



# GB Network Access Policy

Produced in collaboration by:

- National Grid Electricity Transmission
- SP Energy Networks
- Scottish Hydro Electric Transmission

## Executive summary

This document, the GB Network Access Policy, is designed to facilitate collaboration between National Grid Electricity System Operator (NGESO) and the Transmission Owners in Great Britain to deliver value for consumers in relation to the planning, management and operation of the electricity transmission systems in England, Wales and Scotland.

This policy document is produced by the three companies who own the transmission networks in Great Britain. These companies are:

- **Scottish Hydro Electric Transmission** who own the transmission network to the north of the central belt in Scotland.
- **SP Transmission** who own the transmission network from the border with England up to and including the central belt in Scotland.
- **National Grid Electricity Transmission** who own the transmission network covering all of England and Wales.

**National Grid Electricity System Operator** are the sole GB system operator, responsible for the secure operation of all the above transmission networks which effectively operate as one power system.

NGESO agreed the content of this policy before it was submitted for approval to Ofgem who are the economic regulator of all the above companies.

The Transmission Owners, NGESO and Ofgem have formed the NAP working group. This forum meets quarterly and is in place to govern, share best practice and monitor performance of this policy.

The policy explains why it is required and what its goals are. It also explains how the three transmission companies plan all their system access through formal processes with the system operator to ensure consumer value whilst considering the impact of this work on those stakeholders connected to the transmission networks.

It is important to note that this policy does not apply to Offshore transmission owners, any distribution companies or their customers. It only applies to the onshore transmission companies.

Stakeholders who are likely to be interested in this policy include, but are not limited to:

- Distribution Network Operators
- Large and small-scale generators
- Electricity Transmission service providers and storage operators
- Offshore Transmission Owners (OFTOs)
- Large industrial consumers of the transmission system (e.g. steel works, chemical works, electrified rail etc.)

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## 1 INTRODUCTION

### Background of the Network Access Policy

In 2013, at the start of the regulatory price control period RIIO T1, it was recognised that there was a need to accelerate generation connections ahead of network reinforcement if climate targets were to be achieved using a process called Connect and Manage. It was also recognised that when necessary network reinforcement outages were later required, this could cause increased system constraint costs. It would also restrict system access for those connected ahead of reinforcement as well as existing customers. It was these issues that determined the need for a Network Access Policy (NAP).



*1 One of the increasing numbers of offshore wind farms being built as we move to a renewable based power system.*

This was only initially a new special license condition for Scottish Transmission Owners. The GB System Operator role at that time was carried out by National Grid under BETTA regulations (British Electricity Trading & Transmission Arrangement), which were introduced in 2005. In their role as GBSO, National Grid were also a stakeholder in the production of the first NAP.

In April 2019, National Grid Electricity Transmission Owner (NGET TO) became a legally separate business from NG Electricity System Operator (NGESO). Legacy funding issues from when the two National Grid businesses were combined, meant that NGET TO could not adopt the Scottish NAP to make it a GB NAP so they adopted their own, very similar NAP. However, with a new price control period these issues would fall away and Ofgem determined that a single consolidated NAP should be developed for RIIO-T2 starting in April 2021.

## Consolidated Network Access Policy for RIIO-T2

For consistency across GB in RIIO-T2 and in the future, this NAP is to apply to all GB onshore Transmission Owners (TOs). The requirement for TOs to have in place this NAP, hereinafter referred to as "this policy", for RIIO-T2 is detailed in special licence condition 2J of their respective transmission licences.

This policy revision:

- Consolidates system access procedures across all three GB onshore TO's
- Identifies process enhancements for the RIIO-T2 period following customer and stakeholder engagement by the TO's
- Clarifies roles and responsibilities in respect of third-party engagement
- Introduces key performance indicators (KPI's) to monitor TO performance and demonstrate consumer benefits

This policy explains the working relationship between the TOs and NGENSO to achieve above and beyond baseline levels of outage planning, customer service and operation of the GB electricity transmission system. Baseline levels are as specified in the System Operator Transmission Owner Codes & Procedures (STCPs) specifically STCP-11<sup>1</sup>. These NAP enhancements are designed to assist NGENSO in managing system costs and to deliver added value for consumers.

As the GB electricity transmission network continues to facilitate the transition to a net zero-carbon network, the TOs will need to reinforce key parts of our network, connect more renewable generation (onshore and offshore) and modernise and maintain ageing equipment, as well as carrying out other works required to protect the reliability and health of our electricity transmission system. To enable this, it is necessary to switch out parts of the electricity transmission system to carry out the works safely. This de-energisation of equipment to carry out work is commonly described as a planned outage.

There are also unplanned outages which can be required at short notice to repair a fault or to ensure safety of third parties working in proximity to transmission equipment. Some of the planned or unplanned outages can impact the operation of the system and result in constraint costs. These costs are incurred by NGENSO when they take actions to ensure system security during outages. The type of action taken is becoming more varied as the industry evolves but is typically done by increasing or decreasing generator outputs but can now involve flexible demand solutions such as supermarkets temporarily turning off fridges or hotels turning off air conditioning. These constraint costs can be substantial and are ultimately passed on to end consumers.

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<https://www.nationalgrideso.com/document/41056/download>

This policy sets out what level of service above and beyond the baseline level specified in the STCPs the TOs will offer to our transmission stakeholders and NGENSO. This policy also describes how the TOs and NGENSO will collaborate to ensure work on the electricity transmission system is carried out in a manner that takes account of and minimises the impact on consumers, system security and whole system costs whilst considering impact on stakeholders. An example of this would be to build a by-pass to reduce the required outage time and associated constraint costs.

Specifically, this policy sets out the way the TOs and NGENSO will provide visibility of the RIIO-T2 project plan to our stakeholders, especially the planned outages associated with delivering the plan and the impact these planned outages will have on system users. This policy will also describe the transparent decision-making process associated with any changes to the TOs baseline plans submitted as part of the planning process.

Key to planned outage delivery is a flexible and collaborative approach taken by the TOs and NGENSO in network outage planning, it's important we also include our customers and stakeholders, e.g. generators, Distribution Network Operator (DNO), in this enhanced outage planning process. Frequent and robust communication between parties will enable innovative solutions to network issues to be identified while ensuring optimal and cost-effective solutions are achieved for all parties.

Customers and stakeholders affected by a transmission outage may be contacted by either NGENSO or a TO. As referenced in section 6.2 Stakeholder Engagement, the formal and final outage notification will always be from NGENSO. Anyone affected by an outage with a query can always contact the relevant TO or NGENSO who will either help address the query or direct them to the other party as required.

If a party is connected to a distribution network and has been notified of a transmission outage by the relevant DNO, then you should contact the DNO in the first instance with any queries.

This policy will indicate the actions and possible enhancements available in both the short-term and long-term to plan and manage network access. The long-term framework looks forward to a period of one to a minimum of 6 year ahead (beyond year 6 will be reviewed where required). The short-term framework considers work and outages in the current outage planning year (running from 1st April – 31st March of the following year).

This policy is an ongoing process that will be regularly monitored and reviewed. This will be carried out by the NAP working group through regular meetings. The NAP working group is made up of representative from Ofgem, NGENSO and the three GB TOs. This policy will be subject to a formal review every two years and this process will be managed by the NAP working group.

## 2 REQUIREMENT FOR A NETWORK ACCESS POLICY

Transmission licence special condition 2J places on the TOs a number of essential requirements for inclusion in this policy, namely;

- a) Details of the actions that the TOs will take to coordinate with NGENO and/or other TOs as appropriate to ensure that planned network outage arrangements are agreed with due consideration of the long-term outcomes for consumers and network users;
- b) Details of the actions that the TOs will take for the purpose of responding to and managing unplanned network outages with a view to minimising their contribution to network constraints, subject to the need to ensure the safe, secure operation of the National Electricity Transmission System as a whole or any part of it;
- c) Details of the type of circumstances that are likely to require an alternative approach to that set out in relation to the above two paragraphs; and
- d) A description of the TOs communication and coordination strategy for interacting with NGENO and any other relevant third parties, including but not limited to Distribution Network Operators and Generators, in respect of matters relating to this policy.

In this policy, the TOs will;

- Clarify what level of service stakeholders can expect from the TOs in terms of communication associated with the overall availability of the transmission network, the development and planning of outages in the long and short-term planning timeframes and the within year outage change process;
- Commit to work with NGENO to effectively manage the TOs network access requirements in RIIO-T2 and NGENO system operation costs; and
- Define the enhanced level of service above the baseline (baseline is described in the STCP's) that is acceptable to NGENO and to our customers and stakeholders.

The enhanced level of service proposed and described later will cover the following:

- The long-term project and outage planning process to ensure stakeholder engagement in the process where applicable;
- Enhanced services offered by the TOs to NGENSO during RIIO-T2;
- The management and communication of outage changes to the within year outage plan;
- The communication enhanced process between NGENSO, the TOs and our stakeholders; and
- Planning process transparency and KPI's.

This policy does not seek to replace the SO-TO Code (STC) or the suite of STC Procedures (STCP's) or other industry arrangements, its purpose is to support them. It is concerned with whole system outage planning, stakeholder engagement and identifies how the TOs will assist NGENSO in managing system costs while delivering the TOs RIIO-T2 business plans.

In meeting the requirements of this policy, the TOs will seek to ensure that the activities associated with outage planning, network operation and the future development of the Transmission System:

- Are complementary and working together with NGENSO delivers a safe, secure and economic system that benefits all customers and stakeholders;
- Take due consideration of the impact of our RIIO-T2 plans on all customers and stakeholders during the long-term project development framework period of our business plan;
- While utilising an approach during the short-term "within year" planning period that considers the trade-off between the TOs outage changes and new outage requirements verses NGENSO system security and system cost implications, ensure this process is accountable and transparent.



## 3 LONG-TERM OUTAGE PLANNING FRAMEWORK

### 3.1 Overview

As part of our commitment to this policy, the TOs will provide NGENSO with visibility of our project plans and system outage requirements up to 6 years ahead of time (for certain projects, system outage requirement beyond 6 years will be provided). This is to ensure NGENSO can create a robust and efficient outage plan for each year of RIIO-T2, that also takes into account the impact of outages on the TOs stakeholders.

The baseline long-term outage planning framework is described in STCP11.1. This section of the policy specifies what enhancements (above the baseline) to the long-term outage planning framework the TOs will implement in RIIO-T2.

The object of this process is to ensure that the TOs RIIO-T2 business plans are delivered while ensuring NGENSO can operate the transmission system in a safe, secure and efficient manner for all system users. To achieve this objective the TOs commit to carry out the following during the long-term outage planning period;

- All large, complex capital projects will be developed as far as possible and will have sufficient system outage information submitted to NGENSO prior to the start of “Year 2” in the outage planning process as described in STCP11.1;
- The TOs will aim to work with NGENSO to identify and deliver “whole system” solutions to any project or outage combination in our RIIO-T2 business plan to help reduce within year system costs that are borne by the end consumer; and
- The TOs will, as part of our RIIO-T2 long-term outage planning process review all projects and outage combinations to identify any that will result in our stakeholders being de energised for a period greater than 4 weeks.

The TOs will commit to:

- Communicate to our stakeholders during the long-term planning process any project and outage combination that will have a detrimental impact on them for a period of greater than 4 weeks as agreed with NGENSO; and
- Work with NGENSO and any stakeholder identified during the long-term planning process as being impacted by a project or outage combination of greater than 4 weeks to develop possible solutions to minimise the impact.

### 3.2 Project / Outage Prioritisation

The following project and outage categories described below in this policy, have been developed to assist the TOs in creating our long-term outage planning proposals that are submitted to NGENSO during the long-term outage planning process.

#### Agreed Large \ Complex Projects

These are high priority and \ or complex projects which are mostly the TOs driven key projects to deliver and maintain an efficient, coordinated and economical transmission system as well as NOA type transmission network reinforcement works which are required by NGENSO to meet the future operational needs of the system. These works are generally large capital projects and tend to be complex, both in design and in delivery and they can have a large impact on system security and system operational costs during the delivery phase. As a result, outages associated with these types of projects will take a priority in our long-term planning process.

#### Outages Affecting Key Boundaries

Outages on key boundaries associated with the TOs transmission system can have a serious effect on system operation. Outages of this type can affect system security and generate serious constraint limitations that require to be managed by NGENSO. These outages need to be carefully managed due to the potential clash between the delivery of system reinforcement and modernisation works and the system operational costs incurred by NGENSO and borne by the consumer. As a result, outages affecting key boundaries on the TOs network will take a priority in our long-term planning process.

#### Long Duration Outages Affecting Key Stakeholders

The TOs understand the impact long duration outages (greater than 4 weeks) will have on our key stakeholders (Generators, Distribution Network Operators, etc.). The TOs will work with NGENSO and our stakeholders to identify, communicate and mitigate where possible outages of this type. As a result, long duration outages affecting key stakeholders on the TOs network will take a priority in our long-term planning process.

#### Other Outages

All other outages are those that are not included in the above categories and do not heavily impact the main interconnected transmission system or our stakeholders. These outages are generally of shorter duration and are associated with discrete connection schemes, like for like asset replacement, maintenance, etc. Outages of this type will generally be placed in the long-term plan at the 2 year ahead stage of the process and will be aligned with existing outages of the same asset wherever possible.

### 3.3 Long-Term Outage Planning Process

#### 3.3.1 Three – Six Year Ahead Period

The TOs will develop a high-level view of projects and outages required on our transmission network during this period. At this stage of the long-term planning process the focus will be on the following project and outage types;

- Agreed large / complex projects;
- Outages affecting key boundaries; and
- Long duration outages affecting key stakeholders

During this stage of the long-term planning process NGENSO may wish to influence transmission investment by requesting a function design change to a project to provide operational flexibility or to request different delivery timescales or techniques. The TOs will offer to NGENSO an *Enhanced Service Provision* in the long-term planning timeframe, this service is designed to minimise future constraint costs during the delivery phase of the project. The *Enhanced Service Provision* process is described in section 5.

We commit to enhanced stakeholder engagement therefore the TOs will continuously review our long-term outage plans to identify, in conjunction with the ESO, any outage that is greater than 4 weeks and communicate this during this planning timeframe to the relevant stakeholder. The TOs will commit to working with NGENSO and the relevant stakeholder to identify solutions to minimise the impact of long duration outages.



2 - Live overhead line techniques using Tigercat to remove trees that would otherwise require an outage due to the proximity of the transmission circuit to the right.

### 3.3.2 Two Year Ahead

At this stage of the long-term planning process, works associated with the project and outage categories mentioned above will have all known outage requirements submitted to NGENSO. At this stage “Other Outages” as specified in section 3.2 are added to the long-term outage planning process. This stage of the process will continue to identify any potential delivery “pinch points” on the network and solutions to overcome them.

The *Enhanced Service Provision* the TOs will offer to NGENSO and our stakeholder engagement commitments stated in the Three – Six year ahead period will also be applicable during this stage of the long-term outage planning process.

### 3.3.3 Year Ahead

At the year ahead stage, the TOs and NGENSO develop the detailed outage plan. The plan is developed over several months and will be optimised against the critical requirement that the plan should be deliverable in respect to system security and operating cost.

The *Enhanced Service Provision* the TOs will offer to NGENSO and our stakeholder engagement commitments stated in the Three – Six year ahead period will also be applicable during this stage of the long-term outage planning process where timescales allow.



3 – Thyristor valve hall, part of HVDC systems used in subsea links. Outages on transmission equipment are required for maintenance to keep the network safe and reliable as well as to carry out upgrades to increase capacity

## 4 WITHIN YEAR OUTAGE PLANNING FRAMEWORK

### 4.1 Overview

As part of our commitment to this policy, the TOs will strive to minimise preventable change to the agreed year ahead outage plan during the within year delivery period. We commit to only changing the plan due to any of the following;

- Network faults;
- Safety related issues;
- Defects that affect apparatus ratings or service capability;
- Unforeseen project issues;
- Unforeseen maintenance requirements; and
- Positive outage change proposals which benefit stakeholders.

The TOs will also commit to providing as much notice as possible, notice of outages changes to NGENSO and our stakeholders to minimise the impact of any change to them. The baseline within year outage planning framework is described in STCP 11.1 and states that all know outages shall be submitted by the TOs to NGENSO. This section of this policy specifies what enhancements (above the baseline) to the within year outage planning framework the TOs will implement in RIIO-T2

## 4.2 Within Year Outage Prioritisation

The following within year outage categories described below in this policy sets out the order and communication timescales to NGENSO and our stakeholders for any new within year outage and/or any change required to a previously agreed year ahead outage.

### Network Fault

This is when an item of apparatus fails while in service due to a transient or permanent fault. Communication to secure the network will take place between NGENSO and the TOs in real time and then follow existing planning timescales and processes thereafter. Affected stakeholders will be kept informed throughout.

Safety related issues and/or serious asset defects which require prompt intervention

Outages of this type can require outages on the day or as soon as reasonably practicable. Where possible to do so, communication between NGENSO, the TOs and relevant stakeholders to agree the outage required will take place in real time and/or during planning timescales. Depending on the issue, immediate action may be required.

### Projects - outage changes or new within year outages

For large, complex projects or outages affecting key boundaries, any outage changes or requirement for a new outage will be communicated to NGENSO and relevant stakeholders by the TOs as far ahead as possible.

### Other outages

All other new within year outages not included in the above categories that do not heavily impact the main interconnected transmission system and/or stakeholders, shall be offered to NGENSO and our stakeholders with a level of outage flexibility, such that the TOs will aim to program the work with the agreement of NGENSO and stakeholders for a date and time suitable to them, as well as the TOs. These outage requests will be submitted as far ahead as possible.

### 4.3 Within Year Outage Planning Process

The overall aim of the within year outage planning process is to enable the TOs to deliver our RIIO-T2 commitments while assisting NGESO in maintaining a safe and secure system, whilst minimising the overall cost of delivering RIIO-T2 commitments to the end consumer. The TOs commit to enhancing the within year outage planning process where possible by:

- Minimising the number of outage changes and new outage requests submitted to NGESO within year;
- Ensuring any within year outage change, or new outage request, is made to NGESO and our stakeholders as early as possible;
- Offering a level of outage flexibility to NGESO and our stakeholders, where practicable, for certain existing or new outages that require to be taken within year to reduce system constraint costs and minimise the outage impact on our stakeholders;
- Enhancing the outage communication process between NGESO, the TOs and our stakeholders; and
- Retaining bundling of outages whenever possible. It may not always be possible to retain bundling of outages in every instance if, for example, external resources are required for planned maintenance, warranty inspections, insurance related activities or if a suitable alternative date cannot be found for one of the bundled outages.

*Note – Any outage proposal discussion between the TOs and stakeholders is purely to improve stakeholder engagement and to improve the service provided by the TOs. NGESO should be aware of any outage proposal prior to discussion with stakeholders and must not be considered as final until formally notified by NGESO. All formal outage notifications **must** come from NGESO as stipulated in the STCPs as it is only NGESO who know the full GB system requirements and are therefore the only party able to approve outage changes.*

#### 4.4 Change control

Within year NGENSO or the TOs may need to make changes to the agreed outage plan and the change may result in increased constraint costs, project delays, additional costs to the TOs or stakeholder impact. To promote transparency around the approval or rejection of the changes to the agreed outage plan, when the impact of the change may have a detrimental impact on NGENSO or the TOs, a within year Outage Change Control document shall be completed, containing as a minimum:

- A summary of the work;
- Background from the perspective of the relevant TO;
- Background from the perspective of NGENSO;
- Options and mitigating actions available;
- Forecast costs and risks from the TO;
- Implications and forecasts on overall system expenditure from NGENSO; and
- Conclusions and recommendations.

The within year Outage Change Control document will specify the reason for the change, the impact the change will have on NGENSO and the impact it will have on the relevant TO. The Outage Change Control document will then identify if the change to the agreed planned outage and/or new outage request can be effectively managed from a system security, system constraint or the TOs cost view point and if the request is to be approved or rejected by NGENSO.



## 5 ENHANCED SERVICE PROVISION

As part of the TOs commitment to this policy, the TOs will offer services that allow NGENSO flexibility, where time allows, in influencing the design and delivery of the project, while ensuring the TOs are not financially disadvantaged. This process will allow the optimal engineering solutions to be developed by the TOs during the planning phase, with any extra costs incurred by the TOs funded by NGENSO using STCP 11.4 Enhanced Service Provision.

STCP 11.4 has been developed to ensure that whole system costs are controlled and managed for the benefit all stakeholders and consumers. By whole system costs we mean the aggregate cost of constraint payments made under the balancing mechanism and the TO costs associated with an outage. For example, adding assets to a substation design to provide for alternative network feeding arrangements, could reduce future system constraint costs although increase TO costs in the short term. The overall cost saving to consumers is demonstrated by an appropriate cost benefit analysis conducted by the NGENSO using the Change Control process defined in section 4.4 of this policy.

Should NGENSO or the TOs request a change to the design or delivery of a project, or the TOs offer an additional service to NGENSO, an Enhanced Service Change Control Document will be created to assess the feasibility of the request. This document will specify the reasons for the change, the benefits the change will have on the wider networks and the costs involved. The costs shall include the TOs costs for implementing the changes to the scope of a project or for providing additional services, NGENSO shall provide forecasted constraint savings.

If NGENSO and the relevant TO agree the change is beneficial and should be implemented, the appropriate STCP 11.4 process should then be followed. In this policy, the TOs will commit to offering this Enhanced Service Provision to NGENSO in both the long and short-term outage planning periods, where timescales allow.

The following scenarios are just some that may be considered for inclusion into the Enhanced Service Change Control process that could deliver consumer savings;

- Design changes such as an offline build of a key network node rather than an inline;
- The building of a temporary bypass;
- Provision of enhanced ratings from various techniques;
- Reduction of Emergency Return To Service (ERTS) times;
- Temporary intertrip schemes;
- Automatic Network Management (ANM) schemes;
- Bringing investment forward; and
- Enhanced supply chain / procurement / resourcing contracts.

All of the above techniques can be used by any TO as part of normal outage business plan development if the TOs are certain that doing so, will deliver consumer savings.

STCP 11.4 allows these techniques to continue to be used to further minimise costs should any opportunities arise from either innovation or unforeseen circumstances.

## 6 COMMUNICATION

### 6.1 Regular Meetings

To ensure there is an effective Network Access Policy each TO will commit to a robust communication process with NGENSO and other TOs during the long and short-term planning periods.

The following meetings will take place;

#### Long Term Planning

A minimum of 4 outage planning meetings will be arranged each planning year between each TO, NGENSO and other TOs. These meetings will develop the long-term planning years' outages via the Joint Planning Committee Operational Assessment (JPCOA) meetings. Options for Enhanced Service Provision and any enhanced stakeholder engagement are a priority here to identify and make best use of STCP 11.4 funding.

#### Two Year Ahead

A minimum of 4 outage planning meetings will be arranged each planning year between NGENSO, each TO and other TOs. These meetings will develop the future planning years' outage and identify all known outage requirements known at that time.

#### Year Ahead

A minimum of 4 outage planning meetings will be arranged each planning year between NGENSO, each TO and other TOs. These meetings will develop the next planning year outage requirements. At this stage of the process monthly communication between NGENSO and each TO will occur as the year ahead provisional outage plan is constructed by NGENSO that will provide the TOs network access for "plan year 0". STCP 11.1 deadlines will be adhered to by the TOs so that NGENSO can comply with their Grid Code obligations and formally notify parties affected by outages.

#### Within Year

Communication between NGENSO, each TO and other TOs will follow the guidelines specified in STCP11.1, section 4. Further to this, and on a case by case basis the TOs and NGENSO will endeavour to communicate on a tripartite basis with relevant stakeholders on necessary plan changes or valuable developments which may support activities of the relevant stakeholder.

## 6.2 Stakeholder Engagement

Customers and stakeholders affected by a transmission outage may be contacted by either NGENSO or a TO. However, the formal and final outage notification will always be from NGENSO. Anyone affected by an outage with a query can always contact the relevant TO or NGENSO who will either help address the query or direct them to the other party as required.

As part of the TOs commitment to stakeholder engagement the TOs will;

- Engage with our key stakeholders during the long-term planning framework to ensure they are involved in the outage planning process where projects and/or outages have a direct impact on them as agreed with NGENSO in JPCOA meetings;
- Work with NGENSO and key stakeholders to develop solutions, if possible, to minimise the impact of outages that are of a duration greater than 4 weeks;
- Ensure that changes to network outages or new outage requests within the current planning year are communicated to stakeholders as early as possible. This requires close co-ordination between the TOs and NGENSO; and
- Offer tri-partite meetings with NGENSO and our stakeholders where required, 1-1 meetings or information calls to discuss any planning or operational issues that occur at any point in the planning timeframe.

*Note – Any outage proposal discussion between the TOs and stakeholders is purely to improve stakeholder engagement and to improve the service provided by the TOs. NGENSO should be aware of any outage proposal prior to discussion with stakeholders and must not be considered as final until formally notified by NGENSO. All formal outage notifications **must** come from NGENSO as stipulated in the STCPs as it is only NGENSO who know the full GB system requirements and are therefore the only party able to approve outage proposals.*

## 7 KEY PERFORMANCE INDICATORS (KPI'S)

As part of these policy commitments and to ensure the TOs have fully transparent outage planning processes, each TO will produce a series of annual KPI's to monitor outage planning performance and outage delivery. The KPI's are in appendix A.

These KPI's have been developed in collaboration with all GB TOs and NGENSO following feedback from customers and stakeholders across GB. In order to continually drive improvements in performance, these KPI's shall be regularly reviewed and feedback on performance provided to stakeholders to promote transparency.

All TOs will produce these KPIs using data from the current outage database as provided by the NGENSO. The new electronic Network Access Management System (eNAMS) is currently in development by NGENSO and will provide additional functionality to allow further monitoring and transparency of performance and collaboration between TOs, NGENSO, customers and stakeholders in the future.

# APPENDIX A

## Network Access Policy KPIs - Transmission Owner

### 1. Long Term Outage Planning Performance

Measure of the number of outages in the year ahead plan submitted at week 49 vs the number of actual outages delivered in the regulatory year. This is a high-level measure of Long-Term Outage Planning Performance

- a) Number of outages in the year ahead plan
- b) Number of these outages delivered
- c) Percentage of year ahead plan delivered

### 2. Accuracy of the Year Ahead Outage Plan

This is a measure of the TOs capability to construct and deliver a robust outage plan. This is detailed measure of Long-Term Outage Planning Performance

- a) Percentage of outages in the year ahead plan started on the date agreed at the year ahead stage – week 49
- b) Percentage of outages in the year ahead plan started within the outage week agreed at the year ahead stage – week 49
- c) Percentage of outages changed in the year ahead plan for a “positive” reason e.g. NGENSO cost saving change or stakeholder requested change

### 3. Within Year Outage Planning Performance

Measure of new outages requested within year by the TO during the relevant regulatory year. These are essential outages to carry out defect repairs, remove potential hazards or complete construction works. There is a balance of flexibility and these measures are intended to show a reduction in the number of short-term requests being made.

- a) Number of new within year outages submitted to NGENSO prior to the Optimisation phase (17 -52 weeks ahead)
- b) Number of new within year outages submitted to NGENSO during the Optimisation Phase (4 – 16 weeks ahead as specified in STCP 11.1)
- c) Number of new within year outages submitted to NGENSO during the delivery Phase (0 – 3 weeks ahead as specified in STCP 11.1)

**4. How Many Connection Assets or Transmission Circuits Are Out of Service More Than Once Per Annum?**

Measure of the number of times the same item of equipment or circuit is removed from service.

**5. Outage Coordination**

Measure of the number of times the TO has carried out different work during a single outage. Measure is based on the number of outages that have been combined into a single outage vs the total number of outages delivered in the regulatory year.

**6. Percentage of TO Outages Started Within 60mins of Agreed Start Time**

Measure of outage start time accuracy will be the agreed Planned Start Time compared to the Actual Start Time.

**7. Transmission Connected Generation - Percentage of Annual Access Curtailed by Bilateral Connection Agreement Per Annum - Firm Connections**

Measure of lost network access due to transmission outages and connection agreements. Measure would be  $100 \times (\text{total days of actual outages} \setminus 365)$ .

**8. Transmission Connected Generation - Percentage of Annual Access Curtailed by Bilateral Connection Agreement Per Annum – Non-Firm Connections**

Measure of lost network access due to transmission outages and connection agreements. Measure would be  $100 \times (\text{total days of actual outages} \setminus 365)$ .

**9. Average Outage Duration Accuracy**

Measure of TO ability to plan outage durations. A negative figure would indicate outages generally overrun, a positive figure would indicate outages generally finish early.

- a) Average outage duration accuracy – year ahead outage plan
- b) Average outage duration accuracy - within year outages

#### **10. Number of Unplanned Outages Due to Faults or Defects**

This is a measure of the number of times an asset or circuit has been removed from service due to a system fault, has been removed from service by emergency switching or has been made unavailable to NGENSO and removed from service.

- a) Number of system faults removing an asset or circuit from service
- b) Number of emergency switching outages removing an asset or circuit from service
- c) All other unplanned outages when an asset or circuit has been made unavailable to NGENSO due to a defect

#### **11. Enhanced Service Provision**

Measure of the number of STCP11.4 proposals identified within a regulatory year.

- a) Number of proposals identified by NGENSO or TO
- b) Number of proposals delivered by the TO
- c) Measure of System Operational costs savings vs cost to deliver by TO

#### **12. In Service Works**

Measure of the number of “In Service” bookings to highlight works taking place without an asset being taken out of service e.g. Telecoms works, Risk of Trips etc