Totnes BSP and Associated 33 kV Network

Network Development Report – South West

May 2024

Electricity Distribution

nationalgrid

Contents

Totnes BSP and Associated 33 kV Network

1. Network Overview

Totnes Bulk Supply Point (BSP) supplies a mainly rural sections of 33 kV network, in South Devon. It is supplied from two 132/33 kV Grid Transformers (GTs) and feeds approximately 30,400 customers.

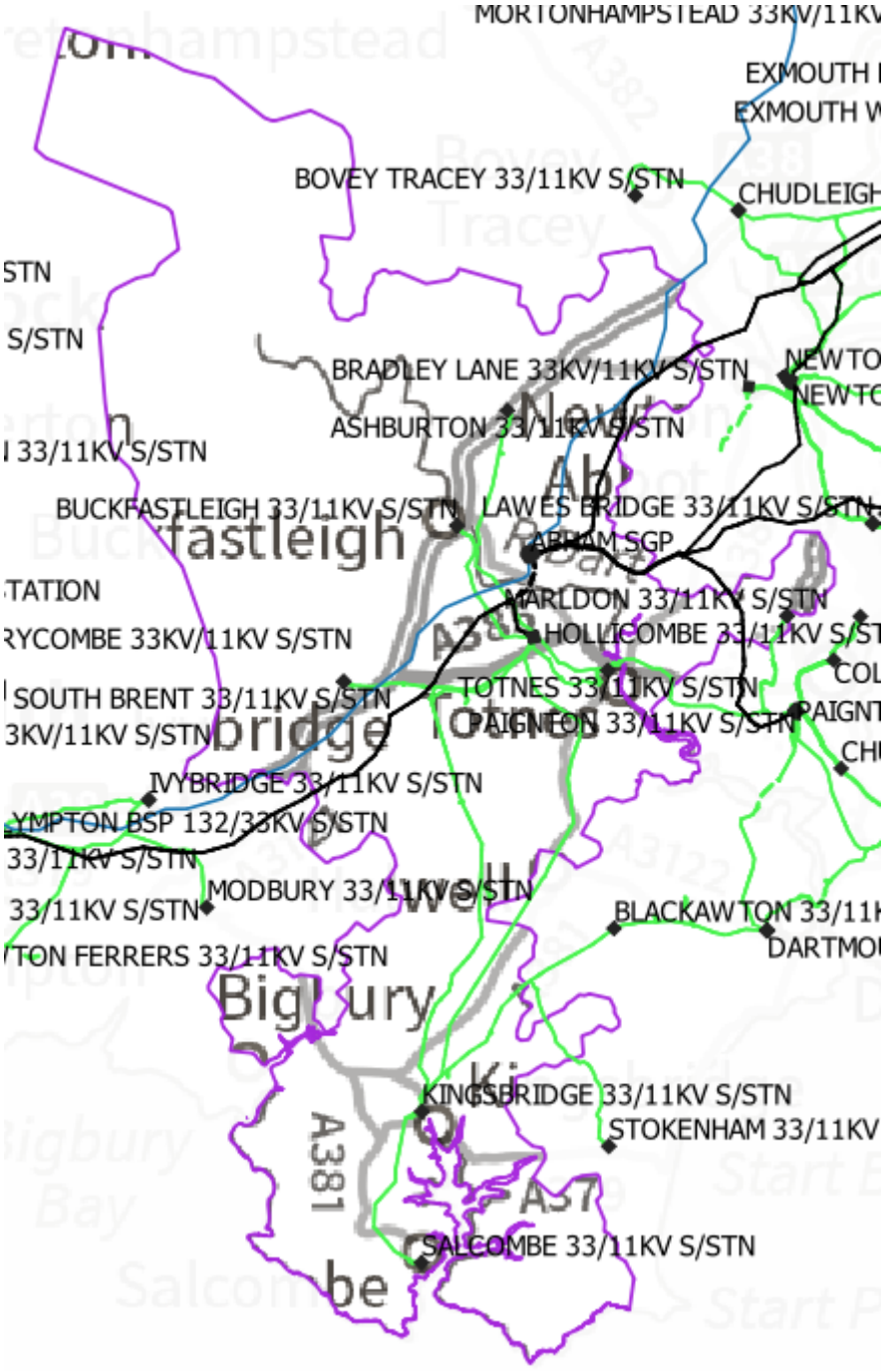

Figure 1.1 Totnes BSP geographic network coverage

This report discusses all existing and future network constraints over a 0-10 year horizon associated with the 33/11 kV transformers, 33 kV circuits and 132/33 kV transformers which supply Totnes BSP. This uses the methodology outlined in the Network Development Plan Methodology Report with Network Operability Modelling applied as outlined below.

For the purposes of this analysis the NGED Best View Distribution Future Energy Scenario (DFES) has been used to study the years 2022 (baseline), 2028 and 2034, with consideration given to how proposals could change under the other scenarios. Five representative days have been studied across the four seasons: Winter Peak Demand, Intermediate Warm Peak Demand, Intermediate Cool Peak Demand, Summer Peak Demand and Summer Peak Generation.

1.1 Network Topology

The Totnes BSP network is arranged as follows:

- Kingsbridge Primary substation is supplied via two separate transformer feeders with three 33 kV generator connection teed off one of the circuits and South Brent Primary plus two other 33 kV generator connections on the other. At Kingsbridge there is an interconnector to the Totnes BSP to Salcombe circuit via a normal open point on isolator 4L3.
- Salcombe Primary substation is supplied as a single transformer feeder with a 33 kV connection to Paignton BSP via a normal open point on pole ZTR68 isolator. Interconnection also exists with the Totnes BSP to Kingsbridge circuit via a normal open point on isolator 4L3 at Kingsbridge.
- A 33 kV ring supplying Buckfastleigh Primary with a tee off to Ashburton and a 33 kV connected generator.
- Totnes Primary is supplied via two separate transformer feeders with a tee off to Marldon Primary, a 33 kV generator and Paignton BSP on one of the circuits. A normal open point exists on circuit breaker 4L5 at Paignton BSP.

1.2 Network Operability Modelling

The following network automation and manual switching schemes have been modelled in the analysis of this area, aligning to how the network is currently operated, as well as proposed actions, to manage some constraints identified operationally.

- For an arranged outage of either grid transformer or 33 kV busbar at Totnes BSP, Marldon Primary is transferred to Paignton BSP by opening 1L9 on pole ZTF19 and closing 4L5 at Paignton BSP.
- For an arranged outage of either grid transformer or 33 kV busbar at Totnes BSP, Salcombe Primary is transferred to Paignton BSP by closing 6L5 on pole ZTR68 and opening 2L5 at Totnes BSP.
- For an outage on Totnes BSP 6L5, Marldon Primary is transferred to Paignton BSP by opening 1L9 on pole ZTF19 and closing 4L5 at Paignton BSP.

2. Network Constraints and Solution Options

2.1 Summary of Network Constraints

The following constraints were identified for the Best View Scenario, for which mitigation options will be discussed:

- Totnes BSP 132/33 kV Grid Transformer overloads
- Totnes 33/11 kV T1 & T2 overloads
- Buckfastleigh 33/11 kV T1 & T2 overloads
- Kingsbridge 33/11 kV T1 & T2 overloads
- Totnes 1L5 to Kingsbridge T2 33 kV circuit overload
- Totnes 4L5 to Kingsbridge T1 33 kV circuit overload
- Totnes 5L5 to ZSB37 33 kV circuit overload
- Totnes 8L5 to Buckfastleigh 33 kV circuit overload

3. Network Constraint Details and Solution Options

3.1 Totnes BSP 132/33 kV GT Overloads

Generation | Demand

Constraint Overview

The table below outlines the nature of the network constraints identified in the network analysis, with the worst overloads seen at winter peak demand.

Table 3.1.1 constraint(s) and condition under which constraint occurs

Constraint	N-1 Condition	Subsequent N-2 Condition	First studied year constraint is observed in each season under Best View			
			Winter	Int Cool	Int Warm	Summer
Totnes GT1 overload	Totnes GT2 fault	None	2028	2028	2028	2034
Totnes GT2 overload	Totnes GT1 fault	None	2028	2028	2028	2034

Uncertainty under other Distribution Future Energy Scenarios: Constraints may be triggered earlier for higher growth scenarios

Solution Options

A list of each of the options considered for this constraint is given in the table below.

Table 3.1.2 solution options to solve constraint(s)

Solution Options	Description	Solves Constraint	Wider Benefit	Potential to be cost effective	Viable or Discounted
0	No Intervention	×	×	×	Discounted
Reinforcement					
1	Application of an increased rating following checks on ancillaries	✓	×	✓	Viable
Operational Mitigation					
-	*None Identified*	-	-	-	-
Load Management Schemes					
-	*None Identified*	-	-	-	-
Flexibility services					
2	Procure flexibility under Totnes BSP at 33 kV or below	✓	×	✓	Viable

Solution Development

These options have been assessed on their technical viability and their likely cost-effectiveness pending a full cost benefit analysis (CBA). This CBA will be subsequently carried out by the Distribution Network Operator (DNO) to determine the optimal reinforcement solution, which will then be tested against market provided flexibility by the Distribution System Operator (DSO) as part of the Distribution Network Options Assessment (DNOA) process.

Option 1 – Application of an increased rating following checks on ancillaries

Capacity released for constraint(s) considered: TBC following assessment ⬆ Viable

Detailed description: Uprate the existing GTs at Totnes via use of cyclic ratings in accordance with British Standard 171/IEC60076 and NGED Standard Technique SD8C. This requires a capability assessment of all ancillaries, such as busbars, isolators, Current Transformers (CTs), cables (including cabling within the substation), switchgear, tap changer, transformer bushings, conservator and earthing transformer. In addition, an assessment of the cyclic profile of the load is required to determine if transformer temperature and ageing is within acceptable limits.

New limiting factor for constraint(s) considered: TBC following assessment.

Option 2 – Procure flexibility under Totnes BSP at 33 kV or below

Flexibility service type: Generation turn up/demand turn down

Viable

Detailed description: Flexibility services could be procured to alleviate projected overloads seen on the Grid Transformer at Totnes. The viability of utilising flexibility will be further investigated as part of the DNOA process.

Solution Recommendation

It is recommended to undertake an assessment using NGED Standard Technique SD8C to achieve the full rating of both Grid Transformers (Option 1).

3.2 Totnes T1 & T2 Overloads

Generation | Demand

Constraint Overview

The table below outlines the nature of the network constraints identified in the network analysis, with the worst overloads initially seen at winter peak demand.

Table 3.2.1 constraint(s) and condition under which constraint occurs

Constraint	N-1 Condition	Subsequent N-2 Condition	First year constraint is observed in each season under Best View			
			Winter	Int Cool	Int Warm	Summer
Totnes T1 overload	Totnes Main 1 33 kV busbar or Totnes T2 fault	None	2025	2028	2028	2028
Totnes T2 overload	Totnes Main 2 33 kV busbar fault	None	Baseline	Baseline	2025	2028

Uncertainty under other Distribution Future Energy Scenarios: As this constraint occurs under baseline, there is no uncertainty about future forecasts. There is a risk that demand reduces, however this is not forecast under any scenario so mitigation against this constraint is required.

Solution Options

A list of each of the options considered for this constraint is given in the table below.

Table 3.2.2 solution options to solve constraint(s)

Solution Options	Description	Solves Constraint	Wider Area Benefit	Potential to be cost effective	Viable or Discounted
0	No Intervention	×	×	×	Discounted
Reinforcement					
1	Apply increased transformer ratings	✓	×	✓	Viable
2	Replace transformer with larger units	✓	×	×	Viable
Operational Mitigation					
3	Install inter-tripping for a 33 kV Busbar fault at Totnes BSP	✓	×	✓	Viable
Load Management Schemes					
-	*None Identified*	-	-	-	-
Flexibility services					
4	Procure flexibility under Totnes at 11 kV or below	✓	×	✓	Viable

Solution Development

These options have been assessed on their technical viability and their likely cost-effectiveness pending a full CBA. This CBA will be subsequently carried out by the DNO to determine the optimal reinforcement solution, which will then be tested against market provided flexibility by the DSO as part of the DNOA process.

Option 1 - Apply increased transformer ratings

Capacity released for constraint(s) considered: Subject to review — Viable

Detailed description: Overloads start to occur in 2025 due to demand growth. Uprate the existing transformers at Totnes via use of cyclic ratings in accordance with British Standard 171/IEC60076 and NGED Standard Technique SD8C. This requires a capability assessment of all ancillaries, such as busbars, isolators, CTs, cables (including cabling within the substation), switchgear, tap changer, transformer bushings and conservator. In addition, an assessment of the cyclic profile of the load is

required to determine if transformer temperature and ageing is within acceptable limits. Consideration should be given to fitting oil pumps to both transformers to increase the rating.

New limiting factor for constraint(s) considered: Subject to review

Option 2 – Replace transformers with larger units

Capacity released for constraint(s) considered: TBC

Viable

Detailed description: Install larger transformers (12/24 MVA).

New limiting factor for constraint(s) considered: TBC

Option 3 – Install inter-tripping for a 33 kV Busbar fault at Totnes BSP

Capacity released for constraint(s) considered: N/A

Viable

Detailed description: Install an intertripping scheme to trip 33 kV generation and transfer demand at Marldon in the event of a 33 kV (Main 2) Busbar fault at Totnes BSP. This will prevent potential overloads on T2 due to reverse powerflow through T1. The demand at Marldon may either be restored via Paington 4L5 or at 11 kV from Colley End.

New limiting factor for constraint(s) considered: N/A

Option 4 – Procure flexibility under Totnes at 11 kV or below

Flexibility service type: Demand turn down or Generation turn up

Viable

Detailed description: Flexibility services could be procured to alleviate projected overloads seen on the 33/11 kV transformers at Totnes. The viability of utilising flexibility will be further investigated as part of the DNOA process.

Solution Recommendation

It is recommended to undertake an assessment using NGED Standard Technique SD8C to achieve the full rating of both 33/11 kV transformers at Totnes. In addition it is recommended to install an inter-tripping scheme to prevent transformer overloads in the event of a 33 kV busbar fault at Totnes BSP.

3.3 Buckfastleigh T1 & T2 overloads

Generation | Demand

Constraint Overview

The table below outlines the nature of the network constraints identified in the network analysis, with the worst overloads seen at summer peak generation.

Table 3.3.1 constraint(s) and condition under which constraint occurs

Constraint	N-1 Condition	Subsequent N-2 Condition	First year constraint is observed in each season under Best View			
			Winter	Int Cool	Int Warm	Summer
Buckfastleigh T1 overload	Totnes Main 1 33kV Busbar fault	None	2028	2028	2032	Baseline
Buckfastleigh T2 overload	Totnes Main 2 33kV Busbar fault	None				Baseline

Uncertainty under other Distribution Future Energy Scenarios: As this constraint occurs under baseline, there is no uncertainty about future forecasts. There is a risk that demand reduces, however this is not forecast under any scenario so mitigation against this constraint is required.

Solution Options

A list of each of the options considered for this constraint is given in the table below.

Table 3.3.2 solution options to solve constraint(s)

Solution Options	Description	Solves Constraint	Wider Area Benefit	Potential to be cost effective	Viable or Discounted
0	No Intervention	×	×	×	Discounted
Reinforcement					
-	*None Identified*	-	-	-	-
Operational Mitigation					
1	Install an inter-tripping scheme	✓	×	✓	Viable
Load Management Schemes					
-	*None Identified*	-	-	-	-
Flexibility services					
-	*None Identified*	-	-	-	-

Solution Development

These options have been assessed on their technical viability and their likely cost-effectiveness pending a full CBA. This CBA will be subsequently carried out by the DNO to determine the optimal reinforcement solution, which will then be tested against market provided flexibility by the DSO as part of the DNOA process.

Option 1 – Install an inter-tripping scheme

Capacity released for constraint(s) considered: N/A

Viable

Detailed description: Install an inter-tripping scheme to disconnect Ashburton and park View Solar Farm in the event of a 33 kV (Main1) Busbar fault at Totnes BSP. This will prevent overloads on both transformers at Buckfastleigh for both peak demand and generation scenarios by preventing back-feeding of the 33 kV network through the 11 kV Busbar and transformers.

New limiting factor for constraint(s) considered: N/A

Solution Recommendation

It is recommended to install an inter-tripping scheme to prevent transformer overloads in the event of a 33 kV busbar fault at Totnes BSP (Option 1).

3.4 Kingsbridge T1 & T2 Overloads

Generation | Demand

Constraint Overview

The table below outlines the nature of the network constraints identified in the network analysis, with the worst overloads seen at summer peak generation.

Table 3.4.1 constraint(s) and condition under which constraint occurs

Constraint	N-1 Condition	Subsequent N-2 Condition	First year constraint is observed in each season under Best View			
			Winter	Int Cool	Int Warm	Summer
Kingsbridge T1 overload	Totnes 33 kV Main 1 busbar	None	-	-	-	Baseline
Kingsbridge T2 overlaod	Totnes 33 kV Main 2 busbar	None	2030	2025	2032	Baseline

Uncertainty under other Distribution Future Energy Scenarios: As this constraint occurs under baseline, there is no uncertainty about future forecasts. There is a risk that demand reduces, however this is not forecast under any scenario so mitigation against this constraint is required.

Solution Options

A list of each of the options considered for this constraint is given in the table below.

Table 3.4.2 solution options to solve constraint(s)

Solution Options	Description	Solves Constraint	Wider Area Benefit	Potential to be cost effective	Viable or Discounted
0	No Intervention	×	×	×	Discounted
Reinforcement					
-	*None Identified*	-	-	-	-
Operational Mitigation					
1	Install an inter-tripping scheme	✓	×	✓	Viable
Load Management Schemes					
-	*None Identified*	-	-	-	-
Flexibility services					
-	*None identified*	-	-	-	-

Solution Development

These options have been assessed on their technical viability and their likely cost-effectiveness pending a full CBA. This CBA will be subsequently carried out by the DNO to determine the optimal reinforcement solution, which will then be tested against market provided flexibility by the DSO as part of the DNOA process.

Option 1 – Install an inter-tripping scheme

Capacity released for constraint(s) considered: N/A

Viable

Detailed description: Install an inter-tripping scheme to trip the three 33 kV connected generators on the Totnes 1L5- Kingsbridge T2 circuit for a Totnes Main 1 33 kV Busbar fault. Also to disconnect South Brent Primary and the two 33 kV connected generators on the Totnes 4L5 to Kingsbridge T1 circuit in the event of a Totnes Main 2 33 kV Busbar fault. This is to prevent overloads on both transformers at Kingsbridge for both peak demand and generation scenarios by preventing back-feeding of the 33 kV network through the 11 kV Busbar and transformers.

New limiting factor for constraint(s) considered: N/A

Solution Recommendation

It is recommended to install an inter-tripping scheme as detailed in option 1 to prevent overloads on both transformers at Kingsbridge in the event of a 33 kV busbar fault (Main 2) at Totnes BSP.

3.5 Totnes BSP 1L5 to Kingsbridge T2 circuit Overload

Constraint Overview

Generation | Demand

The table below outlines the nature of the network constraints identified in the network analysis, with the worst overloads seen at summer peak generation.

Table 3.5.1 constraint(s) and condition under which constraint occurs

Constraint	N-1 Condition	Subsequent N-2 Condition	First year constraint is observed in each season under Best View			
			Winter	Int Cool	Int Warm	Summer
Totnes BSP 1L5 to Kingsbridge T2 33kV	Totnes 33kV Main 2 busbar	None	2032			Baseline

Uncertainty under other Distribution Future Energy Scenarios: As this constraint occurs under baseline, there is no uncertainty about future forecasts. There is a risk that demand reduces, however this is not forecast under any scenario so mitigation against this constraint is required.

Solution Options

A list of each of the options considered for this constraint is given in the table below.

Table 3.5.2 solution options to solve constraint(s)

Solution Options	Description	Solves Constraint	Wider Area Benefit	Potential to be cost effective	Viable or Discounted
0	No Intervention	×	×	×	Discounted
Reinforcement					
-	*None Identified*	-	-	-	-
Operational Mitigation					
1	Install an inter-tripping scheme	✓	✓	✓	Viable
Load Management Schemes					
-	*None Identified*	-	-	-	-
Flexibility services					
-	*None identified*	-	-	-	-

Solution Development

These options have been assessed on their technical viability and their likely cost-effectiveness pending a full CBA. This CBA will be subsequently carried out by the DNO to determine the optimal reinforcement solution, which will then be tested against market provided flexibility by the DSO as part of the DNOA process.

Option 1 – Install an inter-tripping scheme

Capacity released for constraint(s) considered: N/A

Viable

Detailed description: Install an inter-tripping scheme to disconnect South Brent Primary and the two 33 kV connected generators on the Totnes 4L5 to Kingsbridge T1 circuit in the event of a Totnes Main 2 33 kV Busbar fault to prevent an overload on this circuit.

New limiting factor for constraint(s) considered: N/A

Solution Recommendation

It is recommended that an inter-tripping scheme is installed as detailed in Option 1 to prevent 33 kV circuit overloads in the event of a 33 kV busbar (Main2) fault at Totnes BSP.

3.6 Totnes BSP 4L5 to Kingsbridge T1 circuit Overload

Generation Demand

Constraint Overview

The table below outlines the nature of the network constraints identified in the network analysis, with the worst overloads seen at summer peak generation.

Table 3.6.1 constraint(s) and condition under which constraint occurs

Constraint	N-1 Condition	Subsequent N-2 Condition	First year constraint is observed in each season under Best View			
			Winter	Int Cool	Int Warm	Summer
Totnes BSP to Kingsbridge T1 33 kV circuit	Totnes 33 kV Main 1 busbar fault	None		2034		Baseline

Uncertainty under other Distribution Future Energy Scenarios: As this constraint occurs under baseline, there is no uncertainty about future forecasts. There is a risk that demand reduces, however this is not forecast under any scenario so mitigation against this constraint is required.

Solution Options

A list of each of the options considered for this constraint is given in the table below.

Table 3.67.2 solution options to solve constraint(s)

Solution Options	Description	Solves Constraint	Wider Area Benefit	Potential to be cost effective	Viable or Discounted
0	No Intervention	×	×	×	Discounted
Reinforcement					
1	Reconductor circuit with larger conductor (150 sq.mm Cu or 200 sq.mm Al Alloy) & overlay cable	✓	✓	×	Viable
Operational Mitigation					
2	Install an inter-tripping scheme	✓	✓	✓	Viable
Load Management Schemes					
-	*None Identified*	-	-	-	-
Flexibility services					
3	Procure flexibility under Kingsbridge/South Brent at 11 kV or below	✓	✓	✓	Viable

Solution Development

These options have been assessed on their technical viability and their likely cost-effectiveness pending a full CBA. This CBA will be subsequently carried out by the DNO to determine the optimal reinforcement solution, which will then be tested against market provided flexibility by the DSO as part of the DNOA process.

Option 1 – Reconductor circuit with larger conductor (150 sq.mm Cu or 200 sq.mm Al Alloy) & overlay cable

Capacity released for constraint(s) considered: 7 MVA (winter) Viable

Detailed description: Re-conductor the overhead line section between Totnes BSP and South Brent tee with larger conductor (150 sq.mm Copper (Cu) or 200 sq.mm All Aluminium Alloy Conductor (AAAC)) and overlay cable section for 2034.

New limiting factor for constraint(s) considered: 29.7 MVA

Option 2 – Install an inter-tripping scheme

Capacity released for constraint(s) considered: N/A

Viable

Detailed description: Install an intertripping scheme to trip the three 33 kV connected generators on the Totnes 1L5 to Kingsbridge T2 circuit in the event of a 33 kV (Main1) Busbar fault at Totnes BSP.

New limiting factor for constraint(s) considered: N/A

Option 3 – Procure flexibility under Kingsbridge/South Brent at 11 kV or below

Flexibility service type: Demand turn down or generation turn up

Viable

Detailed description: Flexibility services could be procured to alleviate projected overloads seen on the Totnes 1L5 to Kingsbridge T2 33 kV circuit (under peak demand conditions). The viability of utilising flexibility will be further investigated as part of the DNOA process.

Solution Recommendation

It is recommended to procure flexibility in the Kingsbridge and South Brent primary susbtations.

However, in the longer term it is recommended that an inter-tripping scheme is installed to trip generation in the event of a 33 kV (Main1) Busbar fault at Totnes BSP to prevent overloads on this circuit (Option 2).

3.7 Totnes BSP 5L5 to ZSB37 33 kV circuit Overload

Generation Demand

Constraint Overview

The table below outlines the nature of the network constraints identified in the network analysis, with the worst overloads seen at winter peak demand.

Table 3.7.1 constraint(s) and condition under which constraint occurs

Constraint	N-1 Condition	Subsequent N-2 Condition	First year constraint is observed in each season under Best View			
			Winter	Int Cool	Int Warm	Summer
Totnes BSP 5L5 to ZSB37 33 kV	Totnes BSP Main 2 33 kV busbar fault	None	2032	-	-	-

Uncertainty under other Distribution Future Energy Scenarios: Constraints may be triggered earlier for higher growth scenarios

Solution Options

A list of each of the options considered for this constraint is given in the table below.

Table 3.7.2 solution options to solve constraint(s)

Solution Options	Description	Solves Constraint	Wider Area Benefit	Potential to be cost effective	Viable or Discounted
0	No Intervention	×	×	×	Discounted
Reinforcement					
1	Review 270 A protection limit on circuit	✓	×	✓	Viable
Operational Mitigation					
-	*None Identified*	-	-	-	-
Load Management Schemes					
-	*None Identified*	-	-	-	-
Flexibility services					
2	Procure flexibility under Asnburton/Buckfastleigh at 11 kV or below	✓	×	✓	Viable

Solution Development

These options have been assessed on their technical viability and their likely cost-effectiveness pending a full CBA. This CBA will be subsequently carried out by the DNO to determine the optimal reinforcement solution, which will then be tested against market provided flexibility by the DSO as part of the DNOA process.

Option 1 – Review 270 A protection limit on circuit

Capacity released for constraint(s) considered: TBC

Viable

Detailed description: Review the existing 270 A protection limit on this circuit.

New limiting factor for constraint(s) considered: TBC

Option 2 – Procure flexibility under Ashburton/Buckfastleigh at 11 kV or below

Flexibility service type: Demand turn down or generation turn up

Viable

Detailed description: Flexibility services could be procured to alleviate projected overloads seen on the Totnes BSP 5L5 to ZSB37 33kV circuit. The viability of utilising flexibility will be further investigated as part of the DNOA process.

Solution Recommendation

It is recommended to review the existing 270 A protection limit on this circuit (Option 1).

3.8 Totnes BSP 8L5 to Buckfastleigh 33 kV circuit Overload

Constraint Overview

Generation | Demand

The table below outlines the nature of the network constraints identified in the network analysis, with the worst overloads seen at winter peak demand.

Table 3.8.1 constraint(s) and condition under which constraint occurs

Constraint	N-1 Condition	Subsequent N-2 Condition	First year constraint is observed in each season under Best View			
			Winter	Int Cool	Int Warm	Summer
Totnes BSP 8L5 to Buckfastleigh 33 kV	Totnes BSP Main 1 33 kV busbar fault	None	2032	2032	-	-

Uncertainty under other Distribution Future Energy Scenarios: Constraints may be triggered earlier for higher growth scenarios

Solution Options

A list of each of the options considered for this constraint is given in the table below.

Table 3.8.2 solution options to solve constraint(s)

Solution Options	Description	Solves Constraint	Wider Area Benefit	Potential to be cost effective	Viable or Discounted
0	No Intervention	×	×	×	Discounted
Reinforcement					
1	Review 270 A protection limit on circuit	✓	×	✓	Viable
Operational Mitigation					
-	*None Identified*	-	-	-	-
Load Management Schemes					
-	*None Identified*	-	-	-	-
Flexibility services					
2	Procure flexibility under Buckfastleigh at 11kV or below	✓	×	✓	Viable

Solution Development

These options have been assessed on their technical viability and their likely cost-effectiveness pending a full cost benefit analysis (CBA). This CBA will be subsequently carried out by the DNO to determine the optimal reinforcement solution, which will then be tested against market provided flexibility by the DSO as part of the Distribution Network Options Assessment (DNOA) process.

Option 1 – Review 270 A protection limit on circuit

Capacity released for constraint(s) considered: TBC

Viable

Detailed description: Review the existing 270 A protection limit on this circuit.

New limiting factor for constraint(s) considered: TBC

Option 2 – Procure flexibility under Buckfastleigh at 11 kV or below

Flexibility service type: Demand turn down or generation turn up

Viable

Detailed description: Flexibility services could be procured to alleviate projected overloads seen on the Totnes BSP (8L5) to Buckfastleigh 33 kV circuit. The viability of utilising flexibility will be further investigated as part of the DNOA process.

Solution Recommendation

It is recommended to review the existing 270 A protection limit on this circuit (Option 1).

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