ofgem Making a positive difference for energy consumers

Guidance on the Strategic Wider Works arrangements in the electricity transmission price control, RIIO-T1

Guidance

Publication date: 24 November 2017

Contact: Thomas Johns

Team: New Transmission Investment

Tel: 020 7091 7046

Email: NTIMailbox@ofgem.gov.uk

Overview:

This guidance covers the Strategic Wider Works (SWW) arrangements introduced as part of the RIIO-T1 electricity transmission price control. The purpose of the SWW arrangements is to assess large transmission projects during the price control (1 April 2013 to 31 March 2021) that are needed to extend and strengthen the transmission network and transport electricity from where new generation is built to where demand is located.

This version of the guidance replaces the edition published in 2013. We've amended it to reflect changes to our assessment process for SWW projects, including signposting where this process interacts with our consideration of whether an SWW project may be suitable for delivery through a delivery model intended to secure the benefits of competition.

Chapters 1 and 2 of this document are aimed at stakeholders with a general interest in the SWW arrangements. They provide an overview of the SWW arrangements and explain how a decision on a new transmission project will be implemented and its delivery monitored. Chapter 3 provides the Transmission Owners (TOs) with more detailed guidance on the requirements for preparing submissions under the SWW arrangements. Chapter 4 provides an overview of the treatment of the project during and after construction.

It is ultimately the responsibility of the TOs to decide what information is necessary to make a robust case for a proposed project and to provide us with all relevant information to inform our assessment. We will update this guidance from time to time.

Context

Ofgem[1] is the Office of Gas and Electricity Markets which regulates the electricity and gas industries in Great Britain. Our principal duty is to protect the interests of existing and future gas and electricity consumers. Consumers' interests are taken as a whole, including their interests in the reduction of greenhouse gases and in the security of the supply, and in the fulfilment of relevant statutory objectives when we are carrying out our functions as the gas and electricity regulator of Great Britain.

One way in which we can protect the interests of consumers is by regulating the network companies though price controls. We set price controls to specify the services and level of performance that the TOs must provide for users and consumers and to restrict the amount of money that the network companies can recover through network charges over the length of a price control period. In 2012 we published our Final Proposals for the electricity TOs - Scottish Power Transmission Limited (SPT), Scottish Hydro Electric Transmission Plc (SHE Transmission) and National Grid Electricity Transmission Plc (NGET) - which set out the key elements of the price control from 1 April 2013 to 31 March 2021. This included the introduction of the SWW arrangements for assessing large transmission projects when these are needed during the price control. These arrangements are given effect to in the electricity transmission licences of SHE Transmission, SPT and NGET.

In 2015[2] we confirmed our view that it is in consumers' interests to extend the use of competition to onshore transmission assets that are new, separable and high value and we subsequently published documents containing further details. In June 2017 we published an update on extending competition in transmission in which we confirmed that we plan to take forward further development of the Competitively Appointed Transmission Owner (CATO) regime only once there is greater clarity on the timing of enabling legislation.[3] In August 2017 we set out initial thinking around alternatives to the CATO regime as part of a consultation on the Hinkley-Seabank project.[4]

This guidance is intended to provide further information on the SWW arrangements.

[1] The terms 'Ofgem', 'the Authority', 'we' and 'us' are used interchangeably in this document.
[2] https://www.ofgem.gov.uk/publications-and-updates/integrated-transmission-planning-and-regulation-itpr-project-final-conclusions
[3] https://www.ofgem.gov.uk/system/files/docs/2017/06/update_on_extending_competition_in_transmission.pdf
[4] https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-consultation-final-needs-case-and-potential-delivery-models

Associated documents

Decision on strategy for the next transmission price control - RIIO-T1 (March 2011) https://www.ofgem.gov.uk/publications-and-updates/decision-strategy-next-transmission-price-control-riio-t1

RIIO-T1: Final Proposals for SP Transmission Ltd and Scottish Hydro Electric Transmission Ltd (April 2012) https://www.ofgem.gov.uk/publications-and-updates/riio-t1-final-proposals-sp-transmission-ltd-and-scottish-hydro-electric-transmission-ltd

RIIO-T1: Final Proposals for National Grid Electricity Transmission and National Gas Grid (December 2012) https://www.ofgem.gov.uk/publications-and-updates/riio-t1-final-proposals-national-grid-electricity-transmission-and-national-grid-gas-%E2%80%93-overview

Integrated Transmission Planning and Regulation (ITPR) project (March 2015) final conclusions https://www.ofgem.gov.uk/publications-and-updates/integrated-transmission-planning-and-regulation-itpr-project-final-conclusions

Extending competition in electricity transmission - decision on criteria, pre-tender and conflict mitigation arrangements (November 2016) https://www.ofgem.gov.uk/publications-and-updates/extending-competition-electricity-transmission-decision-criteria-pre-tender-and-conflict-mitigation-arrangements

Update on extending competition in transmission (June 2017) https://www.ofgem.gov.uk/publications-and-updates/update-extending-competition-transmission

Hinkley – Seabank: Consultation on Final Needs Case and potential delivery models (August 2017) https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-consultation-final-needs-case-and-potential-delivery-models

Contents

Executive Summary

Introduction

RIIO is the regulatory framework we use to set price controls and regulate the performance of the network companies. It is an outputs-led framework. In the current electricity transmission price control, RIIO-T1, we've specified outputs for the type and level of network services that the network companies must provide. The price control also restricts the amount of money that the companies can recover through network charges to pay for the delivery of those outputs.

In RIIO-T1, large transmission projects to strengthen or extend the electricity transmission system are generally known as wider works outputs. These are triggered by a need to increase the capacity of the network or to extend the network to accommodate new generation and convey electricity from where it is generated to where demand is located, as well as the need to comply with network security standards.

At the time of finalising RIIO-T1, there was uncertainty around the timing and cost of some large transmission projects which would depend on the level of future generation. The potential impact of this uncertainty on consumers could have been significant given the scale of the investment involved. If these investments had been undertaken earlier than needed this may have led to higher costs for consumers due to unnecessary project financing costs or may have increased the risk of assets being built that turned out not to be fully utilised. Equally, delayed delivery of critical infrastructure could have been detrimental to consumers' interests because this might have led to higher operational costs of managing network constraints; higher greenhouse gas emissions; and possible risks to security of supply.

To help manage this uncertainty, the SWW arrangements were included in RIIO-T1 so that large transmission projects could be considered once more information was available to inform decisions on whether investment in the projects would be in the interests of existing and future consumers.

Overview of SWW arrangements

If a TO wishes to propose a new network upgrade under the SWW arrangements, it must give notice to the Authority that it intends to do so. Following this notification, we will check the proposed project's eligibility. To be eligible, a project must meet criteria for an SWW project concerning amongst other things the level of expected cost and the type of outputs it will deliver.

If the project is eligible, we will undertake an initial needs case assessment at an early stage of the project's development before the application for planning consent. The main focus is a review of the technical requirement for the reinforcement, the

technical options under consideration, and the TO's justification for taking forward its preferred option for further development.

Once the TO has developed its proposed project in more detail we will assess the final needs case which will seek to confirm the need for the project and consider the appropriateness of the connection option selected. This will occur when there is greater certainty over the driver for the project. The final needs case will usually occur after a TO has submitted an application for planning or development consent to the relevant planning authorities for its proposal. In our final needs case assessment, we'll look closely at the factors supporting the need for the new transmission project. This includes the expected increase in generation relative to the existing capacity of the transmission network, as well as forecast costs to consumers if transmission capability is expected to constrain generation. To ensure that the investment case is robust we will also review project uncertainties, eg different generation scenarios. We will also look at whether the technical scope and timing of delivery are well justified relative to other options, and assess whether the proposal is likely to provide long-term value for money for existing and future consumers. To inform our assessment we will consult stakeholders on our views of the final needs case.

Following the final needs case, we will undertake a project assessment where we look in greater depth at the preferred option, the TO's readiness to proceed and the efficient cost allowances that can be recovered from consumers for delivery of the project. We will assess the TO's project programme and risk sharing arrangements to ensure that they will deliver the project efficiently. We will also review the final technical project plans to assess the efficient costs that can be recovered from consumers and specify a new SWW output. We will consult stakeholders on the project assessment to inform our final decision.

Table 1 provides an overview of the different stages in the SWW assessment process along with indicative timings for when we would expect to receive the submissions.

Table 1: Overview of SWW assessment stages

SWW assessment stage	**Anticipated TO submission date**
Eligibility assessment	Not less than 15 months prior to the TO's final planning consultation
Initial needs case	Not less than 9 – 12 months before the TO's final planning consultation
Final needs case	When need for the project is more certain (eg. after the generator(s) driving the need for reinforcement has taken a final investment decision or equivalent financial commitment)
Project assessment	After the TO has submitted its final needs case submission, and typically when the majority of contracts to complete the work are significantly developed

If we conclude positively on all aspects of our assessment, we will implement our final decision by proposing modifications to the TO's Electricity Transmission licence. These modifications will specify a new SWW output for the transmission project and

an adjustment to the TO's allowed expenditure. The licence modifications will also specify a date by which the TO is to deliver the SWW output.

It may take several years from the TOs' initial needs case submission to our final decision and licence modification. The timings set out in this guidance could vary depending on the specifics of the proposal including the maturity and complexity of the project and other uncertainties. Moreover, the timescale for our assessment and final decision is dependent upon receiving timely and complete submissions from a TO for our assessment.

After a TO's licence has been modified with a SWW output, we will monitor the delivery performance. During the construction phase, a TO will report annually to us on its progress against the delivery plan. The TO will need to highlight divergences from the plan and its view of the impact on the scheduled delivery date, expenditure etc, as well as any actions it is taking to efficiently manage the impacts on users and consumers. When a TO has commissioned a transmission project it will need to provide evidence that the works have achieved the SWW output specified in its licence. If a TO does not deliver the specified output or delivers it to a different timescale, we would assess the specific facts of the case, including the potential impact on consumers. Subject to our assessment of the circumstances, failure by a TO to deliver the specified output could constitute a breach of the licence condition. As set out in our recent Mid Period Review (MPR) parallel work decision[5], if licence conditions or other relevant requirements have not been complied with then Ofgem may consider taking enforcement action, which could result in the imposition of financial penalties and/or consumer redress orders.

Links to extending competition in onshore transmission

At the initial needs case stage, or (where a project is sufficiently advanced at the relevant time) at the final needs case stage, we will undertake an assessment of the suitability of a proposed project for delivery through a model intended to secure the benefits of competition. This process will be conducted in parallel to the relevant SWW assessment.

We recently consulted in relation to potential delivery models[6], and intend to do so again in December 2017. Where we decide to deliver a project through a model intended to secure the benefits of competition, depending on the delivery model chosen, we may continue to run a project assessment. We will confirm whether this is the case, and how that project assessment would operate, as and when we make a decision to introduce the delivery model to the project.

[5] https://www.ofgem.gov.uk/system/files/docs/2017/07/mpr_parallel_work_decision-v3.pdf
[6] https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-consultation-final-needs-case-and-potential-delivery-models

1. Introduction

Chapter summary

This chapter explains which parts of the guidance are likely to be of interest to stakeholders. It also gives some background on how the SWW arrangements will help to manage uncertainty in the context of the current price control, RIIO-T1, for the network companies and consumers.

1.1. This document provides information for stakeholders on the SWW arrangements that were introduced as part of RIIO-T1. It amends and replaces the guidance published in 2013.

Who should read this document

1.2. We suggest that all stakeholders with an interest in the regulatory treatment of large new onshore transmission projects read this chapter. This chapter provides further background on the development of SWW arrangements and the interaction with new regulatory arrangements we are developing to introduce the benefits of competition into the delivery of certain onshore electricity transmission projects.

1.3. We also suggest that all stakeholders read Chapter 2 for an overview of how we will assess a TO's proposal for a large transmission project under the SWW arrangements and when we will consult with stakeholders as part of this process.

1.4. Chapter 3 of this document has been specifically written with the TOs in mind. This chapter gives more detailed guidance on the requirements for submitting a proposal to us for assessment under the SWW arrangements. It also sets out our assessment and decision-making approach. We recommend that the TOs refer to this chapter for further detail on the scope of requirements when they are preparing a notification and submissions for our assessment under Special Condition 6I of the Electricity Transmission licence. We also expect the TOs to take into account our assessment and decision-making approach set out in this guidance when they are developing their plans for proposed new transmission projects.

1.5. Chapter 4 explains how we will implement a decision on a TO's proposal for a new transmission project, and how we will monitor a TO's delivery performance.

Background to price controls and the RIIO framework

1.6. One way we protect existing and future consumers is to regulate network companies though price controls. Price controls are needed because in general energy networks are a single provider of network services. To ensure consumers and users get the services they want, we specify in price controls both the services and level of performance that the network companies must provide as well as the total

amount of money the network companies can recover through network charges to consumers and users.

1.7. In 2010 Ofgem introduced a new network regulatory regime called RIIO (Revenue=Incentives+Innovation+Outputs) – a new performance based model for setting the network companies' price controls. To implement the new RIIO model a price control review was undertaken between 2010 and 2012 for the companies that own the high voltage electricity transmission network in Great Britain.

Large transmission projects in the RIIO output framework

1.8. As part of setting the current electricity transmission price control, RIIO-T1, we specified outputs that consumers and users wanted network companies to deliver throughout the price control period.[8] We developed these through written consultation and stakeholder workshops.

1.9. Large transmission projects to strengthen or extend the electricity transmission system are known as wider works outputs in RIIO-T1. In general, these works are triggered by a combination of different generation connections and are required to increase the capacity or extend the network to convey electricity from where new generation is built to where demand is located, as well as the need to comply with network security standards.

1.10. In the output framework, wider works outputs are measured in terms of increases in the electricity transfer capability across system boundaries[9] (or within system boundaries) in accordance with the national security and planning standards for the transmission network, known as the National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS). As part of RIIO-T1 we also specified the amount of money that the companies can spend and recover from users and consumers for the delivery of wider works outputs. Under the RIIO-T1 price control, it is clearer what the TOs are expected to deliver, and what they will be held to account for throughout the price control period.

1.11. In this guidance, large transmission projects are interchangeably referred to as 'large scale network developments', 'strategic wider works', 'SWW outputs' or 'wider reinforcement'.

[8] https://www.ofgem.gov.uk/publications-and-updates/decision-strategy-next-transmission-price-control-riio-t1

[9] A system boundary splits the transmission network into two parts across which the capability to transfer electrical power can be assessed. System boundaries are not network ownership boundaries and each TOs network could contain multiple system boundaries.

SWW arrangements to help manage uncertainty

1.12. In business plans developed for the price control review, the TOs identified some large transmission projects totalling approximately £8 billion (2009/10 prices) that may be needed during the RIIO-T1 price control period. However, there was some uncertainty as to whether the potential wider reinforcements will actually be required as the reinforcements are dependent on generation market developments.[10]

1.13. To help manage this uncertainty we included SWW arrangements as part of the price control settlement to allow a TO to propose large scale network developments and additional funding during the price control period – when more information would be available on whether the investment would be in the interests of existing and future consumers.

1.14. Under these arrangements, the incumbent TO is able to initiate a regulatory assessment of its proposal for a wider reinforcement by providing a notice to us. If we conclude positively on the issues covered by our assessment we will determine a new SWW output and an adjustment to the TO's allowed revenue so that it can recover the efficient costs of delivery from consumers.

1.15. A key advantage of the SWW arrangements is that it ensures decisions are made when sufficient information is available about the drivers, timing and efficient costs of delivering the transmission project. In addition, it enables us to apply proportionate scrutiny, on a case-by-case basis, to our assessment of wider reinforcements proposed by the TOs**.**

Competition in onshore transmission

1.16. As part of our strategy for RIIO-T1, we also considered how competition could be introduced to the development, construction and ownership of transmission assets. We highlighted in our Final Proposals under RIIO-T1 that projects treated as SWW could potentially be subject to competition.

1.17. In March 2015 we made a final decision in the Integrated Transmission Planning and Regulation (ITPR) project to enhance the role of the System Operator (SO) to play an increased role in identifying the long term needs of the system, and to develop and assess options to meet those needs. We also decided that new, separable and high value onshore transmission assets should be subject to competition. In June 2017 we published an update on extending competition in transmission in which we confirmed that we plan to take forward further

[10] In business plans for RIIO-T1, the TOs also identified some network development projects that have greater levels of certainty in terms of the need, timing and delivery costs. In the RIIO-T1 Final Proposals we have set specific wider works outputs and approved approximately a total of £3.7 billion allowed expenditure in baseline allowances for the TOs to deliver these network development projects.

development of the Competitively Appointed Transmission Owner (CATO) regime only once there is greater clarity on the timing of enabling legislation.[11] In August 2017 we set out initial thinking around alternatives to the CATO regime as part of a consultation on the Hinkley-Seabank project.[12]

1.18. As such, at the initial needs case stage, or (where a project is sufficiently advanced at the relevant time) at the final needs case stage, we will undertake an assessment of the suitability of a proposed project for delivery through a model intended to secure the benefits of competition. This is likely to include an assessment of the project against the 'new', 'separable' and 'high value' criteria and will be conducted in parallel to the SWW process. In August 2017 we consulted in relation to the assessment. We may update this guidance in light of this consultation in due course.

1.19. Where we decide to deliver a project through a model intended to secure the benefits of competition, depending on the delivery model chosen, we may continue to run a project assessment. We will confirm whether this is the case, and how that project assessment would operate, as and when we make a decision to introduce the delivery model to the project.

11 https://www.ofgem.gov.uk/system/files/docs/2017/06/update_on_extending_competition_in_transmission.pdf

12 https://www.ofgem.gov.uk/publications-and-updates/hinkley-seabank-consultation-final-needs-case-and-potential-delivery-models

2. Overview of SWW arrangements

Chapter Summary

This chapter gives a non-technical overview of the end-to-end SWW arrangements for wider reinforcements during the price control period. It is intended to provide stakeholders with an understanding of the assessment and decision making process and how this will be informed by consultation with stakeholders.

2.1. The SWW arrangements include:

- the TO's notification that it intends to propose a large new onshore transmission project for assessment;
- our assessment of network development proposals and our process for consulting stakeholders;
- our decision making and implementation process to modify the TO's transmission licence for a SWW output and the additional allowed expenditure it can recover; and
- the monitoring regime that tracks the TO's progress and expenditure during construction and verifies completion of the network development to the required delivery standards.

Strategic Wider Works: Benefits for consumers

The Strategic Wider Works mechanism allows us to consider the need and funding for large transmission projects during the price control period, so that delivery of these outputs can be considered when more information is available. Assessing these projects as they are brought forward by each TO, rather than in the original price control settlement, enhances our ability to assess the specific benefits, costs and risks that each project presents at a stage when the project is more developed and there is more certainty on these issues.

The roles of the SO and TO

2.2. TO's have a statutory obligation to develop and maintain the transmission system in an efficient, coordinated and economical manner. It is for the TO to work with the SO to identify what system reinforcements may be needed to meet the needs of existing and future transmission system users. In 2015 we introduced a licence obligation on the SO to support the assessment of SWW proposals by carrying out a cost benefit analysis of reinforcement options identified by a TO.

2.3. Each year the SO develops the Networks Options Assessment (NOA), which seeks to identify new transmission projects that may be required in the future. The NOA also identifies whether the funding of previously identified projects is still

economic. We expect that the TOs should use the NOA alongside their own analysis to determine which projects are brought to us for assessment and what the optimal timing of delivering these projects will be.

2.4. The technical requirements for planning and operating the transmission system are set out in the NETS SQSS which must be used by TOs to determine the required capability of the transmission system. These criteria are designed to identify the level of transmission capability that ensures adequate reliability, facilitates competition in the generation market and is economic.

2.5. In general, a reinforcement is economic when the cost of the project is less than the cost consumers would otherwise pay were there to be no increase in transmission capability. For example, in the absence of a transmission investment, the SO could manage bottlenecks on the transmission network through paying some specific generators to stop generating and others to turn up to compensate elsewhere on the network where there is available network capacity. If the proposed transmission investment costs more than the long-term cost of constraining the generation, the reinforcement would not be considered economic.

2.6. In considering options, a TO should work with the SO and consider transmission solutions such as a wider reinforcement as well as non-transmission solutions such as contracting with users for availability, or active network management systems that make the most of the real time operational capacity of the existing network.

2.7. Under the SWW arrangements it is for a TO to work with the SO to propose the appropriate timing for reinforcements. The TO can initiate an SWW assessment at any time during the RIIO-T1 price control period by notifying us of its intention to propose a wider reinforcement it considers is necessary. This will then trigger our assessment process, outlined below.

2.8. Only network developments that are of a significant scale[14] will be considered under the SWW arrangements. As a result, we expect a TO should also provide timely information to stakeholders about its proposals, including when its plans change. This is necessary so that stakeholders are able to plan appropriately and consider the impact and timing of any decisions that they need to make in relation to their own plans.

Ofgem's role and assessment

2.9. Our assessment of a new transmission reinforcement project covers four submissions at different stages in the project's development:

- an eligibility assessment
- an initial needs case assessment

[14] See Table 2 later in the document for the SWW cost thresholds.

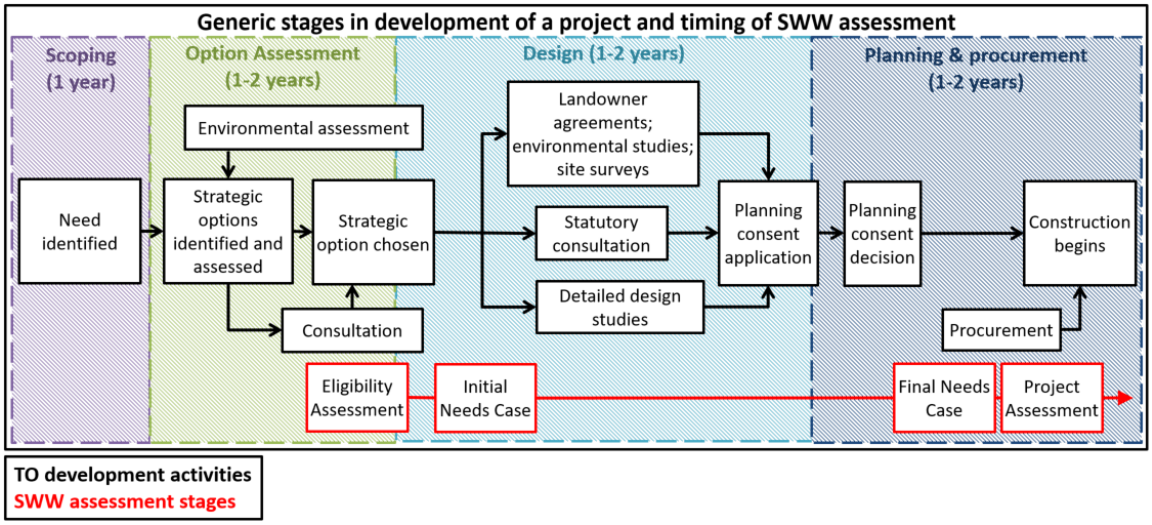
- a final needs case assessment; and
- a detailed project assessment.

2.10. We will adopt an assessment approach that is consistent with the RIIO proportionate assessment principles. This will enable us to focus our efforts on the areas that need the most assessment to ensure that the proposal is in the interests of existing and future consumers.

2.11. When we receive a submission at each stage of the assessment process we will undertake an initial high level review of the submission. The aim of this is to decide whether the submission includes all of the information required for us to carry out our assessment of the proposal. If the submission does not contain all the relevant information we may decide to send the submission back to the TO with feedback on where additional information is required.

2.12. Figure 1 below gives indicative timings for our assessment of a new SWW proposal, relative to the generic stages in a TO's development of a large transmission project. The timing will depend on a number of issues including the scale and technical complexity of the proposal, changes in the needs case and other uncertainties. Typically we expect each of our needs case assessments to take between 6 and 9 months including a public consultation, whereas our project assessment could take up to a year, depending on the size of the project being assessed. We have not included the construction and delivery phase in the diagram as this will vary across different projects.

Figure 1: Indicative timeline of SWW assessment



Eligibility assessment

2.13. When the TO formally notifies us that it is proposing a new transmission project, we will check whether the proposed reinforcement is eligible for

consideration under the SWW arrangements. To be eligible, the proposal must meet pre-defined criteria. These criteria are outlined in more detail in paragraph 3.11 of this document.

2.14. If a project is eligible for SWW, we will work with the TO to agree the timing of, and what will be covered by, our further assessments, starting with the initial needs case.

Initial needs case assessment

2.15. We expect a TO to submit an initial needs case when it has selected a strategic option but before it has completed its detailed project development or held a statutory stakeholder consultation on its planning consent application.

2.16. The purpose of the initial needs case assessment is to:

- verify the potential system requirement for a reinforcement;
- assess whether the TO has evaluated an appropriate range of options;
- assess the economic case for the TO taking forward its preferred option;
- review the TO's approach to deciding on aspects of the project design during its development, eg potential visual mitigation measures;
- set out an indicative timeline for the next stage of assessment based on expected key milestones, eg timing of planning consent decisions and user projects reaching financial close; and
- highlight any other potential issues relating to the proposal to assist the future regulatory assessment of need and costs.

2.17. To verify the system requirement for reinforcement we'll consider the extent to which the existing network can accommodate potential future levels of generation and demand. Where the existing network is unable to accommodate future levels of generation or demand, we will verify the minimum intervention required to maintain compliance with the requirements of the NETS SQSS, licence conditions and/or relevant industry codes.

2.18. We will assess whether the TO has considered a suitable range of investment and operational options. In particular, we'll check that the TO has identified a sufficient range of technically feasible options, and review how it has refined these into a shortlist of options. This will take into account the robustness of cost estimates and other factors that are relevant and supported with evidence. These factors may include wider technical benefits, planning risks, deliverability, environmental impacts, technology risks, supply chain issues, as well as any opportunity for additional economical anticipatory investment to meet future need or deliver additional benefits.

2.19. We will consider whether the TO's preferred option is supported by the cost benefit analysis (CBA) conducted by the SO as part of the TO's SWW submission. This CBA will evaluate the net economic benefit of the options in the TO's optioneering shortlist. This is done by comparing the capital and operational costs to the value of generation constraints that are avoided by each option. To test the CBA

results are robust we also review the cost estimates, the reasonableness of the risks and the delivery programme assumptions, as well as how the options perform under different generation and demand scenarios.

2.20. It is likely that some aspects of a proposed project will not be finalised at the initial needs case stage. For example, the detailed technical design may still be subject to consultation through the planning process, and cost estimates may still be based on high-level estimates. The focus of this review will be on understanding the information/evidence the TO has considered in reaching a decision on the design it takes forward. It will also consider the process by which the TO will ensure that its proposed design remains the most efficient solution as the project progresses.

Competition assessment

2.21. We will assess the suitability of a proposed project for competition[15] at the initial needs case stage, or (where a project is sufficiently advanced at the relevant time) at the final needs case stage. This assessment will be conducted in parallel to the relevant SWW assessment.

Consultation

2.22. We will set out for public consultation our thoughts on the initial needs case, including the options a TO has considered and how it has evaluated these. We will also consult on our views about the potential suitability for competition. We typically expect to consult for a minimum of eight weeks, which is in line with our consultation guidelines.[16] We will consider consultation responses from stakeholders before finalising our views on the initial needs case assessment.

Strategic Wider Works and the design and planning of new transmission projects[17]

In our SWW assessment of new transmission projects we do not design transmission lines or plan how these projects should be built or what routes they should take. This is the responsibility of the TOs, who design the lines within the constraints, and in accordance with the obligations, placed on them by planning regulations and the relevant planning authorities and in accordance with their wider duties in the legislative framework. We do not have a direct role in the planning process. As

[15] For the avoidance of doubt, in this chapter, this term can include the CATO model and alternative regulatory models that are intended to deliver the benefits of competition.
[16] If our consultation approach were to change we would adopt the revised recommended practice. 'Guidance on Ofgem's approach to consultation' is available at: https://www.ofgem.gov.uk/ofgem-publications/37043/guidance-ofgems-approach-consultation.pdf
[17] Our description of the planning process is intended to provide context for the SWW arrangements. It shouldn't be taken as an authoritative explanation of planning requirements.

economic regulator, our role is to consider the investment case for transmission projects and the efficient costs that can be recovered from consumers for delivering the projects.

TOs have an obligation to develop and maintain an efficient, co-ordinated and economical system of electricity transmission. They also have a duty to have regard to the desirability of preserving certain things such as natural beauty or sites of archaeological interest and to do what they reasonably can to reduce unacceptable impacts on these. It is therefore up to the network companies to identify what investment is needed in networks to meet customers' needs in accordance with their legal obligations. The companies are responsible for developing network investment plans and for obtaining the relevant consents from the planning authorities.

Proposals for new transmission lines in England and Wales are classed as National Significant Infrastructure projects. This means that NGET will need to submit a Development Consent Order (DCO) application to the planning inspectorate for the work it is undertaking. The planning inspectorate will make a recommendation to the relevant Secretary of State, who will make the final planning decision on the proposed development. In Scotland, SP Transmission or SHE Transmission must obtain a section 37 consent from the Scottish Ministers for any new transmission overhead lines.

The purpose of the planning process is to manage the development of new infrastructure and the related impacts on the local countryside and community. If the planning authority considers a proposed development is likely to have unacceptable impacts, it can require the network company to alter its proposal or to include alternative technologies or other mitigations as a condition of the planning consent. Alternatively, the planning authority can refuse consent if it considers alternatives or mitigation options would not be sufficient to satisfactorily address adverse impacts of the development.

The planning regulations in England and Wales and in Scotland require network companies to take stakeholders' views into account. This means that the companies must consult key stakeholders and the affected community on its proposals and the potential impacts of these. Through this interaction with stakeholders on the proposed development, the network companies may identify where further mitigation measures or alternative routeing is needed in order to secure consent for its proposal.

As part of our SWW assessment of projects, we will take into account the outcome of the above planning process in assessing the costs the network companies are allowed to recover from consumers for projects.

Final needs case assessment

2.23. The final needs case submission is made after the project design is close to fully developed, stakeholder consultation is completed and a planning application is either with the relevant planning authority or already approved.[18]

2.24. The objective of our final needs case assessment is to confirm whether:

- there is a well justified need for reinforcement of the transmission system;
- the delivery timetable is appropriate;
- the technical scope and design of the option for reinforcement being proposed is appropriate and is reflected in the cost assessment; and
- the proposed reinforcement is in the interests of existing and future consumers.

2.25. To assess whether the proposal is well justified we will review developments in the drivers for the proposed reinforcement since the initial needs case and consider if these have changed the system requirement for a reinforcement. We will also consider how the TO has adjusted/reviewed its proposals, and the reasons for any changes, and how the TO has reviewed the merit of the modified proposal relative to other available options.

2.26. We also need to be satisfied that the investment case is robust in the context of government energy policy, and against a range of credible uncertainties such as the level of future generation capacity connecting to the network. Our assessment of these issues will be informed by information on the current transmission network and projections of the generators expected to connect in the area in the future.

2.27. Our final needs case assessment will be informed by a cost benefit analysis of the proposal by the SO.[19] The CBA will evaluate the economic net benefit to consumers of a network reinforcement compared to the counterfactual that no reinforcement is undertaken. The CBA will also assess the performance of the TO's preferred connection option against other technically viable alternatives.

2.28. An important aspect of our assessment is examining the appropriateness of the core assumptions, the economic estimates used to cost these assumptions up, and any other inputs used in the CBA modelling. For example, we will consider the sensitivity of the results where there is uncertainty about key assumptions or modelling inputs that underpin the investment case. This could include different

[18] It is our intention that all projects should be subject to an initial needs case assessment. However, under certain circumstances it may be more appropriate to progress a project straight to a final needs case. In such cases the final needs case may examine certain areas of the project in more detail than it usually would. For projects that were not subject to an initial needs case, we will assess the project's suitability for competition as part of the final needs case in line with the process described in the 'initial needs case' section of Chapter 2.

[19] This should be a revised CBA to take account of any changes to the project or generation background since the CBA conducted as part of the initial needs case.

generation scenarios, the future cost of constraint payments, as well as other inputs such as changes in capital cost estimates or the timing of other reinforcement projects on the transmission system.

2.29. The TO should also provide its assessment on the optimal timing of the network development and how this takes account of risk to consumers. We will review supporting information on the critical path of delivering the reinforcement, and any practical considerations such as supply chain issues and network availability. Our general approach to assessing the optimal timing of proposed transmission developments is to compare the potential costs to consumers associated with delivering capacity too early (incurring financing costs earlier than necessary and risk of asset stranding) or too late (increased constraint costs).

2.30. To assess whether the technical scope of the proposal is justified we will review technical power system studies[20] of the level of transmission capability that is required to meet future generation and comply with security standards. We will also assess the TO's evaluation of options that could provide the additional transmission capability. The latter should include evidence on the relative merits of each option against key factors considered, such as capital costs, technical benefits, planning risks, environmental impacts, technology risks, supply chain issues and economical anticipatory investment to meet future need.

2.31. We will consult stakeholders on our final needs case assessment of proposals made by a TO. We typically expect to consult for a minimum of eight weeks which is in line with our consultation guidelines. We may run longer or shorter consultation periods from time to time, in line with our consultation guidelines, taking into account the complexity, scale, cost and urgency associated with a proposed SWW output.

2.32. After considering stakeholders' views and undertaking any further assessment we think is needed, we will publish a letter setting out our views on the final needs case, which will usually include a minded-to position. This will be subject to review following our detailed project assessment on the efficient costs of delivering the new SWW output.

Project assessment

2.33. In contrast to the initial and final needs case assessments, the project assessment will only look at the preferred reinforcement option and it will do so in greater depth. The objective of our project assessment is to assess whether:

- the TO has developed a sufficiently robust delivery plan and risk sharing arrangements to deliver the proposed output efficiently; and
- the technical option and costs are efficient.

[20] We typically expect these to be produced by the SO.

2.34. Our assessment will be informed by detailed information provided by the TO on its procurement strategy, construction programme and costs, delivery plan and risk mitigation strategies. In considering the efficiency of the proposal we will use a number of approaches, including benchmarking costs, where comparable data is available. In other areas, where it is more difficult to apply such techniques, our assessment will evaluate the TO's procurement strategy and the extent to which this is likely to lead to an appropriate market-tested outcome.

2.35. We will also assess the robustness and appropriateness of the TO's evaluation of and proposed approach to allocating risk and the costs of managing those risks. An important factor is the extent to which it has been possible for risks to be allocated to the party best placed to efficiently manage them and whether there is an appropriate balance between TO and consumer risk allocation. We will also assess whether there is a sufficiently robust construction programme and that progress has been made towards being ready to proceed within the proposed timescales.

2.36. We will consult stakeholders on our project assessment, typically for an eight-week period. This consultation will help inform our final decision on any appropriate outputs and allowed expenditure adjustment that is to be made.

2.37. After considering stakeholders' views and carrying out any additional assessment we consider necessary we will make a determination on the SWW outputs and on an adjustment to the TO's allowed expenditure to deliver the output. We will set out our determination in a decision letter.

2.38. If we determine that allowed expenditure should be given for a specific output, the decision letter will include details of:

- the new SWW output as measured by an increase in boundary transfer capability or equivalent additional transmission capacity where there is no existing boundary;
- the adjustment to the TO's allowed expenditure it can recover from consumers and further detail on the treatment of risk allocation between consumers and companies; and
- the required timescales for the new output to be delivered.

Implementation, construction and delivery

2.39. Please refer to Chapter 4 for more detail on the regulatory processes and requirements to implement a positive decision on a new wider reinforcement and a TO's reporting requirements during the construction and delivery stages.

Summary of SWW arrangements and timings

2.40. Appendix 1 summarises the end-to-end arrangements for the assessment, implementation and delivery of an approved SWW output.

3. Assessment of proposed Strategic Wider Works

Chapter Summary

This chapter is aimed primarily at the TOs. We set out in more detail the relevant issues we will consider in each assessment area and the relevant information we are likely to need from the TOs to inform our assessment.

Introduction

3.1. Our assessment of the wider reinforcements proposed by a TO under the SWW arrangements is set out in Special Condition 6I of the Electricity Transmission licence. It broadly covers:

- the eligibility of the proposed reinforcement under the SWW arrangements;
- the assessment of the initial and final needs cases for a proposed SWW output; and
- an assessment looking at the detailed technical plans and the efficient costs of delivering the proposed reinforcement, including risk management.

3.2. While each assessment area covers distinct issues, there is a degree of interaction between our assessment of the needs case (both initial and final) and the detailed project plans and costs. For this reason, we anticipate some overlap in our assessment. One advantage of this approach is that it may help to reduce the overall timescale of our assessment.

3.3. We are committed to consulting and reaching conclusions on the needs case and project assessment areas when we have sufficient information to do so. During the different assessment stages we wouldn't normally expect to revisit areas of our assessment where we have previously found that no further work is required. However, given the possibility of new relevant information coming to light such as changes in government energy policy or other important factors, we expect that the assessment and decision making process may be iterative in some cases. Accordingly, initial views and conclusions reached on particular issues in our assessment will not fetter our discretion to make the final determination on the SWW outputs and any associated adjustments to allowed expenditure under the RIIO-T1 price control at the end of our overall assessment.

3.4. For the avoidance of doubt, we emphasise that the information specified in each assessment area below is not intended to be an exhaustive checklist or structure for a TO's submission. Rather, it should be seen as a guide to the information that we consider to be relevant in light of the issues we intend to consider in each assessment area. As each project is unique, the information required will vary between projects. We expect a TO to consider carefully the

supporting material it considers appropriate to our assessment to ensure that it makes robust submissions for the project. It is the TO's responsibility to ensure it includes sufficient information in its submissions to enable us carry out our assessment.

3.5. If we consider that a submission does not contain all the relevant information that we need to carry out our assessment, we may decide to send the submission back to the TO. We expect such 'send backs' to be the exception rather than the rule and this guidance document is intended to provide the TOs with sufficient detail on what is to be included so that this can be avoided wherever possible. We expect to set out to the TO the areas needing improvement and/or any additional information that we need to commence a needs case assessment following an initial review.

3.6. There is some crossover between the information provided by a TO for the different stages of our assessment and the exact requirements could vary depending on the particular project. Moreover, as there could be a significant period of time between the different stages of our SWW assessment it is important that the TO includes up-to-date information at the time of each submission rather than relying on information provided in a submission for an earlier assessment stage.

3.7. It is not intended that this guidance is taken as a substitute for any statutory, licence or other relevant requirements. Therefore, TOs should read this document in conjunction with any relevant statutory obligations and Special Condition 6I of the Electricity Transmission licence.

General principles and requirements

3.8. The provision of timely and complete information by the TO in respect of a new proposed SWW output is very important. As set out in Special Condition 6I we will only be able to start assessing the case for a proposed SWW output when a TO has provided us with the relevant information required to inform our assessment.

3.9. The quality of the information submitted, the robustness of the data within it, and how well it is justified, will also influence the degree of regulatory scrutiny we apply during our assessment. To help the SWW assessment process run as smoothly as possible, it is important that TOs meet a number of general requirements:

- Keep us updated about the expected submission schedule for at least six months in advance and ideally beyond, including when it expects to make a new submission, or if there are changes to the timetable that the TO has previously advised us of.
- Identify whether there will be any joint working with other TOs or distribution network owners (DNOs) in the delivery of the proposed SWW output.
- Provide complete and navigable submissions that do not rely on the cross-referencing of information provided previously to Ofgem for some other purpose or given in a previous submission that was subsequently withdrawn.
- Maintain an assurance system for the quality and completeness of information submitted to us, eg senior management sign off on all submissions.

- Clearly identify and justify the validity of assumptions used in supporting analysis.
- Keep the submission up-to-date throughout our assessment period and actively provide us with the most up to date information and version of documents such as status of generators in area, risk registers, construction schedules etc in a timely manner.
- Inform us as and when changes are made to key assumptions and provide a log of the impacts of such changes on the supporting analysis and results.
- Respond in a timely manner to requests for further information, ensuring that the information provided is complete, accurate and addresses the issue or question being raised.
- Proactively engage with stakeholders including other TOs, seeking their views and providing them with timely updates to changes in its plans in relation to proposed SWW outputs.

Eligibility

3.10. A TO will trigger the SWW assessment process by notifying us under Part F of Special Condition 6I of the Electricity Transmission licence that it is proposing a new network reinforcement. In its notice, the TO must show that the proposed reinforcement meets the eligibility criteria set out in the following paragraph for assessment under the SWW arrangements.

Relevant issues for Ofgem to consider in its eligibility assessment

3.11. When we receive the notification and supporting information, we will review the TO's proposal against the eligibility criteria for SWW assessments that we set out in RIIO-T1 Final Proposals as follows:

- the output will deliver additional transfer capability capacity across system boundary (or within boundary) or wider system benefits;
- the costs cannot be recovered under any other provision of the TO's price control settlement; and
- the total expected delivery cost is greater than the threshold specified for each TO as shown in Table 2 below.

Table 2: TO-specific cost thresholds for SWW outputs

Company	Cost threshold
Scottish Hydro Electric Transmission Plc	£50m
Scottish Power Transmission Ltd	£100m
National Grid Electricity Transmission Plc	£500m[21]

[21] The Networks Options Assessment, updated annually by National Grid, outlines that projects with a smaller capital cost may be considered as an SWW project if specific criteria are met.

3.12. In some instances, where a proposed reinforcement has already been shown as suitable for assessment under the SWW arrangements (for example, those we listed as a prospective SWW output in the RIIO-T1 Final Proposals for a TO), we may not review the eligibility of the proposal (unless the proposed reinforcement has changed significantly).

3.13. If a proposed project is to be undertaken jointly between more than one TO we will also consider if there is sufficient coordination between the TOs for the efficient planning and delivery of a project. Therefore, we expect all TOs to participate in the initial notification to us. This will also help us determine what information will be required from each TO or jointly in each part of the assessment and to inform the overall assessment timeline.

3.14. We will also review the TO's proposed timetable for the project's critical path and for providing us with the relevant information we need to conduct the remainder of the assessment. A key issue we want to consider is whether there are any implications arising from the TO's proposed delivery timetable for our assessment approach and timetable under the SWW arrangements for that project.

3.15. At this stage of the process, we will assemble a project team which will work together on each stage of the assessment. This team will liaise directly with the TO to discuss the proposed reinforcement and agree with the TO on information requirements that are specific to the proposed reinforcement.

3.16. In general, we do not expect it will be necessary to consult with stakeholders on the initial eligibility assessment, before we consider the substantive proposal.

Relevant information for the TO's eligibility submission

3.17. The TO's notification needs to demonstrate how the proposed SWW output meets the qualification criteria for assessment under the SWW arrangements. It should also provide sufficient information on the overall delivery timetable and the proposed project's critical path. The notification should include, but is not limited to:

- A measure of the proposed SWW output in terms of the increase in transmission transfer capability across system boundaries or sub boundary and/or other wider system benefits.
- Confirmation that the project has not been funded as part of the current price control settlement or other funding.
- Estimates of total delivery costs, excluding the costs of pre-construction activities undertaken by the TO to develop the technical design plans and obtain the necessary planning or development consents in preparation for constructing a SWW output.
- An indicative timeline for the project delivery including the expected timing for awarding key supply contracts.
- A timeline for the TO to provide further information submissions to Ofgem (i.e. when it expects to provide submissions for the three stages in our SWW assessment).

- Details of the proposed working arrangements between the TOs (eg a formal joint venture or other forms of co-operation) if the project is to be undertaken jointly between more than one TO.
- Details of the proposed working arrangements and underlying obligations between the TO and a DNO if the proposed reinforcement will involve significant involvement from the latter.
- Any other analysis or information that the TO considers to be relevant to the Authority's determination of its request.

Scope of Ofgem's conclusions on the eligibility assessment

3.18. If the proposal meets the eligibility criteria, we will work with the TO on an indicative timetable for our assessment of the initial and final needs case and detailed project assessment. In coming to a view on the assessment timetable we will consider the TO's timetable for providing all relevant information and the TO's timetable for delivering the project. This timetable would be subject to further review as our assessment progresses. It will also depend on the timely provision of information by the TO(s). Likewise, Ofgem will aim to review new information in a timely manner.

Initial and final needs case assessments

Ofgem's assessment of the needs cases

Timing

3.19. Our assessment of the needs case for new SWW proposals will generally involve two stages - an initial needs case and a final needs case assessment.[22]

3.20. We expect a TO to submit an initial needs case when it has selected a strategic option but before it has completed its detailed project development or held a statutory consultation on the project for its planning consent application.

3.21. The final needs case submission will occur later in the project development, after the TO has developed a detailed project design, completed its stakeholder consultation and when the planning application is either with the relevant planning authority for decision, or has already been approved.

[22] It is our intention that all projects should be subject to an initial needs case assessment. However, under certain circumstances it may be more appropriate to progress a project straight to a final needs case. In such cases the final needs case may examine certain areas of the project in more detail than it usually would.

Scope

3.22. Consistent with the assessment objectives set out in Special Condition 6I our assessment of the initial and final needs case will examine a number of issues, including but not limited to:

- The validity of the technical requirement for reinforcement.
- Whether the TO has considered a reasonable range of the technically feasible options and / or operational measures to meet the network requirements.
- The quality of the TO's optioneering, focusing on the justification for shortlisting options based on cost and other relevant considerations that are supported by evidence.
- Whether there is a strong economic case for proceeding with its preferred solution, i.e. is it the most economical, efficient and coordinated solution relative to other options and is it in the interests of existing and future consumers overall.
- Whether there is a robust requirement for the reinforcement and optimal timing, given potential uncertainties about the level of generation connecting, constraint costs and demand projections.
- The validity of the assumptions and inputs used in the quantitative analysis.
- Whether the cost benefit methodology is appropriate and the sensitivity analysis is well justified.
- Whether the methodology for estimating the costs of options is appropriate and allows a fair comparison between the different options.
- Other potential issues relevant for the project including the appropriateness of the SWW provisions to review project costs in the event that specific project issues and risks occur.

Competition assessment

3.23. We will assess a proposed project for competition[23] at the initial needs case stage, or (where a project is sufficiently advanced at the relevant time) at the final needs case stage. This assessment will be conducted in parallel to the relevant SWW assessment.

Consultation

3.24. We will consult stakeholders on the issues considered in our assessments. In general, we will consult for a minimum of 8 weeks.[24] We will consider stakeholders' responses before finalising our views on the project.

[23] For the avoidance of doubt, in this chapter, this term can include the CATO model and alternative regulatory models that are intended to deliver the benefits of competition.
[24] We may vary the consultation period where appropriate, in line with our consultation guidance.

Relevant information in the TO's needs case submissions

3.25. As detailed in Special Condition 6I, the TO will submit information to inform our needs case assessment of the project. It is the TO's responsibility to provide us with all relevant information and to make a robust case for the project. The requirements set out below provide an overview of the sort of information that we would expect to assess at each of the needs case stages. Prior to each assessment we will engage with the TO to determine exactly what information we will require.

3.26. As noted previously we expect the information set out below to be relevant to the issues we will consider. However, the TO should not limit its submission to the points listed in paragraphs below. It should consider in each case whether there is additional material likely to be relevant to our assessment.

3.27. A TO should expect to cover all of the areas of evidence set out in the paragraphs below in both its submissions for the initial needs case and the final needs case. However, the amount/type of detail required on the different areas of evidence will likely differ for the initial and final needs case assessment. This is because the proposal will be at a different stage of development when each stage of the assessment is carried out. For example, the initial needs case will likely focus on the technical capability issue, the TO's optioneering of the strategic options, and the initial CBA. The final needs case will focus on developments after the initial needs case including, for example, progress with planning consents, the detailed project design, drivers that confirm the need and timing for reinforcement, and an updated CBA of the economic merit of the proposal relative to other options.

3.28. The TO's submission should include evidence on the technical requirement and scope of the proposed reinforcement, including:

- Details of the existing network configuration and characteristics, including circuit rating of existing circuits, current generation and demand as well as whether the boundary is currently compliant with planning standards (NETS SQSS).
- Expected future demand and generation scenarios. Details on the type of generation and geographic distribution across the area, as well as any local arrangements or agreements with developers regarding transmission export restrictions that permit using intertrips and commercial agreements. Any other factors that might affect the local load factor such as planned maintenance, outage regimes, energy storage etc.
- Information on the power flow restrictions which require addressing through reinforcement or operational action (including information on the specific nature of the restrictions). Identification of the specific SQSS, licence condition and relevant industry codes that need to be complied with.
- The strength of user commitment, including supporting evidence on historical rates of termination and the slippage in the timing on contracted generation connections.
- Analysis and explanation of what would happen without the added investment.
- An explanation of the policy context and how it has helped to inform the choice of options and the timing of reinforcement.

- An explanation of the assumptions used in the submission.
- Where a proposal is an iteration of a previous submission, an explanation of any changes made (eg changes in cost, change in scope or technical design).

3.29. Evidence on the options considered and the TO's preferred solution, including:

- A full description of the options considered including potential transmission and non-transmission solutions (eg active network management). This section should include both investment and operational transmission solutions and indicate the maximum transmission capability increase that can be achieved from each solution and the technical limitations associated with each option. This should be independent of issues such as route options, planning or cost implications.
- An evidenced appraisal of the reinforcement options (optioneering) covering lifetime costs, NETS SQSS compliance, technical complexity, lead times, environmental impacts, amenity values, impact on security of supply, delivery and planning and other risks and option values.
- An explanation of the TO's appraisal methodology, including the information and evidence the TO has considered, and the weighting attached to the different factors.
- Consideration of potential benefits and risks of future proofing, eg including some anticipatory investment.
- Explanation of the capital and operational cost estimates for each option, and reasons for significant changes from earlier cost estimates.
- A justification for the shortlist of options to be included in the cost benefit analysis.
- Where relevant, quantitative analysis to demonstrate the extent to which consumers are willing to fund designs that go beyond the minimum cost consentable solution (eg through the use of willingness to pay surveys and analysis)

3.30. Evidence on the expected long-term value for money for the consumer, including:

- A Cost Benefit Analysis (CBA) of the shortlisted reinforcement options. This should focus on the monetised costs and benefits for consumers across different scenarios for future generation.
- An explanation of the methodology and assumptions used in the CBA.
- CBA results on the expected net economic benefits of the reinforcement options. Additional analysis looking at the sensitivity of the results to key inputs and assumptions such as the volume of generation and demand projections, discount rates and constraint volumes and costs.
- The modelling of the CBA. The model is a fundamental piece of evidence supporting the needs case and should be reviewed by Ofgem. The submission should include, but not be limited to, a working spreadsheet of the CBA, details of the inputs, outputs and calculated constraint volumes from the CBA, and any modelling of key assumptions. Limitations on the transparency of modelling and/or inputs may undermine the credibility of the submission.

- Relevant information provided by the SO which has been used to inform the analysis on the proposed reinforcement.

3.31. Evidence on the optimal timing of the reinforcement, including:

- An assessment of the key uncertainties underlying the timing of the transmission reinforcement, including CBA results for different delivery dates and a range of generation scenarios.
- Analysis of the merits of different delivery dates under various scenarios. This should include least worst regret analysis.
- Description and explanation of factors that have driven the decision on timing. This should include making clear, and providing evidence of, the extent to which factors such as availability of resources and supply chain constraints have influenced the timetables.

3.32. Project timelines and the delivery strategy, including:

- A delivery plan/schedule, including the project lifecycle, lead times and key milestones.
- An explanation of the TO's procurement strategy (eg the objectives, operating structure, how the TO will maximise value for consumers, supplier strategy, risk management, post-delivery evaluation, key procurement milestones).
- The proposed scope of any material works related to its project that are being undertaken by another TO, a DNO, or other third party. An outline of the arrangements and obligations that are in place to ensure all parties work effectively to ensure that the scope of the works being delivered is appropriate and that they are delivered efficiently.
- An assessment of the supply chain availability for the preferred solution, eg setting out any significant constraints or supply issues.
- An overview of the risk profile of delivering the competing reinforcement options, eg potential planning sensitivities, supply chain issues, cost uncertainties, weather related risks and risks to consumers, such as technology risks or delays in delivery. The TO should also include a detailed description of how they intend to manage these risks.
- An explanation of how lessons learned from previous projects will be applied to the proposed SWW project.

3.33. Evidence on the quality of the TO's stakeholder engagement on its proposal, including:

- The TO's stakeholder engagement plan and the range of stakeholders that involved.
- The range of stakeholders' views on key aspects of the proposal.
- An explanation of where stakeholders' views have informed the proposal, and where the proposal differs from the views of stakeholders and the TO's justification for this.

Ofgem's minded to position on the needs case assessments

Initial needs case

3.34. Following a public consultation on our initial needs case assessment we will publish our initial views on the areas covered by our assessment. Alongside our views on the initial needs case assessment, we will also set out our views on the suitability of the project for competition.

Final needs case

3.35. Where possible, we would like to be able to arrive at a minded to position in part or whole following our final needs case assessment. Our minded-to position would be subject to concluding positively on related issues in our project assessment or other such issues that we might specify as relevant during the assessment period. For example, we may wish to verify the CBA with the market-tested cost data that is submitted as part of the project assessment, or other related conditions such as obtaining relevant planning consents.

3.36. In some instances we may not consider it appropriate to come to a minded-to position following the consultation on the final needs case. This could be the case for example if stakeholders have significant concerns in response to the consultation or raise additional significant issues that require further assessment before we can come to a minded-to position.

Project assessment

3.37. When a project is assessed under SWW we will expect a TO to address all of the areas identified in this section. Where we decide to introduce a model intended to secure the benefits of competition into delivery of an SWW project, depending on the delivery model chosen, we may continue to run a project assessment. In such cases we will provide specific guidance on a case-by-case basis regarding our expectations for the provision of information at project assessment and in relation to any changes to the TO's licence.

3.38. **For the avoidance of doubt, the remainder of this chapter, and chapter 4, are intended to provide information on the treatment of projects under SWW, ie where we have not decided to introduce or seek to approximate the benefits of competition.**

3.39. The project assessment will look at the preferred option in greater depth. As part of this we will focus on the TO's readiness to proceed with delivery and the efficiency of the total forecast costs of construction and other elements, including risk contingencies.

Timing

3.40. The TO should not submit its project assessment submission until:

- the project has been fully developed and the TO has confidence in its cost estimates;
- the TO has received its final offers from external suppliers, and the TO can provide clear evidence on its subsequent negotiations leading to signing (we expect contract award and signing will be concurrent with our project assessment, so that costs being assessed are firm).

Scope

3.41. It is ultimately the TO's responsibility to provide us with all relevant information to inform our assessment. It is for the TO to make a robust case for the proposed reinforcement. We expect the information in the areas set out below to be amongst the issues relevant to the project assessment.

3.42. Consistent with the aims set out in Special Condition 6I, our project assessment will examine the efficiency of the proposed costs and technical readiness to proceed with a proposed SWW output. We will consider a number of issues, including but not limited to:

- Whether there is sufficient detail on the technical design to demonstrate that the costs are efficient and that any optional capabilities included in the proposal represent long-term value for money.
- The robustness of the TO's process for procurement and selection, and whether this process had been efficiently applied and could be expected to lead to an efficient outcome.
- The efficiency of the proposed costs, taking into account the conclusions on the above and any additional detailed cost assessment including benchmarking of specific elements.
- The evaluation of risks, and the appropriateness of the proposed risk management strategy including the allocation of risks and the associated costs.
- The appropriateness of the construction programme and progress made towards being ready to proceed in the proposed timescales.

3.43. We will consult stakeholders on the relevant issues considered in our Project Assessment and our initial views on the SWW output that the TO would be required to deliver and the efficient delivery costs and treatment of risks. We will also highlight where our assessment has shed further light on the relevant issues considered in relation to the needs case and/or conditions attached to a previous minded-to position on the needs case. Stakeholders' responses will also help to inform our initial views.

Relevant information for the TO's project assessment submission

3.44. In line with the indicative assessment timetable, the TO will need to submit detailed plans and information showing the TO's readiness to proceed with the proposed SWW project and showing that the proposed costs of delivering the output are efficient. Moreover, we will expect to see detail on the technical design, a delivery strategy, and details of how the TO will manage risk. The TO should accurately complete the associated cost templates. These templates can be modified prior to submission to better reflect project specific characteristics subject to sufficient engagement beforehand. It is important that all relevant information is provided as part of the Project Assessment submission. As such the TO should include copies of all documents referred to in the submission.

Structure of the project assessment submission

3.45. The project submission should be well-structured, evidenced and justified to provide a robust case for the costs, and their drivers, to be funded. We suggest the TO provides the following at a minimum. (Additional information submitted beyond the items listed below must be relevant to the project's management and case for cost allowances.)

- A submission narrative
- Completed cost templates
- Technical summary
- Procurement processes followed, tendering information and any major signed contracts and details of final offers (immediately prior to signing)
- Delivery strategy and risk management
- Role of 3rd parties in successfully delivering the project
- Associated evidence

Submission narrative

3.46. The TO should provide the submission narrative (in Word and PDF versions) to summarise the project costs, explain the structure of the submission, and detail the cost drivers of each element. Particular explanations should be made in areas that might drive costs away from industry standards. The narrative should sign-post the overall submission, including:

- Structure of the overall submission, including a comprehensive reference guide of any associated documents (eg studies) and their relevance in the submission.
- Details of the procurement strategy followed (eg the objectives, operating structure, how the TO will maximise value for customers, supplier strategy, risk management, post-delivery acceptance testing) and the procurement timetable and selection process, specifying whether the project will be a turnkey solution or delivered through multi provider contracts, and providing details of the supply chain and any supply constraints. A summary of key areas of negotiations with potential suppliers.

- Risk management throughout the project, how it relates to the contracting approach taken, and specific actions to mitigate and control risks during the project.
- Evidence that the costs are efficient, eg through cost benchmarking, market testing, or competitive tendering.
- An explanation of any changes in costs from previous submissions.
- A description of the cost methodology (eg estimates, market testing, benchmarking) and a comparison, where possible, to historic costs in carrying out similar projects.
- An explanation of which cost components have been acquired though a competitive tendering exercise. If applicable, provide secure access to tender documents, details of the preferred bidder proposals and second proposals including the scores awarded in the tender assessment process.
- An explanation and a summary of any contingencies and other factors included in the cost of individual items eg insurance.
- Clarify which contracts have been awarded and provide a timetable for those which are to be awarded in the future.
- Once the contracts have been awarded a copy should be provided to us so that we can see the final costs, and contract terms.

3.47. The narrative should also include information on the business structure, where relevant (eg establishment of subsidiary companies), including but not limited to:

- Legal form of the ownership and operational vehicle (is it an incorporated or unincorporated joint venture, or other), and how this fits within existing ownership and licensing framework.
- Currency that the project and company accounts will be denominated in.
- Whether contracts are procured on a joint or individual basis between the TO and any associated developers, and information on which the cost submission will be based (i.e. joint EPC for whole project).
- Where any project revenues will be received outside of RIIO-T1 price control mechanisms, in which currencies and on what basis.

Cost templates

3.48. The TO should provide a breakdown of all costs and cost schedules associated with the project (eg land, capital investment, expected maintenance, refurbishment, part and full replacement of assets), with reconciliation to the cost templates. This should be done by completing an Excel cost template spreadsheet. This includes a summary tab of the entire project construction costs and separate tabs/sheets with a cost disaggregation for each asset type (eg overhead line). These high level costs should be indexed to supporting spreadsheets (or tabs in the same spreadsheet) to show the calculations and assumptions that have been used (including relevant units, price bases and time profiles). References should be made from any of these, in turn, to any supporting contract terms and quotes, studies, reports or other relevant documents that provide the evidence base. Any source data from the contractor should be provided to Ofgem in original format.

3.49. We expect a clear indication of the 'firmness' of each cost (i.e. whether the cost is fixed, fixed subject to agreed variations, hedged, variable or estimated, etc). Our classification for this 'firmness' (input into the first blank column alongside the data, for each cost item) is as follows:

	Classification	Description	Supporting documentation required
1	Fixed	The cost has been incurred, is not subject to change and has supporting documentation matching the amount.	Contract/bill with supporting documentation of payment made. Fully auditable if needed.
2	Agreed, but re-measurable	The cost has been agreed or estimated, but is subject to according to a clear and agreed variation process. Changes only driven by unforeseeable circumstances.	Contract/bill with supporting documentation of payment made/to be made. Fully auditable if needed.
3	Agreed, but will be re-measured based on known future information received	The cost has been agreed or estimated, but will be subject to change due to clarifying the scope of works or due to additional surveys and assessments being undertaken. As above, changes should follow a clear variation process.	Contract/bill with supporting documentation of payment made/to be made. Rates auditable, volumes subject to change based on quantifiable and foreseeable factors.
4	Estimated	Cost estimated on the basis of assessments and actual surveys and using experience and examples from other projects.	Spreadsheet with the calculations (methodology), assumptions and evidence base. Emails/minutes of meetings with specific mention of the variables that have been used in calculating these estimates, the person and company providing the calculations and information. List of surveys done as well as documentation of the surveys.
5	Early estimate	Costs estimated through modelling cost ranges from different projects and past experience.	Spreadsheet with the calculations (methodology), assumptions and evidence base. Emails/minutes of meetings with specific mention of the variables that have been used in calculating these estimates, the person and company providing the calculations and information. List of surveys to be performed to increase the confidence of the cost estimates.

Technical summary

3.50. A technical summary should be submitted, detailing the scope of the project. For example, this would cover the route (eg maps, including of any known utility crossings etc) and landing points. As above, each area should be indexed to the supporting documentation.

3.51. The technical case should provide, at a minimum:

- A description of the construction works.
- Details of any changes in design since earlier submissions, with explanations and associated evidence, if appropriate.
- An appropriate level of detail on technical designs (eg substation layout) and construction techniques to be used in the project, with the expectation that

more detail would be provided if design and/or construction activity is technically challenging, novel, or a cause for divergences in cost relative to industry benchmarks.
- Detail on any optional capability that is included in the technical proposal and justification for its inclusion.

Information on procurement and contracts

3.52. All procurement and tender information that has been shared during the procurement rounds should be included as appendices or supporting documents. The information should present how many bids were received, on what terms and prices, and the process that was followed and justification applied for selecting a preferred bidder, as well as deselecting the others. The following information should be provided:

- Project specifications (what was tendered)
- Original ITT issued. We may ask for full copies or parts of the tenders returned
- Documents from any additional rounds of tendering, with description of any changes to the ITT or the tenders and a comparison table to clearly see a summary of the bids and how they changed
- Outline of any relevant award criteria or negotiations in the selection process
- Justification for the chosen contractor in the form of a standardised and quantified comparison. Clear estimated value ranges have to be presented for "difficult to quantify" selection criteria
- Any variation orders since signing major contracts
- A summary table of the entire procurement process to show the chronological sequence of events and actions, including all the dates, actions taken or comments by the contractor and actions taken or comments by the developer.
- Signed contracts for all major construction sub-projects must be included.

Delivery strategy and risk management

3.53. The TO should outline its approach to delivery and risk management. This should include:

- A description of the delivery model and a detailed delivery plan/schedule with key dates and critical paths clearly identified.
- Evidence of readiness to proceed, eg details of delivery team structure, roles and responsibilities.
- Details of the company's previous experience in managing similar projects and how learning from previous projects (if applicable) will inform proposal, eg lessons learnt on previous risk mitigation strategies.
- The delivery risk profile of the proposed project, and an assessment of the key risks, and uncertain costs. An up-to-date risk register should be included along with details of how the risk register has been derived and the process for updating it (including audit trail).
- The risk mitigation strategy and risk sharing arrangements, including what costs and risks have been included in supplier contracts, and why this

represents an efficient level. All incentives in the contract to encourage the supplier to deliver on time and to budget should be highlighted, eg arrangements to pass through any potential regulatory penalties to the supplier through the contract.

- Details on the level of contingency risk that is included in the proposed costs and justification for why this is an appropriate level given other risk sharing mechanisms such as RIIO-T1 efficiency sharing factor and the Cost and Output Adjusting Event provisions that are part of the SWW arrangements.
- A summary of the insurance strategy and any signed or near-signed contracts. This should include what factors are insured against.
- Information should be provided on the TO's policies (and project policy, where different) for managing:
  - Risks
  - Hedging and foreign exchange
  - Cost overruns or delays.
- The risk register is a document summarising the process and results of a logical, transparent and consistent qualitative and quantitative project risk assessment. The risk register should include, but not be limited to, the following:

ID	Unique risk code
Project area	Which part of the project the risk relates to (example: weather downtime – subsea cable; ground conditions – underground cable)
Description of risk	A detailed description and rationale behind the risk, including the source of the risk.
Action	What actions have/will be taken towards the risk and how will the risk be monitored
Mitigations	What actions will/have been taken to mitigate the risk, with associated cost (estimates)
Fall-back action	Action that can be taken to fully mitigate the risk and negate its effects
Fall-back action cost	The cost of "fall-back action"
Risk identification date	Date when the risk was identified
Risk owner	Party best placed to control the risk (developer, contractor, etc.)
Risk owner rationale	Rationale why the party owning the risk has been identified as such
Risk date	Date when the risk is due to materialise or expire
Minimum cost	Minimum cost of the risk, after the mitigation actions
Minimum cost method	Calculations showing how the minimum cost has been derived together with the input value sources and rationale.
Most likely cost	Most likely cost of the risk, after the mitigation actions
Most likely cost method	Calculations showing how the most likely cost has been derived together with the input value sources and rationale.
Maximum cost	Maximum cost of the risk, after the mitigation actions
Maximum cost method	Calculations showing how the maximum cost has been derived together with the input value sources and rationale.
Probability of the risk occurring	Probability of the risk occurring
Probability of the risk occurring method	Calculations showing how the probability has been derived together with the input value sources and rationale
Reference	Reference to the document/hyperlink to source of supporting documentation for calculating the min, best, max and probability values.

Associated documents

3.54. Supporting documentation should contain, but not be limited to, the following:

- Project management details, including hours worked/to be worked and rates used
- A summary table (but not the original documents) to provide references (name, date produced, supplier, report name and description of report objective) for any supporting third party reports, including:
    - Scope/technical drawings
    - Design and engineering studies
    - Site surveys and evidence of these being passed to relevant contractors
    - Technical equipment testing reports
    - Route and site selection reports
    - Any relevant consultant reports
    - Stakeholder engagement
    - Any cost allocations and the methodology used
    - Any related party margins (with linkages to the completed cost templates)
    - Any hedging (eg forex), or hedging gains/losses
    - Signed targets or forecasts of project internal rate of return (IRR).

Scope of Ofgem's conclusions on the Project Assessment

3.55. After considering responses to the consultation we will publish the Authority's decision on the required SWW output that the TO will be expected to deliver and the adjustment to the TO's RIIO-T1 allowed expenditure for delivering that output, unless there is a requirement to consult further. The new SWW Output will be specified in terms of an increase in boundary transfer capability (or equivalent change in transmission capacity where there is no existing boundary) to be available by a scheduled date.

3.56. In Final Proposals for the RIIO-T1 price control we set out that the scope of allowed expenditure for new SWW outputs determined by the Authority under the SWW arrangements would only cover the total costs associated with delivering the SWW output. For the avoidance of doubt, the adjustment to the TO's RIIO-T1 allowed expenditure determined through the SWW arrangements will not include any associated pre-construction engineering works. There is a separate provision for this activity that is included in each TO's baseline settlement for the RIIO-T1 price control.

3.57. The next chapter describes the delivery stage and how we intend to give effect to the Authority's decisions taken under the SWW arrangements in relation to new SWW outputs and the adjustment to the TO's RIIO-T1 allowed expenditure through licence changes. It also gives an overview of the requirements on a TO to report on progress during the delivery phase and the additional provisions that allow the TO to seek a re-opener of the decision in order to adjust the specified SWW

output and allowed costs for certain pre-defined events where these materially change the scope of works to deliver the specified output.

4. Implementation and delivery of SWW outputs

Chapter Summary

Describes the process for the Authority's implementation of decisions on a new SWW output and the associated adjustment to allowed expenditure that a TO can recover. We also highlight the reporting requirements on TOs during the construction and delivery of SWW outputs.

Implementing output and funding decisions

4.1. When we have published a decision on a new SWW output and the allowed cost recovery for the TO, we will also publish a statutory consultation under section 11A of the Electricity Act 1989 in order to give effect to that decision. This consultation will set out the proposed modifications to Special Condition 6I and will be for a minimum period of 28 days.

4.2. After the statutory consultation, and consideration of stakeholders' responses, the Authority will determine whether the proposed modifications set out in the consultation document (namely a new SWW output, an agreed delivery date, and the annual allowed expenditure for delivering the SWW output) can be made (or be made subject to minor alterations). Alternatively, the Authority will consult again and set out the reasons why it has chosen to do so.

4.3. If the Authority decides to make the proposed modifications, the decision will take effect not less than 56 days after the decision to proceed with the making of the modifications is published.

4.4. Adjustments to the TO's allowed expenditure in RIIO-T1 that have been determined and approved under the SWW arrangements by Ofgem will be given effect through the Annual Iteration Process (AIP).[25] The AIP was introduced as part of the RIIO regulatory framework to update a TO's allowances in RIIO-T1 each year for additional allowed expenditure that has been approved by Ofgem through the SWW arrangements as well as other changes arising from the incentives or other expenditure adjustments that reflect a TO's performance in delivering the outputs set out in Final Proposals for RIIO-T1. The AIP will take place in the autumn of each year to update the transmission company's Price Control Financial Model.

[25] Where allowances for SWW projects cross into RIIO-T2, we expect a similar approach to be taken but will seek to confirm this through our Project Assessment determination on the project.

4.5. In the event that an allowed expenditure adjustment for an approved SWW is not updated before the TO starts to incur the delivery costs,[26] the TO's expenditure allowances would be amended retrospectively in the next AIP, i.e. the following year, with a time value of money adjustment so as not to cause financial loss to the TO.

During Construction

TO's role

4.6. The TOs are required through Standard Condition B15 (Regulatory Instructions and Guidance) to report annually during the construction phase on their expenditure and progress in delivering the SWW output. As part of this annual update the TO should provide an update on the status of the project delivery programme against the project plan. This should include an explanation of divergences in expenditure or project milestones or concerns that the TO has about delivery progress.

4.7. Although we expect such occurrences to be rare, a TO may notify us during the construction phase that it intends to seek an adjustment to the allowed expenditure and/or specified SWW output through the provisions in Special Condition 6I for a Cost and Output Adjusting Event (COAE) or an Output Amendment (OA). The provisions will apply only for a small number of pre-defined events that have a material impact on the efficient costs of delivering the output or if there has been an unexpected change in the generation and demand background relative to that expected at the time the SWW output was specified. We refer the TO to the requirements in Special Condition 6I of the Electricity Transmission licence for further detail on the requirements of these provisions.

Ofgem's role

4.8. We will monitor progress against deliverables based on information provided in the TO's annual regulatory report. Where appropriate we will consider and make decisions on any COAE or OA requests made by a TO.

4.9. Following receipt of the annual information from a TO we will compare actual incurred expenditure on SWW projects in any year with the allowed expenditure for that year. We will apply the applicable efficiency incentive rate to the difference between actual incurred expenditure and allowed expenditure (during RIIO-T1 these will be as specified for each TO in the RIIO-T1 Final Proposals[27]) so that the TO is exposed to a proportion of any overspend (and similarly retains a proportion of any

[26] This might be the result of timing issues between when a determination is announced and when the AIP is scheduled.
[27] For projects that involve construction during RIIO-T2, the applicable incentive arrangements of that price control will be applied.

underspend). There would be a two-year lag in any adjustments that are due as a consequence of the efficiency incentive.

Delivery

TO's role

4.10. Once the SWW output has been commissioned the TO must confirm to us the delivery of SWW output as specified in the TO's licence and must provide evidence to verify that the required increase in boundary capacity has been achieved.

4.11. One way to provide evidence that an SWW output has been delivered would be through an independently verified report. This report should include, but not be limited to: some background on the proposed reinforcement, verification whether it has delivered the agreed level of increased boundary capacity, highlight any areas of non-compliance and confirm whether there needs to be additional work.

Ofgem's role

4.12. We will review the TO's performance in the delivery of the SWW outputs. Where the TO has not delivered the agreed output on time, we would expect the TO to explain why and to provide plans for progression. Failure by a TO to deliver the output on time as specified in the licence could potentially constitute a breach of the licence condition. In considering whether this is the case or not, we would follow our usual processes and policies for enforcement.[28] Among other things, we would look at the factors leading to the late delivery, the extent to which the TO could be held responsible for these and whether or not it took reasonable steps to mitigate the impact of such events where it could do so efficiently.

4.13. For the avoidance of doubt, in general we consider that a licensee is responsible for all of its actions, including where it engages third parties. Licensees are best placed to manage these risks rather than consumers. Therefore, we do not consider it appropriate to treat issues differently based on whether the licensee does the work in house or uses an external contractor. This helps to ensure that the licensee takes appropriate care in the selection and practices of the contractor.

4.14. If the Authority is satisfied that the late delivery constitutes a breach of the TO's licence, the TO could potentially be subject to financial penalty determined under the Authority's' *Statement of policy with respect to financial penalties*.[29]

[28] A copy of the guidelines can be found here: https://www.ofgem.gov.uk/system/files/docs/2016/12/enforcement_guidelines.pdf
[29] A copy of the policy statement can be found here: https://www.ofgem.gov.uk/ofgem-publications/74207/utilities-act-statement-policy-respect-financial-penalties.pdf

4.15. In setting a financial penalty the Authority would take into consideration certain factors, including the level of consumer detriment that is a consequence of the late delivery, as well as aggravating or mitigating actions undertaken by the TO in relation to the late delivery and its impact on consumers.

Appendix 1: Summary of SWW Arrangements

Stage and timing	TO	Ofgem
1. Assessment		
- Eligibility assessment (Not less than 15 months prior to final TO planning consultation)	Formally advises Ofgem of new SWW proposal. Provides information to show the proposed project is eligible for assessment under SWW arrangements.	Review whether scheme is eligible for assessment under SWW arrangements.
- Initial needs case (Not less than 9 - 12 months prior to final TO planning consultation)	Submits initial needs case (including CBA from SO).	Verify future system requirement for additional capacity and review TO's optioneering. Assess case for TO developing its preferred option. Assess whether project is suitable for competition. Consult on initial views arising from assessment and issues under consideration. After considering consultation responses, decide whether all or parts of project may be suitable for competition, or delivery through an alternative model intended to deliver the benefits of competition.
- Final needs case (When need for the project is more certain)	Submits final needs case (including CBA from SO).	Assess whether the need for proposed reinforcement is well justified. Ensure the proposed reinforcement provides value for money for existing and future consumers. Consult on views arising from assessment and issues under consideration.
- Project assessment (After Final Needs Case submission and when the majority of procurement is complete)	Submits detailed plans about design, costs, delivery and managing risks for the project.	Assess the TO's delivery plans and proposed costs to deliver the SWW output by the proposed completion date. Ensure proposal is cost efficient and TO is ready to proceed according to the proposed project timelines. Consults on initial views and proposals for SWW output to be delivered, efficient

Stage and timing	TO	Ofgem
		costs, and scheduled completion date.
2. Decision and implementation		Publish decision on whether project is in interests of consumers. If so, specify a new SWW output for TO to deliver and adjust the TO's RIIO-T1 allowed expenditure. Propose and consult on licence changes. Direct licence modification
3. Construction	Reports on progress, expenditure and any Cost and Output Adjusting Event.	Monitor progress and actual expenditure against allowed expenditure. Ensure timely progress towards delivery of SWW outputs.
4. Delivery	Advises on the delivery of outputs.	Monitors the TO's performance in the delivery of the outputs.

Appendix 2 - Glossary

A

Authority

The Gas and Electricity Markets Authority is our governing body and is referred to variously as GEMA (Gas and Electricity Markets Authority) or the Authority. The Authority was established by section 1 of the Utilities Act 2000 to regulate the gas and electricity markets in Great Britain. The role of the Authority is to oversee our work and provide strategic direction.

B

Benchmarking

The process used to compare a company's performance (eg its costs) to that of best practice or to average levels within the sector.

C

Capital Expenditure (CAPEX)

Expenditure on investment in long-lived network assets, such as gas pipelines or electricity overhead lines.

F

Fettering discretion

Procedural fairness demands that decision-makers do not "fetter" their discretion. Officials can have a pre-determined policy on how discretion will usually be exercised. But if a policy becomes so rigid that it prevents a decision-maker from responding to the merits of each case, their discretion will have been "fettered". In reference to the SWW arrangements, this means that previous positions (eg on needs case assessments) do not affect our ability to reconsider these cases in the light of new evidence.

I

Integrated Transmission Planning and Regulation (ITPR)

The Integrated Transmission Planning and Regulation (ITPR) project reviewed the existing GB electricity transmission arrangements. It looked at how the system is currently planned and delivered, assessing whether any changes were appropriate to facilitate a future integrated system. This was in response to the longer term

challenges arising from the move to a decarbonised energy system. The final conclusions of the project are available on our website.[30]

L

Licence conditions (obligations)

An obligation placed on the network companies to meet certain standards of performance. The Authority (GEMA) has the power to take appropriate enforcement action in the case of a failure to meet these obligations.

Licence condition – Special Condition 6I

A licence condition in the Electricity Transmission licence which details the legal framework with respect to Strategic Wider Works.

N

Network charges

These are charges set for the use of network services.

Network companies

In this case it refers to the electricity transmission owners in GB (i.e. NGET, SHE Transmission and SPT).

National Electricity Transmission System (NETS)

The system of high voltage electric lines providing for the bulk transfer of electricity across GB

National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS)

As referred to in the Electricity Transmission licence Standard Conditions C17 and D3. This is the standard in accordance with which the electricity transmission licensee must plan, develop and operate the transmission system.

National Grid Electricity Transmission plc (NGET)

The electricity transmission licensee in England & Wales

O

Operating Expenditure (OPEX)

[30] https://www.ofgem.gov.uk/publications-and-updates/integrated-transmission-planning-and-regulation-itpr-project-final-conclusions

Expenditure on the day to day operation of a network such as staff costs, repairs and maintenance and business overheads.

Outputs (objectives of new regulatory framework)

What the network companies are expected to deliver. The output that we expect from the new framework are that network companies play a full role in the delivery of a sustainable energy sector and deliver value for money network services for existing and future consumers. The TOs will report information annually on outputs delivery to assess network company performance over a control period. This information may be both qualitative and quantitative in nature.

P

Price control

The control developed by Ofgem to set targets and allowed revenues for network companies over a given period of time. Working with stakeholders and the network companies we develop the outputs and incentives of a price control taking account of network company performance over the last control period and expected expenditure in the next.

R

Reinforcement (electricity)

The installation of new assets to accommodate changes in the level or pattern of electricity supply and demand.

RIIO (Revenue = Incentives + Innovation + Outputs)

Ofgem's new regulatory framework was developed from a fundamental review of the previous price control framework, RPI-X. It was implemented for Gas Distribution and Transmission price controls in 2012. RIIO places emphasis on the accountability of network companies for delivering outputs over the price control period, and incentives to drive innovation and deliver a sustainable energy network at value for money to existing and future consumers.

RIIO-Transmission Price Control Review 1 (RIIO-T1)

The price control review to be applied to the electricity and gas transmission network owners, following the TPCR4 rollover. This price control was introduced on 1 April 2013 and will run until 31 March 2021, and is the first transmission price control review to reflect the new regulatory framework, RIIO.

S

Scottish Hydro Electric Transmission plc (SHE Transmission)

The electricity transmission licensee in northern Scotland.

SP Transmission Limited (SPT)

The electricity transmission licensee in southern Scotland.

Stakeholder

Stakeholders are those parties that are affected by, or represent those affected by, decisions made by network companies and Ofgem. As well as network users and consumers, this would for example include Government and environmental groups.

Stranded asset

Is a term that describes an asset that has become obsolete, or non-performant, but must be recorded on the balance sheet as a loss of profit. In this case it specifically refers to reinforcements that are not fully utilised (because of insufficient generation).

T

Transmission Owner (TO)

Companies which hold transmission owner licenses. Currently there are three electricity TOs: NGET, SPT and SHE Transmission.

Turnkey projects

Is a type of project that is constructed so that it could be sold to any buyer as a completed product. In this case it refers to the situation where a reinforcement is completed by only one supplier.

U

User commitment

The level of commitment of generators to the proposed transmission reinforcement.

V

Value engineered

A value engineered project would provide value for consumers and be built in an economically efficient manner. Value engineering differs greatly from over engineering; where projects are gold plated, or built to the level where the vast majority or all risk has been mitigated.