

Scottish & Southern Electricity Networks

# **Regulatory Framework**

Scottish Hydro Electric Transmission plc RIIO-T2 Business Plan

July 2019

www.ssen-transmission.co.uk

# Regulatory framework and the business plan

This document explains how our Business Plan relates to the RIIO regulatory framework. We focus on three components:

- The **RIIO revenue building blocks** how allowances, revenue, outputs, innovation and incentives fit together.
- Incentivised outcomes how we will be incentivised to deliver the targets for RIIO-T2 that align with our stakeholder-led ambitions.
- Uncertainty Mechanisms how can we use the price control framework to manage risk efficiently including factors that can be deemed within and outside our control, with the latter warranting updates to the RIIO-T2 plan.

Ofgem's Sector Specific Methodology (SSM) Decision and Business Plan Guidance was published at the end of May and early June 2019, respectively. The timing has meant that we have been unable to take account of them in draft Business Plan but we note that the stakeholder-led incentive package we have been developing is more ambitious than that set out by Ofgem in its SSM Decision. We are currently engaging with Ofgem on this and the development of Uncertainty Mechanisms. There remains significant work to do.

Our proposals on Incentives and Uncertainty Mechanisms will evolve between what is currently set out in the draft business plan and the final business plan that will be submitted in December 2019.

We are seeking your views on:

- 1. The level of ambition and our proposed incentive package that will contribute to meeting that ambition; and
- 2. The uncertain costs areas we have been able to outline at this stage and our proposals on the Uncertainty Mechanisms to balance risk.

# **RIIO Revenue Building Blocks**

Our Business Plan sets out the delivery of stakeholder-led outcomes for electricity consumers, local communities and wider stakeholders in the north of Scotland and GB. Stakeholders responding to this also need to be able to understand how our proposals translate into the revenue we will collect during the price control period.

**Revenue:** Under the **RIIO** price control the Revenue we receive is derived from the base allowances Ofgem set following an assessment of our plan; that is the efficient level of costs to deliver our Outputs. These are often referred to as 'ex-ante' allowances; allowances set 'before the event'. Our revenue is then adjusted during the price control depending on how we perform against our Incentives and deploy Innovation to deliver our Outputs and resolve previously uncertain events.

Our base revenue for each year is calculated based on annual expenditure allowances. This revenue adjusts year on year as a consequence of:

- our totex efficiency Incentive performance. If we underspend this will reduce base revenue, if we overspend it will increase;
- our output Incentive performance. There will be a negative adjustment/penalty if we underperform and a positive adjustment/reward if we outperform;
- applied Uncertainty Mechanisms. If we experience material changes in costs which cannot realistically be forecast at the price control review; and
- whether we receive Innovation funding.

Along with adjustments for inflation and tax these changes produce our annual Allowed Revenue which is ultimately recovered through consumer bills.

Figure 1 – Allowed Revenue



# **Cost Recovery Mechanisms**

Our business plan sets out how we have forecast base **total expenditure (Totex).** This is based on our certain view (Sector Leading Efficiency section) and the justification for our opening RIIO-T2 allowances as well as our plans and ambition to deploy Innovative solutions (Stakeholder-Led Strategy section). We have also set out a range of financial assumptions to enable the delivery of our Business Plan (Finance section).

The remaining two key components uncertainty mechanisms, used to manage expenditure risk efficiently, and incentive earnings, to meet the stretch ambitions of all our stakeholders, make up the remaining major RIIO-T2 network revenue components. These are discussed in this supporting document.

Base (ex ante) Totex allowance and Totex incentive: We expect the bulk of our costs to be incorporated into our controllable ex ante allowance, Totex (Total Expenditure). Totex is expected to continue to be incentivised during RIIO-T2; where cost efficiency savings are Figure 2 – Cost recovery mechanisms shared with consumers through the Totex Incentive Mechanism (TIM). Funding the majority of costs through an incentivised ex ante allowance is in the best interests of consumers. It creates greater cost certainty, less bill volatility, and, if calibrated strongly, can place the onus on us to manage the total expenditure risk.

**Output incentives:** At the heart of the RIIO control, the role of **incentives** is to drive outcomes valued by stakeholders. If we are efficient and if we deliver stretch outcomes that stakeholders value we should receive incentive rewards. Conversely, if we fail to deliver according to expectations and baseline targets, we should be subject to penalties or clawback of opening allowances.

Uncertainty Mechanisms: Experience tells us that some cost elements cannot be forecast with certainty when business plans are submitted. This uncertainty arises from factors outside our control, for example, unanticipated changes in economic growth or changes in government programmes, legislation or policy. When these changes are material they will alter our investment plans for the price control and result in an increase or decrease in required expenditure. Uncertainty mechanisms are efficient tools in managing the risk to consumers by protecting against the equally undesirable outcomes of over or under resourced networks. Balance is required to ensure these mechanisms are only created for genuinely uncertain and uncontrollable outcomes.

Many of the individual elements within the uncertainty mechanisms and the incentive framework also applied in RIIO-T1; for many we are not proposing to apply a different methodology from that already in place. In response to the opportunities and challenges we will face in RIIO-T2 and the emerging regulatory framework we have suggested some amendments.



**Ex ante allowances** – set following an assessment of our certain view. For the components of our base expenditure refer to the Finance section of our plan. Our ex ante allowances will largely determine our annual Base Revenue.

**Uncertainty mechanisms** - adjust allowances during RIIO-T2 where costs could not be forecast with certainty ahead of the price control. These protect consumers by ensuring allowances match investment need. Changes to costs here will reset the initial Base Revenue.

Incentive mechanisms - adjust revenue up or down during RIIO-T2 depending on our performance. The most significant is the Totex Incentive where we share our performance with consumers. Output Delivery Incentives (ODIs) also reward or penalise our performance against set targets.

# Incentivising the right outputs and outcomes – Incentive Mechanisms

Our 200-page Business Plan explains how investment in and the operation of our network will benefit consumers and wider stakeholders. This investment has been informed by extensive stakeholder input. We are now seeking further stakeholder views on whether the package of outputs and our Five Goals match their ambitions.

To give an informed view, it important to understand the overarching outputs framework for RIIO-2 that Ofgem has set. The framework is detailed below, where outputs are specified as a combination of licence obligations (LOs), price control deliverables (PCDs) and output delivery incentives (ODIs). These outputs are intended to deliver three consumer facing outcomes as set by Ofgem.





# Our core plan

The targets and business as usual (BAU) ambition set out in our plan, and funded under ex ante allowances, align to Ofgem's LOs and PCDs. Together these support the delivery of our ambitious **Five Goals:** 

- 1. Transport the renewable electricity that powers 10 million homes
- 2. 100% network reliability for homes and businesses
- 3. Every connection delivered on time
- 4. One third reduction in our greenhouse gas emissions
- 5. £100 million in efficiency savings from innovation.

Our Five Goals are ambitious and we are committed to delivering these along with the more detailed LOs and PCDs set out in our plan. The infographic which follows, shows how our outputs align to each of the four strategic themes in our plan.

# Our stretch ambitions

Beyond our business as usual output delivery we set out in our plan further stretch ambitions. We believe ODIs are best used to drive stretch ambition and respond to new stakeholder-driven outputs during the price control period.

This principle has informed our engagement to date with Ofgem on what we believe the ODI package should look like. Ofgem's SSM Decision highlights differences between what we consider should be incentivised and its current thinking. This requires us to revisit the range of outputs and incentive proposals as we now prepare for the business plan submission in December 2019.

While we are working through the implications, our initial view is that we have two options: maintain or reduce our Plan ambition.



#### Figure 4 – Incentives vs. ambition



We believe stakeholders want us to maintain the level of ambition. If the incentivised package is reduced we believe it may be possible to fund some stretch PCDs through baseline ex ante allowance and consumer value propositions (CVPs) (as set out in Ofgem's business plan incentive guidance. We continue to believe ODIs have a significant and important role to play (Table 1) in reaching our stakeholder's stretch ambitions. If the role of incentives is significantly diminished, so too will the level of ambition. Stakeholder feedback is therefore vital on our draft business plan; we must understand if the level of ambition is correct, if we should be doing more or less and in what areas.

	Pre Ofgem SSM Decision (18/19 prices)		Post Ofgem SSM Decision (18/19 prices)	
	Сар	Collar	Сар	Collar
Stakeholder Engagement Incentive	7.5			
Stakeholder Survey	22.5	(22.5)	22.5	(22.5)
Timely Connections		(10)		(10)
Bespoke Quality of Connections	10	(10)		
Energy Not Supplied	16	(16)	16	(16)
Whole Systems Incentive	20	(10)		
SF6 Incentive	20	(20)	20	(20)
Sustainability Discretionary Reward	30	(30)	20	(20)
Total 5 years - opportunity	116	(119)	79	(79)
Annual average - opportunity	23	(24)	16	(16)

Table 1 – Output Delivery Incentives RIIO-T2 proposals – Impact of Ofgem Sector decision

The following sections provide further detail on RIIO-T2 outputs under each of the four strategic themes. We also describe how our thinking is developing following Ofgem's SSM Decision.

#### Stakeholder-Led Strategy

Our Stakeholder-Led Strategy encompasses our proposals for stakeholder engagement, connections and innovation, all co-created with stakeholders and our RIIO-2 User Group.

In RIIO-T1, stakeholder engagement was not considered BAU. As such there were no ex ante allowances for stakeholder activity. Instead, the cost recovery for stakeholder activity was through the incentives earned only.<sup>1</sup> The RIIO-T1 incentives have been instrumental in driving significant change in the approach to and benefit from engagement, without placing risk on the consumer – consumers only paying for the outputs delivered.

We think this should continue in RIIO-T2. We would carry the risk of stakeholder activity expenditure and only be rewarded (net of cost incurred) if we delivered on the incentive targets. Ofgem concluded in its May Decision that the majority of stakeholder engagement activity should be BAU and therefore funded in our ex ante allowances.

RIIO-T2 should continue to strongly support the role of stakeholder output measures in driving continued consumer benefit. We are working through the detail of what this would mean for in practice for outputs within our Business Plan. It is likely to mean an increase in our ex ante baseline costs to deliver our RIIO-T2 Stakeholder Engagement Delivery Plan and associated KPIs.

We recognise the criticality of consistent and transparent reporting in this area and support Ofgem's proposals to report on network company performance in this area. In fact, we propose our own Enhanced Reporting Framework.

Only engagement with specific customers connection customers and those affected by Large Capital Projects (LCPs) - will be subject to an Ofgem proposed incentive via a Stakeholder Satisfaction survey. Within this, only connection customer survey would be financially incentivised. Over the past few months have been undertaking significant engagement with key stakeholders, including Ofgem, to develop a bespoke Quality of Connections survey to ensure that we continuously improve and adapt our services and products throughout the customer experience for our future connection customers. It is not yet clear how similar Ofgem's Satisfaction Survey and our bespoke proposals will be. We will be engaging with Ofgem and the other TOs in the coming months to discuss this detail and design and calibrate the incentive or incentives.

If a single survey, the key consideration will be the need for bespoke questions for each TO. We also identify any customers who will not be surveyed through this targeted approach and may wish to propose our own survey to measure our wider stakeholder performance.

We support the retention of the Timely Connections LO which requires us to provide quotations to the Electricity System Operator (ESO) within 60 days for a prospective connection customer.

We will be working to determine if our stretch ambitions under this strategic theme remain achievable through careful consideration of the application of Ofgem's output framework. But our principal goal of **every connection delivered on time** will not change following Ofgem's SSM Decision.

#### Safe and Secure Network Operation

Under this strategic theme, the output framework we envisaged prior to the Ofgem decision remains broadly the same.

Our principal goal is to deliver **100% network** reliability for homes and businesses. We believe this ambitious goal will be met if we deliver on the four-Rs of resilience – reliability, redundancy, response  $\vartheta$  recovery, and resistance. Through extensive stakeholder engagement we see the four Rs as BAU and the costs of delivering these are set out in our

<sup>&</sup>lt;sup>1</sup> The Stakeholder Satisfaction Output incentive which comprised a survey, KPIs and external assurance and the Stakeholder Engagement Incentive.

baseline ex ante allowances and delivering under our certain view.

Our more detailed outputs will be PCDs , delivering the risk profile target also known as the **Network Asset Risk Metric (NARM)** target. This reflects approach of intervening efficiently on the right assets at the right time to reduce the risk of network failures and the resulting impact. As with all large projects, if associated PCDs are not delivered we commit to returning appropriate allowances to consumers.

On top of this, failure to deliver the NARMS risk target may result in an end of price control penalty. It is not possible to estimate the potential downside penalty of NARMs as the methodology is to be finalised by Ofgem. However, this protection ensures consumers can rely on receiving the network benefits for which they are also paying.

RIIO-T1 incentivised strong performance in reliability – the **Energy Not Supplied (ENS)** incentive. Given reliability remains a principle concern of our consumers and there is strong stakeholder support for availability (generators) and resilience (government) we support its continuation in RIIO-T2.

ENS sets a limit on the amount of Megawatt hours (MWh) of energy we can lose from our network in any given year. If we remain below that threshold we are rewarded but if we lose more than that threshold we will be penalised.

Ofgem is yet to decide on the RIIO-T2 ENS target and we will engage in the coming months on this. At this stage, we estimate this incentive could be calibrated at +/- £16m over the full RIIO-T2 price control period.

A further key incentive under this strategic theme, as with all themes, is the role of **the Totex Incentive Mechanism (TIM)** in driving ongoing efficiency improvements. This is explored further under Sector Leading Efficiency.

# **Sector Leading Efficiency**

The output framework we envisaged prior to the Ofgem Sector Specific decision remains the same. All outputs will be PCDs and our certain view baseline allowances enable us to deliver two of our Five Goals - to transport the renewable electricity that powers 10 million homes and to deliver £100m of efficiency savings through innovation.

Our BAU ambitions will be delivered through PCDs and include the following areas:

- to increase the generation connected to and demand accommodated by SHE Transmission's network during the RIIO-T2 period;
- create additional capacity through shareduse infrastructure; and
- provide and an uplift in boundary capability.

The above is based on our certain view – we are 100% confident in the need for this investment. Where we don't have 100% confidence, this is subject to the Uncertainty Mechanisms discussed in this next section. Nonetheless, failure to deliver the above PCDs or a materially equivalent PCD will result in a commensurate allowance being returned to consumers. During a price control the conditions against which the outputs are originally specified may change which can affect the outputs delivered. For example, when we propose a capability uplift this is against a particular generation, demand and network background. We propose that the outputs are assessed against that same background.

While there are no ODIs in this area, at the heart of delivering efficiently is the **Totex Incentive Mechanism (TIM).** This is the mechanism whereby any efficient underspend or overspend against this ex ante allowance will be subject to an efficiency sharing factor.

For ex ante costs we believe an appropriate sharing factor is 50%, where 50% of any underspend or overspend is shared between us and consumers. However, as set out in Ofgem's Decision, the final sharing factor will depend on Ofgem's view on how confident it is on the certainty of our cost forecasts. The final sharing factor may be in the range of 15% to 50%. In the case of the lowest sharing factor of 15%, if we underspend on allowances, 85% will be returned to consumers and we will retain 15% efficiency savings. Conversely, if we overspend, consumers will pay for 85% of the overspend and we will pay for 15% of the overspend.

Our cost justification will provide Ofgem with confidence to set a high sharing factor. We think a strongly calibrated efficiency incentive, places the onus on us to manage the total expenditure risk.

#### Leadership in Sustainability

Our final strategic theme of Leadership in Sustainability encompasses our stakeholderled ambitions to be leading in all areas of sustainability. Our Goal under this strategic theme is to **deliver a one third reduction in our greenhouse gas emissions** and as with all our Five Goals this will not change following Ofgem's Decision.

As set out in our 200-page business plan our approach to sustainability is wider than carbon reduction. We take a holistic approach to sustainability encompassing the natural environment, waste management, supporting local communities, delivering societal benefits and growing careers.

Given the breadth and depth of our sustainability ambitions we envisaged an output framework that incorporated both PCDs and ODIs to deliver our BAU and stretch ambitions across these areas, with a greater focus on ODI.

We welcome Ofgem's definition of minimum standards, both in the environmental and workforce areas, the LO requirement to produce an Annual Environment Report, and the ODI for  $SF_6$  and other insulation interruption gases (IIG) leakage.

The removal of the RIIO-T1 Environmental Discretionary Reward (EDR) has significant implications for our approach. We supported its retention in order to continue to drive stretch ambitions across all areas of sustainability, particularly in those areas difficult to baseline at this stage.

While we are still reflecting on the implications of its removal, we believe that overwhelming evidence to date supports strong ambition in sustainability and therefore we are considering how best to amend our outputs approach that allows us to continue to meet our stretch ambitions.

This may include the development of Consumer Value Propositions as set out in Ofgem's Business Plan Guidance. We demonstrate the additional value our plan will generate for current and future consumers and for those in vulnerable situations. The limited scope of the CVP indicates to us that a bespoke ODI is still required to meet the sustainability ambitions of our stakeholders. There are activities that cannot easily be forecast or baselined at this point in the price control but represent significant value to meeting the stakeholder-led sustainability goals.

We anticipate **sustainability ODIs** continuing to play a significant role in our December Business Plan. We are planning to work with stakeholders and Ofgem in the coming months to refine details of any such bespoke incentive.

Similar to ENS, Ofgem has proposed to engage with the TOs to develop targets for reducing **leakage of SF**<sub>6</sub> and other IIG in the coming months.

Our current view is that given that SF6 is over 20,000 times more toxic than carbon a stronger incentive rate should be applied than in RIIO-T1. This will provide for greater reward if the leakage is reduced and conversely a stronger downside penalty if leakage increases in the period. This will give considerable focus in reducing such harmful emissions.

It is our view that the calibration must be strong enough to eliminate leakage and the effort has got to be reflective in incentive rate to cover costs of doing it.

Strategic Objective	To enable the transition to the low carbon economy					
Policy Enablers	DECENTRALISE	DIGITISE	DECARBONISE	DEMOCRATISE		
Strategic Themes	Stakeholder-Led Strategy	Safe and Secure Network Operation	Sector Leading Efficiency	Leadership in Sustainability		
Five Goals	Every connection delivered on time	100% network reliability for homes and businesses	Transport the renewable energy that powers 10 million homes £100 million in efficiency savings through innovation	One third reduction in our greenhouse gas emissions		
Business as usual ("certain") <b>BAU ambition</b> outputs & targets LOs and PCDs	<ul><li>Timely Connections, 100%</li><li>Annual Stakeholder Report</li></ul>	<ul> <li>Network Access Policy</li> <li>NARMS risk profile, target tbc</li> <li>Specified Large Capital Project (LCP) delivery</li> <li>Pre-construction output, target tbc</li> </ul>	<ul> <li>Boundary capacity</li> <li>MW connected, target tbc</li> <li>MVA installed, target tbc</li> <li>Pre-construction output, target tbc</li> </ul>	<ul> <li>BAU sustainability outcomes (as per in Business Plan)</li> <li>Annual Environment Report</li> <li>Social &amp; environmental CBA applied to new projects</li> </ul>		
Ambition	INCENTIVE: +£23m to -£33m	INCENTIVE: +£16m to -£16m	INCENTIVE: N/A	INCENTIVE: +£40m to -£40m		
Stretch ambition outputs & targets ODIs	<ul> <li>Quality of Connections, target tbc</li> <li>Satisfaction Survey</li> <li>Stretch bespoke Key Performance Indicators</li> </ul>	<ul><li>Energy Not Supplied, target tbc</li><li>Key role for TIM</li></ul>	<ul><li>Key role for the TIM</li><li>Key role for BPI</li></ul>	<ul> <li>SF<sub>6</sub>, target tbc</li> <li>Stretch sustainability goals (as per Business Plan)</li> <li>Key role for BPI and CVP</li> </ul>		
	Totex Incentive Mechanism rewa	rds ambition in cost efficiency	ncy Business Plan Incentive rewards the quality and cost ambition of the Plan			
Uncertainty mechanisms		<ul> <li>Reopeners: physical site security, cyber resilience, subsea cable faults, landowner compensation, legislative/ standard changes</li> <li>ESO driven changes including Blackstart</li> <li>Pre-construction pot</li> </ul>	<ul> <li>Generation connections volume driver</li> <li>GSP upgrade volume driver</li> <li>Reopeners: Whole system, landowner compensation, legislative/standard changes</li> <li>Exceptional consent changes</li> <li>Pre construction pot</li> </ul>			

Figure 5 - Application of the Ofgem output framework to our RIIO-T2 plan

# Developing efficient responses to risk - Uncertainty Mechanisms

#### Certain view forecast costs

Our draft Business Plan is based on forecast expenditure based on our certain view. This is supported by stakeholder and engineering justification and is derived from robust projections of cost efficiency. Consumers can have confidence that the plan is capable of delivering efficiently. These certain view costs amount to **£2.2 billion** and include:

- growth related capital expenditure where we have high certainty of new renewable generation proceeding e.g. ESO driven schemes, schemes that cross over from the RIIO-T1 price control into RIIO-T2;
- asset-driven capital expenditure covering major scheme replacements and refurbishment based on condition;
- capital expenditure relating to maintaining network resilience;
- capital expenditure relating to IT system upgrades; and
- operational costs covering a wide range of aspects such as asset inspection and maintenance activities, business support costs, control room, network planning etc.

The decision on our final ex ante allowance will follow Ofgem's cost assessment process in 2020 and, as we described above, our performance during the price control against this set allowance will be subject to the Totex Incentive Mechanism.

- Our proposed approach ensures upfront funding only for known need and known outputs consumers are not at risk of funding outputs that might not happen.
- Uncertain costs and associated outputs will be funded through regulatory mechanisms, such as volume drivers, re-openers and ODIs.

# Areas of Uncertainty under RIIO-T2

Our certain view base allowances can be set because we are able to identify the need, justify the solution or option proposed and forecast the cost with relative certainty. This is not always the case. In some circumstances the need is subject to external influence or the justification of the adopted solution is contingent on factors outside our control. It is then not possible to forecast the future cost requirements with the requisite certainty.

Unchecked, such scenarios can pose a material risk to both consumers and companies. Either base allowances are included which may transpire not to be required (a windfall to the network company) or no allowance is included, and the investment need materialises (a material risk to the network company's returns and delivery of consumer outcomes). Appropriately designed and calibrated mechanisms can substantially reduce or eliminate these undesirable outcomes.

As the energy transition develops, RIIO-T2 will be subject to greater and faster technology and market changes than previous control periods. The increase in scale, scope and pace of these changes creates further uncertainty and requires a framework that is even more flexible and agile to effectively respond and minimise the cost impact for consumers. Uncertainty mechanisms will continue to play a fundamental role in the price control in providing this flexibility and reducing risk.

In developing our Business Plan, we have been careful to identify uncertain cost activities. We are now turn our attention to developing appropriate recovery mechanisms, but there remains a lot of work to do. Figure 6 summarises the mechanisms that have been preliminary identified as necessary and are currently being discussed with Ofgem.

#### Figure 6 - RIIO-T2 proposed Uncertainty Mechanisms



Uncertainty mechanisms fall into two broad categories:

- uncertain volume / need; and
- uncertain external costs.

Uncertain volume / need: Some network outcomes are only subject to uncertainty over the volume or driver of activity during the price control period; there is more certainty on the cost of delivery an individual outcome. Where there is the potential for significant variance in the volumes experienced during the control, mechanisms are required to protect both consumers and network companies. We seek to recover and manage the cost uncertainty over the RIIO-T2 period through:

- Connection volume drivers: costs relating to the connection of new renewables where we do not have certainty over the works;
- Grid Supply Point (GSP) upgrades: costs to accommodate increase in load related expenditure from both demand and generation connections; and
- Network Options Assessment (NOA) driven work: system reinforcement costs

for which we do not currently have strong certainty over the need for the works.

Uncertain external costs: The drivers of such costs are decisions by or actions of third parties, hence, not in our direct control. For example, a decision by the UK Government to require networks to comply with enhanced cyber security standards. There is a clear need for mechanisms that can effectively respond to **material** changes in certain cost drivers and which regulator, stakeholders or network company could not know in advance. These comprise:

- **reopeners:** re-setting allowances during a price control when the driver of costs become more certain; and
- pass-through costs: costs which can vary annual revenue in line with the actual cost, either because they are outside our control or because they have been subject to separate price control measures.

For completeness, a further uncertainty mechanism that will be used in RIIO-T2 where appropriate is **indexation.** Where an element of price control costs, such as the cost of

labour, is linked to an independent driver, e.g. the rate of inflation or average labour rates, when that driver rises or falls the cost also adjusts.

# Uncertain volume / need

#### Volume drivers: generation and demand

Some expenditure which will be incurred in RIIO-T2 meeting generation and demand network requirements is certain. These are projects that are already known and under development. Forecast costs are therefore included in certain view and ex ante allowances referred to above.

However, much of the remaining potential is uncertain. As we look later in the RIIO-T2 period where we either cannot identify particular projects or projects are ill-defined at this stage. The actual level of capacity required is very sensitive to external factors such as economic growth, the response of generators to the energy market and the speed of electrification of heat and transport, as set out in our scenario analysis. We see this clearly in the possible ranges in our North of Scotland Scenarios and the System Operator's Future Energy Scenarios (see Sector Leading Efficiency). We propose that these less certain costs are accommodated under the generation connections volume driver and a GSP upgrades volume driver.

A symmetric mechanism: When the volume of generation seeking to connect or overall demand on the network exceed set thresholds, funding for the resultant investment in local enabling works will be available to us through the two proposed mechanisms. In turn, this will adjust our Base Revenue. Conversely, if external conditions change and we do not need to invest in and deliver the base levels of network outputs the allowance associated with the lower volume of outputs and calculated through the revenue drivers will be returned in full to consumers.

**Industry next steps:** We will develop and refine the methodology for these mechanisms in the coming months with Ofgem and will be set out them out in detail in our final Business Plan.

#### Network Options Assessment (NOA) work

This relates to the large Strategic Projects that will be necessary to accommodate the increased flows of renewable energy across the main transmission boundaries on our network. These projects are driven by the wider system need rather than specific generation projects and are reviewed annually as part of the NOA process (see Sector Leading Efficiency).

We only proceed with these projects once a robust needs case has been justified based on the background generation projections and associated project costs. We do not want to build too soon, or too late. Both these outcomes carry costs for consumers (underutilised assets) and connecting parties (opportunity costs).

We propose a within period determination mechanism to allow funding for these projects when the needs case can be demonstrated. By waiting until the needs case is made, customers are not asked to pay for these schemes too early. Again, the detail behind this mechanism will be set out in December following our ongoing engagement with Ofgem. This mechanism builds on the current RIIO-T1 Strategic Wider Works (SWW) mechanism which has been demonstrated to be a powerful tool in accommodating uncertain and material network investments.

#### Operating costs impact

The mechanisms identified above address how the necessary capital allowances can be identified and adjusted during the price control. For the same reasons that investment requirements are uncertain, it is also difficult to accurately assess our future operating costs associated with these new assets.

For this reason, we have made a distinction between our BAU operating costs and additional operating costs that are incurred following the completion of uncertain projects. We propose that they are built in to the above uncertainty mechanisms. We are proposing that an Operating Cost escalator is built into the volume drivers and also used to automatically allow the future operating costs of new large capital projects emerging from the NOA work.

We will work through the detail with Ofgem but our current thinking for the final business plan is that for large projects we will include an automatic cost escalator of 1% of the gross asset value of the new assets, which would be triggered in the year following completion.

We believe that, because this mechanism applies automatically and will therefore reflect the actual outturn, it will cover for the uncertainty of timing and future level of operating costs associated with new large value assets. This design of cost escalator is currently used in the volume driver and current NOA projects in RIIO-T1 and effectively and efficiently accommodates the uncertainty.

#### Unknown external costs

#### **Re-openers**

We believe there is a case in RIIO-T2 to include re-openers for efficiently incurred costs in a limited number of areas where the costs and level of activity are outside our control. It is better to determine cost allowances when the need and associated cost is more certain.

To do so prematurely during the price control review can introduce a risk premium as the continued uncertainty may result in consumers paying more than is necessary to efficiently delivery the required output in each of these areas.

As this five-year price control has no midperiod review, and the pace of change and level of uncertainty is high, we believe the reopeners are justified.

Our current proposals are aligned with the three reopeners proposed by Ofgem:

**Cyber resilience**: a reopener prior to RIIO-T2 commencing to allow companies the ability to submit a Cyber Resilience Plan and a reopener at the mid-point of the price control. The latter

reflect the amount of work still required to clarify the cyber resilience scope following the EU Network and Information Systems (NIS) Directive being transposed into UK Law. We are supportive of this approach to reduce cost uncertainty for the networks and ensure the efficient delivery of cyber resilience for consumers.

**Physical Security:** Changes in government policy during the price control can result in changes to the investment required for the Physical Security Upgrade Programme (PSUP). There is uncertainty regarding the list of Critical National Infrastructure (CNI) sites which require security upgrades and the scope of works required at each site. Changes to the site list or requirements at each are not within our control. Ofgem proposed a reopener mechanism to deal with such changes to ensure that all CNI sites are appropriately protected.

# Whole System 'Coordinated Adjustment

**Mechanism':** The mechanism will work cohesively to improve whole system planning and operation, improve support for new whole system approaches to ensure the price control is not a barrier to the efficient allocation of projects across networks. It would be triggered by two or more cooperating networks. A single network could also trigger the mechanism if they were able to meet the threshold requirements. This protects consumers, only funding network companies where whole systems approaches and benefits and demonstrable. We support this.

We are considering a further three reopeners at this stage and have begun discussions with Ofgem which will continue in the coming months, taking on stakeholder feedback prior to our final submission in December. These are set out below in **Table 2.** 

**Re-opener principles**: It is necessary to establish a materiality threshold for each individual reopener mechanism to control the number and frequency of changes to allowances. We suggest 1% of Base Revenue in line with that applied in RIIO-T1. The materiality threshold may never be met for each of the individual reopener mechanism but, together, they may collectively result in significant additional expenditure.

Consistent with RIIO-T1 we believe all loggedup costs should be subject to an efficiency review at the end of the price control period. Where costs are deemed to have been efficiently incurred, a one-off Regulatory Asset Value (RAV)/cash adjustment should be made at the end of the price control and should also reflect the costs of financing this expenditure during the period. This should not limit the option to apply for a re-opener and to recover these costs within the period where the materiality threshold has been exceeded.

We believe this is a pragmatic solution ensuring only necessary and efficient costs are allowed for network companies while maintaining a strong incentive to control expenditure levels through the price control.

### Pass through costs

We believe it is appropriate to maintain the current RIIO-T1 pass through arrangements for **licence fees** and **network rates**. This includes the obligation to use reasonable endeavours to minimise the amount payable for network rates.

# Other

There are three other areas that are uncertain at this stage in the price control and require an uncertainty mechanism to manage them. None fit neatly into the above categories, so we have classified them as 'other'.

# These relate to: pre-construction works, ESO driven works and exceptional consent changes.

# **Pre-construction works**

Our key strategic theme of Sector Leading Efficiency in delivering our capital program requires substantial focus in the project development phase. This phase is critical in delivering early value by ensuring we develop the most efficient solutions and carry out preliminary design activities to minimise unnecessary cost exposure during the delivery phase. It is this phase that unlocks the potential for efficiency savings, driving considerable consumer benefit.

The costs that have been included in our certain view already include a provision for the development phase, i.e. the project preconstruction pot. Our proposal for uncertain projects in RIIO-T2 is as follows:

- For new generation schemes funded under the generation connection volume driver, our proposal is to include the preconstruction costs as part of the overall unit cost used to design the uncertainty mechanism.
- For the development of large strategic NOA and ESO driven schemes, our proposal is to set out a baseline allowance based on an estimate of required preconstruction funding for such schemes during the RIIO-T2 period. Given the uncertainty associated with predicting the actual levels of required expenditure in this area, our proposal is to include a mechanism to reconcile efficiently incurred costs at the end of the price control period with an adjusting mechanism to hand back unused allowances. This will be what is known as a "use it or lose it pot".
- We anticipate there will be a requirement for us to incur pre-construction expenditure on projects that will be **constructed in RIIO-T3**. This spend relates to both generation-driven and asset upgrade projects. There is a high level of uncertainty associated with these projects and our proposal is to include an ex-ante allowance for such projects based on our certain view (i.e. calculating the typical percentage of pre-construction costs that make up total project costs) with a 'true up' mechanism to adjust allowances at the end of the price control period.

# Electricity System Operator (ESO) driven works (including Blackstart)

Through the Planning Request mechanism under System Operator - Transmission Owner Code Procedures (STCP), the ESO can directly ask us, as the TO, to undertake work for which no ex ante allowances have been set. For example, during RIIO-T1, we had a number of inter-trip projects that the ESO asked us to progress through this mechanism. Given the changing and evolving nature of the network giving rise to new system requirements and the widening scope of the ESO to look at wider system issues and solutions, we believe such requests are likely to continue, if not increase. We do not have certainty of what the projects or requests will involve but it is important that we are in a position to respond to the ESO and efficient cost allowances are provided to meet the requests. We will continue to work with the ESO, the other TOs and Ofgem but we envisage either a passthrough allowance or a reopener to deal with such requests.

#### **Exceptional consent changes**

In determining the efficient cost of a project, we cost on the basis of consents approved and typical consenting risk. However, we do not cost for exceptional changes to consenting. One such risk is where we have costed for overhead lines as opposed to underground cables and it transpires that consents require the network, or a significant part of the network, to be undergrounded. We do not propose it is appropriate to submit a general a reopener for consents as we should be able to manage this risk within our Totex allowance but, the scale of the cost differential between overhead lines and underground cables is atypical. To avoid a high risk premium in ex ante costs which may result in consumers paying more than is necessary, we propose for such exceptional changes in consents a logging up of the incremental additional costs of undergrounding subject to an efficiency review at the end of the price control period. Where costs are deemed to have been efficiently incurred, a one-off Regulatory Asset Value (RAV)/cash adjustment will be made at the end of the price control and will reflect the costs of financing this expenditure during the period.

# Uncertainty during the Business Plan Process

While we have been developing our draft business plan the environment in which we operate continues to change and will continue to do so until Ofgem reaches it's Final Determinations on our final business plan late in 2020.

### Large Capital Project: Skye

While we have been developing our July draft we have experienced material changes in the drivers for a large capital project required on Skye, west Scotland. While it does not form part of the July draft plan, ongoing development in the investment drivers may shift this into our certain view by December, equally, it may not. But it is important to flag such a large project at this point.

This is a clear example of where we want to ensure we have certainty that we are doing the right thing, taking a holistic approach to our investment decisions. We want to minimise any risk to consumers of over or underfunding important RIIO-T2 network investment opportunities. It will also demonstrate how responsive we can be to changes in our network and the needs of our customers.

The Skye project was initially part of our certain load programme but its complexity and recent changes in the generation drivers has meant the right thing to do is to take more time to consider the right approach, rather than form a view ahead of the July draft submission.

The island of Skye is currently served on a single radial 132kV circuit with a subsea cable to Harris. This current arrangement is subject to a derogation which allows approximately 10MW of small generation to connect in lieu of Security and Quality of Supply Standards (SQSS) section 2 compliance which requires the Western Isles HVDC link. The initial reinforcement of Skye was triggered by two windfarm connections (42MW for 2024 and 25MW for 2027). The original scope was to construct a new 132kV circuit. A further load driver was a GSP upgrade following a request from the distribution network operator. At the same time, there were asset condition issues to be addressed.

Two key issues affecting our decision to any intervention on the existing Skye infrastructure are:

- its radial nature which requires that diesel generation be run on the Western Isles to maintain supplies during any outage. This generation runs at a cost of c. £1m/week; and
- the area covers the Cullins National Scenic Area (NSA), owned by the John Muir Trust. This means that there is a very narrow corridor through the island which already contains a number of overhead lines.

This was an already challenging environment, requiring decisions on how best to approach the combined generation and asset-driven works, along with the uncertainty of Western Isles connections and the location of being in an NSA.

Added to this, in the past 2 months, a 40.8MW generation scheme has applied for a connection. It has been offered an October 2027 connection date. This has required us to take a step back.

There is an optioneering exercise ongoing to consider all of the above. This may require a different approach to the original reinforcement option and we will need to consider the impact on all stakeholders on the Island. Also reflecting the concurrent assessment of the Western Isles HVDC Needs Case, it is right at this point we take a step back and consider the optimal holistic solution in light of this new generation scheme. If we have certainty by December, we will submit as part of our certain view, submitting the required justification papers. If not, we are likely to propose an uncertainty mechanism.

#### Brexit import charges

Another material risk to costs as we draft our business plans and go through Ofgem's Draft and Final Determination process is the potential impact of Brexit on import charges. Our costs will be submitted based on current import charges. The UK is due to leave the EU on 31 October 2019 and regardless of whether the UK ratifies the exit treaty, opts for a nodeal Brexit, or cancels the departure, there is a potential for significant changes to import charges and other cost drivers.

SHE Transmission can be exposed to costs not accounted for in our ex ante allowances and given the uncertainty, an unnecessary and high-risk premium may result in consumers paying more than is required. Between October 2019 and the start of the RIIO-T2 price control in April 2021, the impact Brexit on import charges is likely to be clearer (provided the UK does leave the EU). Therefore, we propose a mechanism whereby a significant impact on import changes can be reflected in our final allowances subject to an independent assessment, prior to Ofgem Final Determinations.

# Table 2 - Preliminary proposed additional reopeners

	Landowner/Wayleave compensation	Exceptional subsea cable faults	Legislative, policy or engineering standard changes
What it is	SHE Transmission needs permission to install our electric lines and associated equipment on, over or under private land. We also require access to that land for the purposes of inspecting, maintaining or replacing the line or equipment.	SHE Transmission has subsea cables as part of our network, with potential projects during RIIO-T2 that will increase the length of subsea cable in our network, through the island projects.	SHE Transmission is governed by legislation and engineering standards when developing our network.
Why it's important	Robust land rights are critical in ensuring that a safe and resilient network can be maintained and operated throughout our licenced area. Efficient land management ensures that costs, budgeting and clean delivery are achieved. Clear negotiation of rights makes certain that our assets are best placed to provide longevity and reduces risk in the long term whilst ensuring efficient costs for consumers.	In order for us to safely and efficiently operate a co- ordinated and economical system of electricity transmission.	Legislative and engineering standard changes could result in significant additional costs for the TOs that are currently unfunded. Examples include changes to the System Operator- Transmission Owner Code (STC), the Energy Code Review, Significant Code Review, the Security and Quality of Supply Standard (SQSS) flood resilience requirements, HSE's Electricity Safety, Quality and Continuity Regulations (ESQCR), and the Energy Data Taskforce data requirements (BEIS).
What we can do	Through the RIIO-T2 period we have a robust strategy for ensuring that we secure the required land rights that provide land rights in perpetuity, to make sure that we are able to develop and operate the network guaranteeing the security of supply without the risk of expensive diversion works if we have to reroute the network elsewhere.	Through the RIIO price control we have an operational and maintenance allowances to cover routine maintenance of cables.	SHE Transmission works to the legislative and engineering standards set out to efficiently deliver a safe and reliable network for network users and consumers.
What we can't do and why a reopener is necessary	We propose a reopener to deal with Injurious Affection claims, wayleave terminations and challenges to our land rights that landowners may lodge with the business for existing assets. These claims are inevitable as there is provision for grantors to claim for losses however, the number of claims that are likely to be lodged with the business are difficult to forecast as is the quantum of the claims.	Given the planned investment in subsea cables, faults in the RIIO-T2 period are unlikely to be any reflection of the asset age or wear and tear, yet these faults have the potential to be costly and drawn out given the global demand for the vessels, equipment and expertise necessary for their repair and the location of the cables. We could be exposed to the repair costs required to maintain a safe and reliable network of exceptional cable faults caused by a third party or unforeseen environmental damage that are out with our control. It is difficult and expensive for consumers to set an efficient allowance to cover the costs of such high impact low probability events through totex allowances.	We must be able to respond to substantively changed outputs as a direct consequence of changes in legislation, policy and standards in order to meet the needs of consumers and other network users, and in a way that will still allow us to deliver the schemes and projects required and avoid delaying key projects to the detriment of network users and consumers. There is no Mid-Period review which would consider changes to outputs available in RIIO-T2, but a reopener mechanism is proposed to deal with the uncertainty to continue to deliver for consumers.