S&C ELECTRIC EMEA LTD
Excellence Through Innovation

RIIO-T3 RELATIVE RISK ASSESSMENT

SP TRANSMISSION

SUMMARY REPORT

11 DECEMBER, 2024

S&C ELECTRIC EMEA LTD
Excellence Through Innovation

DISCLAIMER

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1. Introduction

1.1 S&C Electric Company ("S&C") was appointed in March 2024 to provide consultancy support to SP Transmission ("SPT") in examining and providing a view on the likely level of risk associated with RIIO-T3 when compared with the current price control period, RIIO-T2.

1.2 The purpose of this summary report is to outline S&C's key findings with respect to the changing level of risk. Based on current proposals for RIIO-T3, it provides a view as to whether the level of absolute risk is likely to be flat, increasing or reducing.

1.3 This report was largely developed between April and September 2024 incorporating evidence from a range of sources including Ofgem documentation, a number of external sources, and interviews with the relevant SPT teams working on RIIO-T3 as well as members of SPT's Independent Net Zero Advisory Council. Its results reflect all information available at the time of its development.

Scope and process of the review

1.4 The starting point for the assessment was the arrangements in place for RIIO-T2. This provides the benchmark against which to assess the impact of changes proposed for RIIO-T3. For the purposes of this assessment, the RIIO-T2 position is based on Ofgem's Final Determinations[1] published in December 2020.

1.5 For RIIO-T3 we have based our judgement on the prevailing geopolitical and economic environment as well as the latest position on the regulatory mechanisms for RIIO-T3. This is identified in Ofgem's Sector Specific Methodology Decision (SSMD) published in July 2024[2] as well as in developments reflected through materials from Ofgem's Cost Assessment Working Group (CAWG) and its associated meetings.

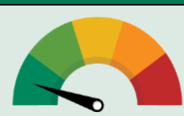
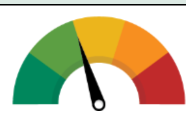
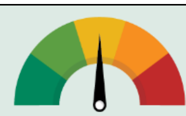
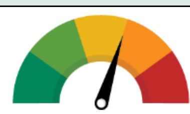
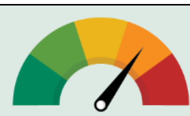
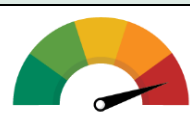
[1] RIIO-2 Final Determinations - Core Document – Ofgem, December 2020
[2] RIIO-3 Sector Specific Methodology Decision – Ofgem, July 2024

APPROACH TO THE REVIEW

1.6 Given limitations in the material required to undertake a full quantitative assessment, this report largely assesses risk on a qualitative basis. A qualitative approach is a useful way to examine the direction of risk. It enables a comparison of the range of factors driving the change in risk and their relative contribution to that risk. It also enables a consideration of how regulatory mechanism may offset or indeed contribute to increased risk.

1.7 In undertaking this assessment, we used a spectrum to consider how to identify the level of risk. The spectrum is summarised in the following table.

Table 1: Spectrum of Risk

Position on spectrum	Level of associated risk when compared to RIIO-T2
	Very Low – risk is likely to be falling
	Low (falling) – risk is flat or falling slightly
	Neutral – risk is balanced and broadly equivalent to RIIO-T2
	Low (rising) – risk is flat or rising slightly
	Medium – risk is likely to increase
	High – risk is likely to materially increase

2. Overall findings – Summary Report

Introduction

2.1 The purpose of this chapter is to provide a summary of our overall fundings on the likely change to relative risk in RIIO-T3. This chapter takes the form of a Summary Report.

Categories of risk

2.2 Risk is wide ranging and can be defined in different ways. To simplify the presentation of our assessment, we identified three overarching categories. These categories and their sub-categories are summarised in the following table. This is not intended to be exhaustive but to provide a guide to the types of risk identified in association with setting the RIIO-T3 price control. Further, rather than only applying to one category, several sub-categories are likely to be cross-cutting.

Table 2: Broad categories of risk

Risk Category	Sub-Categories	Drivers
Investment	• Volume Risk • Delivery Risk • Credit Risk • Technology Risk • Planning Risk • Competition Risk • Contractor Risk • Health & Safety Risk	• Increased scale & complexity of investment • Impact of new technologies on delivery • Changing demands of planning/land purchasing • Impact of an increased role for competition
Geopolitical	• Climate Risk • Political Risk • Supply Chain Risk • Resource Risk • Operational Risk	• Increased climate threats • Decarbonisation/Net Zero targets • Supply chain/labour market constraints
Regulatory	• Incentive Risk • Uncertainty Risk • Operational Risk • Financial Risk • Legal Appeal Risk • Revenue Collection Risk	• Clarity and complexity of regulatory arrangements • Balance of incentives (upside vs, downside) • Controllability of deliverables • Exposure to actions of others

AGGREGATE ASSESSMENT

2.3 The aim of our assessment was to determine the aggregate change in relative risk. In other words, the overall direction of risk when all components of the investment, geopolitical, and regulatory risk are taken into consideration. A summary of our view of the aggregate position is set out in the following table.

Table 3: Aggregate Assessment of Risk

Risk Category	Changes for RIIO-T3	Implications for Risk
Investment	Significant increase in both the volume and complexity of required investment. These factors exacerbate other risks associated with planning, outages, technology etc. Competition remains an unknown but even the associated uncertainty creates increased risk.	
Geopolitical	A range of factors pose a greater risk in RIIO-T3 when compared with the RIIO-T2 Final Determinations. The threats posed by climate change are rising (although may have limited direct impact in RIIO-T3), the challenge of decarbonisation is becoming greater the closer we get to the deadlines for Net Zero targets, and supply chains and resources become tighter as the same challenges are tackled on a global scale.	
Regulatory	Ofgem recognises the risk challenge and some of the proposed measures for RIIO-T3 are clearly designed to address that risk. At the same time, in other areas Ofgem is currently proposing changes that could increase the level of risk. The biggest challenge is uncertainty given many remaining gaps in the SSMD and areas which have been deferred for decision later in the price control process. These fuel further risk.	
AGGREGATE RIIO-T3 RISK POSITION	The combination of investment and geopolitical factors indicate a significant rise in relative risk in RIIO-T3 when compared with RIIO-T2. At best, the current RIIO-T3 proposals would have a neutral impact on risk, but depending how existing gaps are addressed, they may increase risk in some areas.	

Explanation of our aggregate assessment

2.4 Our key conclusion is that both investment and geopolitical risk are rising. This is widely accepted, including by Ofgem in statements made in both its SSMC and SSMD. Recognising this, the key to determining the aggregate position on risk is how the regulatory arrangements mitigate the rising risk levels and, considering that response, whether these need to change or whether additional measures are required.

2.5 Undoubtedly, some of the measures set out by Ofgem in its SSMD are designed to reduce risk. These include plans to adjust the sharing factors for the Totex Incentive Mechanism, the commitment to mechanisms to support major projects, and the introduction of an overarching Resilience Reopener to address increasing resilience threats. Having said this, a key consideration is how these mechanisms function in practice which, based on detail published in the SSMD, is not sufficiently clear at this stage, although it is positive that the management of risk has been added as another objective for the Totex Incentive Mechanism.

2.6 Further, there are other mechanisms proposed by Ofgem that could inadvertently increase risk. These include plans for sharper incentives on the TOs around timely and high-quality delivery of major projects, the treatment of connection incentives, the grouping of major project re-openers including the Medium Sized Investment Project (MSIP) reopener into a single mechanism thereby posing a risk of creating confusion or indeed that some projects are left without a funding mechanism, and the proposed application of the Opex Escalator which could introduce additional risks. The common theme is that the size of the investment challenge is rising and delivering that investment at pace in a world where delivery will not be fully within SPT's control, poses a challenge that is difficult both to measure and to mitigate. As a result, such measures have the impact of increasing risk for SPT.

2.7 On balance, based on information currently available, regulatory risk can be assessed to be either flat or slightly rising in RIIO-T3. Indeed, this reflects Ofgem's own assessment in the SSMD where it noted that it was *"minded to slightly increase the overall risk profile and RoRE range for RIIO-*

3, with the potential for a more pronounced increase for the subsequent price control (all else being equal)."[3] This provides a clear signal regarding Ofgem's view of the direction of risk, although not on the level of any increase. However, it must also be remembered that regulatory risk cannot be considered in isolation as this picture does not reflect the broader impact on risk associated with a material increase in levels of investment across RIIO-T3 and beyond.

2.8 Separately, as part of the SSMD Ofgem noted that *"In assessing changes in risk, it is vital that we do so on a 'net' basis. In other words, we must assess the overall change in risk, including new or updated mitigations used throughout the price control package … It is the aggregated balance of the whole price control that should influence the associated balancing of overall risk and reward."* It also clarified that it would *"… expect higher levels of risk exposure to be accompanied by an offsetting increase in expected returns (i.e., a higher cost of equity)."*[4]

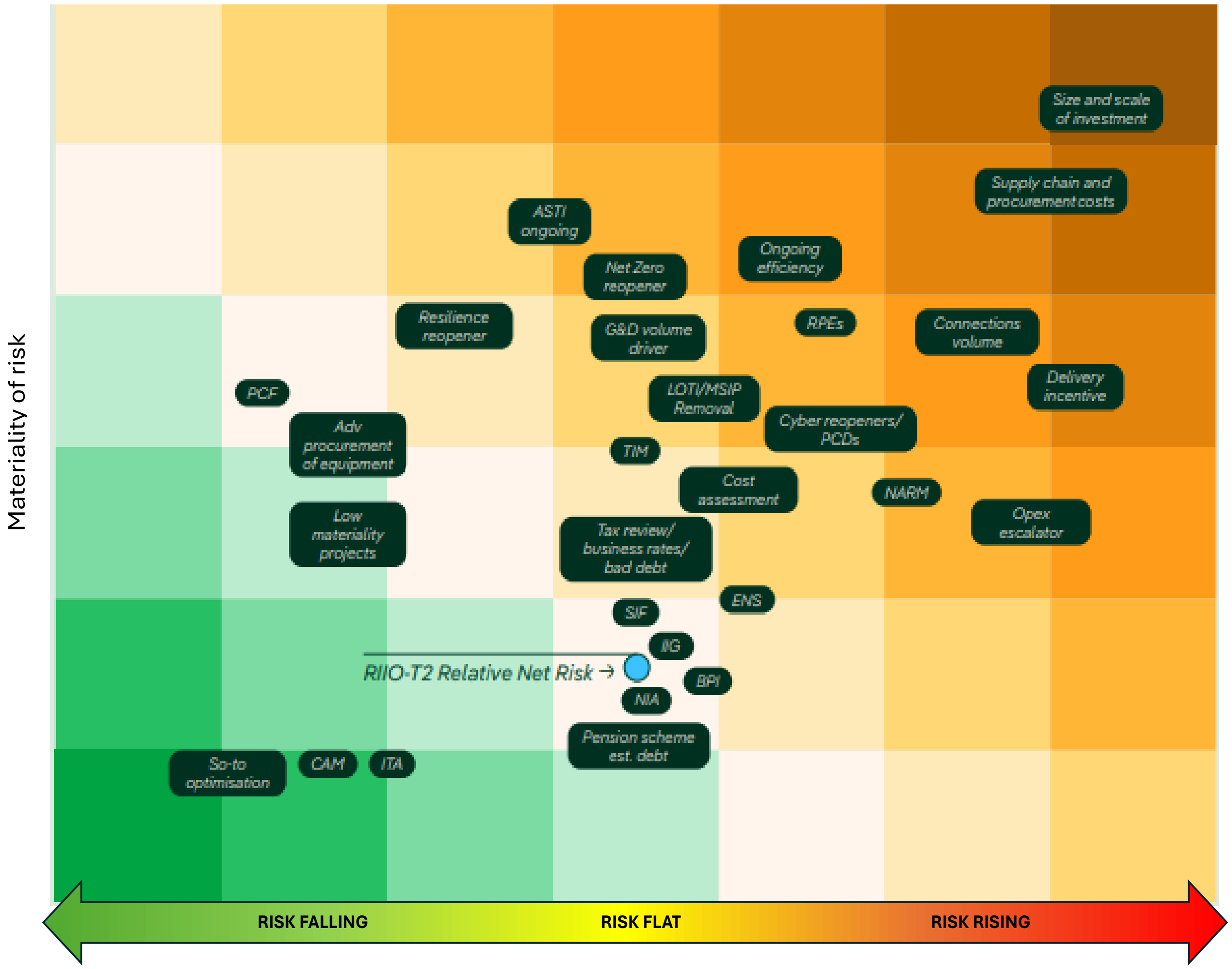
2.9 Taken together, these are helpful statements. Ofgem clearly recognises it is the aggregate risk position that matters which reflects the fact that some factors will drive increased risk while others will drive a reduction in risk. This is reflected in Figure 1 which highlights the impact of the proposed changes to the regulatory framework on the 'net' risk. This should not be viewed as a definitive picture of the financial impact, which is not possible at this stage given the information available. Rather, it provides an overall sense of the balance of risk versus RIIO-T2 using the same spectrum applied throughout this paper. In the centre of the chart are areas where the risk level is broadly flat i.e., the level of risk would be comparable to that faced in RIIO-T2. While there are components of the regulatory proposals that would serve to reduce risk (shown as black boxes to the left of the central axis), these are outweighed by the factors that, if not changed, would serve to increase risk in RIIO-T3 (shown as black boxes to the right of the central axis). For completeness, the larger investment and geopolitical risk categories are also shown to provide a clearer picture of the overall balance. Note that some of the smaller mechanism which have a negligible impact have been excluded to avoid overcomplicating the diagram.

[3] RIIO-3 Sector Specific Methodology Decision - Overview Document – Ofgem, 18 July 2024, p17
[4] RIIO-3 Sector Specific Methodology Decision - Finance Annex – Ofgem, 18 July 2024, p116

2.10 Some mechanisms were in place during the RIIO-T2 period which would have a different impact on risk in RIIO-T3. The Accelerated Strategic Transmission Investments (ASTI) programme is an example of this. Undoubtedly, this would have had a significant impact on reducing risk in RIIO-T2. While it will continue to reduce risk in RIIO-T3, its overall impact will have been reduced given a portion of the associated risk will already have been resolved. This is distinct from the new mechanisms proposed to support the CSNP funding (CSNP-F) which were not in place in RIIO-T2 and thus which both individually and collectively can be expected to have a greater relative impact on risk in RIIO-T3.

2.11 Reflecting this picture and Ofgem's own view that the risk profile for RIIO-T3 is rising, and with no offsetting reduction in investment and geopolitical risk, then the clear evidence is that the overall level of risk is rising that this needs to be reflected in a higher cost of equity.

Figure 1: **Impact of SSMD on relative risk position versus RIIO-T2**



RECOMMENDATIONS

2.12 The RIIO-3 process is ongoing. Many of the issues identified above could be addressed by changes introduced by Ofgem at a later point in the process. This means that a definitive view on relative risk cannot be taken at this stage, particularly given the areas outstanding in the SSMD. As context for the review, it is welcomed that Ofgem has stated that it would like to see *"pace over perfection"* or *"acceleration over accountability"* in RIIO-3. These are positive statements which chime with the size of the challenges faced and the need to accelerate actions to tackle those challenges. At the same time, it remains unclear what these statements mean in practice, and it would be beneficial if TOs sought further guidance from Ofgem. To inform this, SPT should consider offering a statement of principle on what this might mean, including the trade-off between pace of delivery and cost of delivery.

2.13 The arrangements outlined in the SSMD in aggregate, while emphasizing the need for an acceleration in progress, pose some barriers to a greater emphasis on pace. Continued complexity, bureaucracy, and a lack of detail on the approach to cost assessment and benchmarking, where many of the decisions have been postponed until after the business plans are received, hinder TOs from having the necessary clarity to support the required investment at pace. The overall risk profile is rising and while it is right that there must be a balance of risk between network companies and customers and that TOs should be accountable for risks they can control, it is self-defeating if the regulatory arrangements expose them to disproportionate risks beyond their control. It increases risk for both the companies and customers. Recognising this, to support sustainable investment and deliver the grid of the future, it will be imperative that a rising risk profile is reflected in the financial settlement for RIIO-T3. From the proposals set out in SSMD it is not immediately clear that this will be the case, although the current ranges remain sufficiently broad to provide a more supportive financial package.

2.14 Reflecting these conclusions, we set out below both overarching recommendations and several specific recommendations for changes to address areas where relative risk is rising in setting RIIO-T3.

Overarching recommendations

2.15 These can be divided into two areas. Area 1 is those relating to the approach to setting regulatory mechanisms. Area 2 provides further considerations for SPT in tackling changes in risk.

<u>Area 1: Engagement with Ofgem on refining the proposed regulatory frameworks</u>

2.16 SPT should actively engage with Ofgem on actions to address several of the factors that are driving a rise in relative risk. The key cross-cutting actions can be summarised are as follows:

- **Provide increased transparency** – This requires addressing remaining gaps in the SSMD promptly so SPT can understand how they will work in practice and their impact.
- **Ensure any incentive arrangements are based on areas of performance that are controllable** – Companies should face some risk through incentives, but it must be controllable risk. Key areas of focus should be the delivery incentives associated with Load-Related Projects, the new connections mechanisms, and NARM.
- **Limit complexity of regulatory mechanisms –** Given the drive for pace in RIIO-3, mechanisms must be designed to support pace rather than add bureaucracy. A key principle of this will be proportionality i.e., a review should reflect materiality rather than applying a 'one size fits all' approach to an assessment. This will be particularly important for uncertainty mechanisms such as the Net Zero, Resilience and Cyber Reopeners.
- **Enable investability in the context of a global energy transition** – With increasingly tight supply chains and competing demands on resources, the regulatory framework must provide network companies the ability to attract the necessary investment. This requires an appropriate cost of capital as well as an appropriate balance of incentives. The proposal outlined in the SSMD to introduce new supply chain resilience arrangements and in particular an equipment procurement mechanism which will provide funding for TOs to book factory slots are extremely positive developments, but the detail remains uncertain at this stage.

- **Refining mechanisms to mitigate risk** – Specific changes should be made to core mechanisms to mitigate known risks. These would include refining the RPE indexation mechanisms to better reflect inflationary impacts and updating the TIM mechanism to recognise the greater likelihood of overspend in RIIO-T3.

Area 2: Re-evaluate SPT's appetite for risk and how to reflect this in its actions

2.17 The onus to manage risk does not just fall on Ofgem. There are also actions that SPT and other TOs can take that would have a positive impact on risk. These are:

- **Adopt a mindset that is more accepting of risk –** The current landscape inevitably involves greater risk. Just as Ofgem must be less risk averse in its decision making, SPT must be prepared to accept a degree of increased risk and reflect this in its investment decision making and associated processes. This is important to help facilitate the unprecedented level of delivery required over RIIO-T3 and beyond. Crucially this risk must be bounded as SPT should not be over-exposed to risks beyond its reasonable control.
- **Take positive measures to address associated barriers** – There is a significant investment challenge and successful delivery necessitates a culture shift and a clear focus on the opportunities available. It will require greater flexibility, fresh thinking, and new skills and technology including an enhanced role for digitalisation.
- **Work more closely with other network operators and third parties** – Success will depend on several parties working together. It will mean sharing information, resources, and best practice. For this to succeed there must be a level playing field with parties facing the same standards and incentives enabling a fair level of risk sharing across all parties in the sector.

Specific recommendations

2.18 In the following table we set out mitigation measures to tackle specific risks in 11 areas where we have identified those risks are likely to be rising in RIIO-T3 and beyond. For each risk, the measures are split into the following categories:

- Category 1: SPT to take action to address risk
- Category 2: Regulatory (Review existing mechanisms)
- Category 3: Regulatory (Introduce new mechanisms)
- Category 4: Regulatory (Provide additional allowances)
- Category 5: Regulatory (Address systematic/ risks beyond reasonable control)
- Category 6: Other

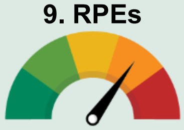
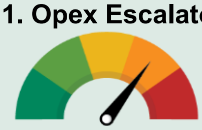
2.19 Note, for several of the identified risks we envisage a combination of measures will be required. The following table summarises these proposed measures.

Table 4: Specific recommendations for addressing material risks

Risk Area	Specific Recommendations
1. Scale & complexity of investment  P&L/Cash Impact (pa) Over £50m	**Category 1: SPT** • Leverage innovation opportunities • Fully harness the benefits of digitalisation **Category 2: Regulatory (Review existing mechanism)** • Recalibration of TIM to reduce overspend for TOs /underspend exposure for customers • Major Projects – enable quicker, more streamlined approach **Category 5: Regulatory (Address systematic risk)** • Reflect in financial proposals – above recommendations can only partially mitigate new and growing risks relating to new technology & integration, construction activity, network access and management, and increasing demand and utilisation of the network
2. Planning & land purchasing  P&L/Cash Impact (pa) £10-25m	**Category 1: SPT** • Improve communication with stakeholders to increase understanding of local aspirations with the aim of removing obstacles and increasing public acceptance **Category 3: Regulatory (Introduce additional mechanism)** • Flexibility for reflecting changes to legislative requirements **Category 4: Regulatory (Provide additional allowances)** • Reflect compensation needs in regulatory allowances and UMs based on proposed benefit values from the draft guidance **Category 5: Regulatory (Address systematic risk)** • Reflect in financial proposals – above recommendations can only partially mitigate new or growing risks relating to complex planning processes and purchasing, and environmental considerations relating to network expansion **Category 6: Other** • Need for legislative change to support increased speed • Need for national guidance on compensation (including a potential role for community benefits) in line with the Winser Report

Risk Area	Specific Recommendations
3. Supply chain/ resource constraints  P&L/Cash Impact (pa) £25-50m	**Category 1: SPT** • Move away from disaggregated contract model to a looser, more flexible 'portfolio' style of contracting – includes need for earlier commitments to secure capacity • Consider broader use of collaboration with other network companies/ suppliers to deliver investment needs **Category 3: Regulatory (Introduce new mechanism)** • Finalise details for new equipment procurement mechanism which could have a positive impact in reducing risk **Category 5: Regulatory (Address systematic risk)** • Increase financial parameters to attract investment – above recommendation can only partially mitigate new and growing risks relating to the significant increase in demand for materials and skilled labour and geopolitical risks
4. Load-Related Projects – Delivery Incentives  P&L/Cash Impact (pa) Over £50m	**Category 2: Regulatory (Review existing mechanism)** • Adjust delivery incentives to reduce both controllable and uncontrollable risk • Re-evaluate use of LOs, PCDs, and ODIs to recognise factors outside SPEN's reasonable control thereby reducing the risk of a punitive result and providing a better balance of overall risk • Under new CSNP Funding Mechanism (CSNP-F) clarify application of materiality thresholds, late delivery penalty, and how delivery incentives/ ITA role will impact different subset of projects
5. Connections volume  P&L/Cash Impact (pa) Over £50m	**Category 1: SPT** • Enhanced engagement with ESO to manage process and messaging **Category 2: Regulatory (Review existing mechanism)** • Clarify plans to replace existing connection ODIs with new incentive structure to drive faster connections times and a more effective overall connections process **Category 3: Regulatory (Introduce new mechanism)** • Complete broader review of connections policy to ensure it is 'fit for the future' including an approach to support prioritisation

Risk Area	Specific Recommendations
	Category 5: Regulatory (Address systematic risk) • Reflect in financial proposals – above recommendations can only partially mitigate new/ growing risks relating to the integration and processing of new, variable, and intermittent generation connections
6. Financial – Cost of Debt/ Cost of Equity  P&L/Cash Impact (pa) Over £50m	**Category 2: Regulatory (Review existing mechanism) – Cost of Debt** • Reflection of increased additional borrowing costs • Reflection of the proposed adoption of the company specific RAV weighting of the trailing average for the TOs • Retain long run inflation assumption of 2% as targeted by the Bank of England **Category 2: Regulatory (Review existing mechanism) – Cost of Equity** • Reflection of market based cross checks • Reversion of reduced long term returns during times of low interest rates • Adjustment to the beta calculations via expanding the comparator set to place weight on industries in which SPT shares a similar risk profile (welcome inclusion of European utility comparators) but should also include construction companies **Category 3: Regulatory (Introduce new mechanism)** • Comprehensive investability test and framework to ensure returns and the overall financial package is sufficient to attract investment **Category 5: Regulatory (Address systematic risk)** • Adjustments to beta calculations set out above should reflect growing risks relating to increasing exposure to volatile macroeconomic conditions, competition for capital, investor confidence, and reduced outperformance opportunities which may only be partially mitigated through recommendations set out above • There must be sufficient clarity of the returns available to investors, this needs to be considered when calibrating the overall financial package
7. Cyber  P&L/Cash Impact (pa) £25-50m	**Category 1: SPT** • Investment in digital capability and necessary workforce skills to prepare for threats and maximise resilience **Category 2: Regulatory (Review existing mechanism)** • Ensure UMs are sufficiently flexible and broad to address additional investment needs

Risk Area	Specific Recommendations
	Category 5: Regulatory (Address systematic risk) • Recognise new and growing risks of vulnerability to cyber-attacks associated with a larger, more complex, and interconnected grid
8. NARM  P&L/Cash Impact (pa) £10-25m	**Category 2: Regulatory (Review existing mechanism)** • Finalise framework to provide transparency including basis of expanded coverage and aspects of methodology alignment • Review methodology to enable more flexibility in making changes to plans/ substitutions
9. RPEs  P&L/Cash Impact (pa) £25-50m	**Category 2: Regulatory (Review existing mechanism)** • Review RPEs to fully reflect uncertain cost environment including addressing increased market volatility and supply chain challenges **Category 3: Regulatory (Introduce new mechanism)** • Potential role for reopener to address unexpected developments
10. Ongoing efficiency  P&L/Cash Impact (pa) £25-50m	**Category 2: Regulatory (Review existing mechanism)** • Ensure mechanism is reflective of the scale of the delivery challenge and does not penalise delivery at pace
11. Opex Escalator  P&L/Cash Impact (pa) £10-25m	**Category 2: Regulatory (Review existing mechanism)** • Review proposed treatment of contractor indirects to ensure efficient costs are fully funded • Assess project on a gross capex basis with Opex Escalator focusing on 'Opex' CAI costs **Category 3: Regulatory (Introduce new mechanism)** • Potential role for reopener to address unexpected developments

2.20 A clear pattern emerging from this table is the scale of systematic risk facing SPT. It can be seen in each of the following areas:

- Scale and complexity of investment – Through a combination of construction, technology, resource constraints, 'lock-in' and utilisation risks.
- Land planning and access – Reflected in the impact of delays in obtaining planning permits, planning conditions, public resistance, environmental regulations, and landowner compensation disputes.
- Supply chain and resource constraints – Resulting from shortages of materials and skilled labour as well as the impact of geopolitical tensions on accessing critical components.
- Scale and uncertainty of connections – The surging volume of connection requests, integrating new generation sources, and challenges predicting future demand patterns.
- Cyber security and resilience – Manifest as increased vulnerability to attacks at a time when the grids have become increasingly digitally managed and operated.
- Key financial components – The need to attract and retain investment in an increasingly volatile macroeconomic climate where other countries are seeking to deliver their own energy transformation.

2.21 Further, while other risks such as climate change and those associated with connecting a range of new technologies to the network may not be considered as material in the RIIO-T3 timeframe and therefore are not reflected in this table, in combination they contribute to a multiplier effect on the systematic risk profile. For RIIO-T3, this increases the importance of ensuring the financial settlement reflects the changing risk profile and, while SPT should bear some of this risk, it should not be over-exposed to risk beyond its reasonable control. If it is, there is greater risk that the energy transition cannot be delivered which impacts GB energy consumers and the country more broadly.