

Ofgem RIIO-2  
10 South Colonnade  
Canary Wharf  
London  
E14 4PU

23 August 2019

Dear Sir/Madam

### **RIIO-2 tools for cost assessment consultation**

Scottish Hydro Electric Transmission plc (SHE Transmission) welcomes the opportunity to respond to Ofgem's consultation on the RIIO-2 tools for cost assessment. Our response to specific questions posed in the consultation is attached.

SHE Transmission acknowledges that this RIIO-2 cost assessment consultation is focussed on Gas Distribution and associated econometric models, and we have therefore responded only to the sections that are relevant to the Transmission sector. Our response focuses on non-econometric analysis, regional factors and RPEs and on-going efficiency.

In previous price controls the cost assessment methodology has been determined well in advance of Business Plan submission.<sup>1</sup> This ensured that information required to support the cost assessment of Business Plans was included in the Business Plan submissions, notably the content of the final Business Plan Data Tables (BPDts). We acknowledge and welcome Ofgem's intention to evolve the approach to cost assessment taken in RIIO-T1 but there will inevitably be differences. We require an agreed detailed methodology for how Ofgem will undertake its cost assessment in RIIO-T2, including complete BPDts templates, to ensure we have sufficient time to provide the necessary information and analysis to support our Business Plan.

Yours sincerely

Sara McGonigle  
Senior Manager, RIIO-2

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<sup>1</sup> In RIIO-ED1 the "Strategy decisions for the RIIO-ED1 electricity distribution price control: Tools for cost assessment" was published in March 2013, two years prior to the price control.

## **RIIO-2 Tools for Cost Assessment consultation response**

### **Non-econometric analysis**

#### *General comments*

SHE Transmission are very supportive of Ofgem's position that not all network costs, particularly large lumpy expenditure, often involving bespoke, non-repeated projects and workloads, can't be estimated using econometric analysis. We support Ofgem adopting a more tailored approach to cost assessment. We support a combination of cost assessment techniques, but with particular focus on a bottom-up project by project review and expert review for large bespoke capital projects. There may be merit in considering third party evidence for cost benchmarking where it can be demonstrated as sufficiently reliable and comparable on a technical and construction basis or for specific operating costs.

### **Question 13: Should we assess business support costs at a group level in order to address cost allocations across companies within groups?**

We believe that assessment of business support costs should be undertaken at an aggregate level across groups with reference to individual licensees. This ensures that different approaches in allocation methodologies across groups are accounted for, and it allows for consistent comparisons while also reconciling to individual licensees accordingly.

### **Question 14: Which types of business support costs should be benchmarked, and how should they be benchmarked?**

SHE Transmission support benchmarking of 5 of the 7 BSCs:

- Finance;
- Procurement;
- HR & non-operational training;
- Property management; and
- CEO and group management.

Care must be taken in how these costs are benchmarked, what metric is used and reliance on cost drivers including but not limited to totex expenditure, activity analysis, size and scale of expenditure, allocation of activity, and sourcing strategy (insourcing vs outsourcing activities).

For IT&T we support a hybrid approach, whereby benchmarking as above is used for ongoing service costs, and expert review is used for the non-operational capex element. Every business will have different non-op capex requirements and therefore this requires bespoke justification through IT&T strategies and plans, and consequently it will not lend itself well to quantitative

benchmarking but to qualitative review. However, ongoing service costs will lend itself to quantitative benchmarking techniques, provided the correct cost driver is used.

For insurance, we also propose expert review. Insurance costs are ultimately driven by a) the level of risk a company is willing to take and b) the process a company follows to ensure the competitive procurement of insurance. This can only be tested through expert review.

On cost drivers, for the five benchmarkable costs above and the element of IT that is benchmarkable, we support the use of revenue or expenditure (direct opex + capex) drivers amongst other reference points based on existing network size, network growth, and geographical locations or complexities where applicable. Ultimately how much we spend on our network drives how much we will have to spend on supporting that expenditure. Below notes how these fit with Ofgem's cost driver principles:

Principle	Fit
<b>Make economic and/or engineering sense</b>	Revenue and/or expenditure makes economic sense. It is reasonable to assume that the more direct expenditure and thus activity on a network, the more back office resources will be required to support that. This will be in terms of staff costs, and the equipment, facilities and support staff (and contractors) will require to carry out those activities. Rather than cherry picking disaggregated cost drivers, all link back to direct expenditure.
<b>Be accurately and consistently measurable</b>	Historical and forecast revenue is subject to audited accounts. Historical and forecast expenditure data is available via Regulatory Reporting Packs and have been subject to robust data assurance.
<b>Have a relatively stable relationship with costs over time</b>	Where the relationship of costs is not directly correlated with changing Network size, complexity or dynamic, these can be deemed as relatively stable and fixed over time with exceptions. However, there will always be some form of relationship between direct costs (capex and opex) and indirect costs. The relationship should be a factor in trend analysis, relative analysis and absolute analysis particularly where costs are agnostic to size and scale of company or network.
<b>Be beyond the control of the network company</b>	While direct expenditure is arguably within the control of the network company, it is subject to robust need and cost efficiency assessments through the price control regimes. So, what has been spent and what is forecast to be spent, is proven to be necessary and essential to meet customer needs. As such can't reasonably be seen as distorting company incentives in ways which might be ultimately inefficient. Unforeseen or unexpected events should fall under reopener or uncertainty mechanisms where in RIIO-T1 an operating cost allowance was included as part of load related expenditure mechanisms including SWWs and the Generation Connection Volume Driver.

**Question 15: Which types of business support costs should be excluded from benchmarking?**

As noted above, SHE Transmission support the removal of the non-operational capex element of IT&T costs from the benchmarking and the insurance costs.

For IT&T costs above, we have outlined how we believe these should be assessed and will set out in our Business Plan submission the basis of our cost estimation and efficiency assessment.

Insurance is dependent on the split between capital and operational insurance, the contracting strategy with the supply chain for capital expenditure, and the level of risk taken by each company for insurance purposes. Basing cost benchmarking of insurance costs ignorant to the level of cover or contracting approach may lead to an inappropriate increase in network risks. Any assessment should reflect the approach and strategy adopted for insurance and risk.

**Regional factors and company-specific effects*****General Comments***

SHE Transmission acknowledge that the regional factors and company-specific effects questions within this consultation are focussed on issues relating to the pre-model adjustments. However, we believe that even though there is not a regional factor adjustment model for Transmission, due to the bespoke nature of the large capital projects in the Transmission, we are impacted by regional factors. We would refer to these as cost drivers which Ofgem has set out in the BPDs. We would consider regional factors as part of our labour costs and Real Price Effects (RPEs) which we have set out separately and will include in our Business Plan submission.

SHE Transmission operates across a challenging geography and encounter unique factors that impact our costs of operating and developing the network that are outside our control. We believe this is important to consider as part of any cost benchmarking exercise.

In our response to the RIIO-2 Sector Specific Methodology consultation, we set out the key areas where we have encountered additional costs due to regional factors in previous projects and these fall under two overarching headings:

- **Site Location** – the remote locations of project sites can have a significant impact on the overall cost due to a number of drivers: attracting resource, travel time, onsite living costs, weather conditions and site access.

- **Site topography and terrain** – the topography in the north of Scotland can be extreme with challenging ground conditions that range from deep bedrock to peat, all within a potentially mountainous environment.

A small sample of projects that illustrate these regional factors are the Beaulay-Denny replacement overhead line project and Stronelairg Windfarm connection project.

#### Beaulay-Denny Regional Factors

The 137-mile line runs through some of the most remote and inaccessible landscape in GB and posed a serious challenge to SHE Transmission that had an impact on costs, especially the civil construction works.

- 59% of all towers are greater than 300m above sea level in areas where winter working was challenging due to ground conditions, high winds and snow cover. The remote locations and terrain also created challenges regarding travel time to tower locations. As an example, the furthest location from the public road to the tower location was 34km, which, because of the terrain and environment, resulted in a travel time of approximately 1 hour.
- The extreme terrain made track construction between the towers impossible. There was therefore a requirement to turn back and travel around the mountain to allow access between two towers. This required an overall journey of 113.6km consisting of 14.5km down access track 18, followed by 80km by public road and a further 19.3km up access track 19, with a total journey time of approximately 3 hours.
- Consent granted by the Scottish Ministers in January 2010 contained a total of 311 conditions covering items such as habitat & species protection, construction procedures and additional wirescape rationalisations.

#### Stronelairg Regional Factors

The Stronelairg windfarm connection project was carried out in one of the most remote areas in the UK, having a material impact on costs relating to construction costs and productivity.

- The Stronelairg Substation is located 680m above sea level on the Monadhliath Mountains to the south of Fort-Augustus, making it one of the highest substations in the UK.
- The workforce was largely based in a self-sufficient camp due remote location and elevation of the site with capacity for 90 persons. The camp offered comfortable en-suite sleeping pods, canteen, gym, laundry and free WiFi access.
- Working at such a high-altitude the impact of the weather on productivity was significant with the construction team working through 7m snow drifts and high winds.

Such regional factors that SHE Transmission encounter can have a significant impact on costs. They also make benchmarking difficult. SHE Transmission agree with Ofgem that Transmission companies' have "large lumpy expenditure, often involving bespoke projects and non-repeated workloads" and this adds a level of complexity to benchmarking these costs against historical costs, especially with a large amount of the cost being non-unit cost civil construction work.

**Question 16: How should we estimate and model the impact of regional factors?**

N/A

**Question 17: Do you agree with the proposed criteria for justifying regional cost factors that we have outlined?**

N/A

**Real price effects and ongoing efficiency**

***RPE General Comments***

RPEs are important in the overall regulatory framework and must be considered within each cost category to ensure appropriate allowances are determined while ensuring the allocation of risks are efficient. We believe that RPEs are more appropriately managed by the Network company by way of a fixed allowance (which may be zero in some categories). We believe a high bar must be set for justifying either ex ante RPE totex allowances or transitioning to an RPE index. As Ofgem recognised when it consulted during RIIO-ED1<sup>2</sup> on RPEs, this is a complex and challenging area which could lead to windfall gains and losses on Network companies and consumers.

We have undertaken an assessment of the options for RPEs with Oxera Economic Consulting and intend to set out where we believe the high threshold for justifying an ex ante RPE allowance is merited in our Business Plan. The process has allowed us to conclude thus far that this is limited to a few cost categories at most and there appears little to no evidence that significant ex ante RPE allowances would be justified.

We believe the impact could be more pronounced in changing to CPI/CPIH from RPI. Input costs in aggregate could change materially relative to CPIH indexation depending on the underlying cost base which is still more closely reflective of RPI. We await the outcome of an independent assessment and this will be reflected in our final Business Plan.

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<sup>2</sup> <https://www.ofgem.gov.uk/publications-and-updates/consultation-treatment-real-price-effects-riio-ed1-slow-track-electricity-distribution-network-operators>

With regards to indexation of RPEs, we have set out our thoughts previously for RIIO-2<sup>3</sup> where we believe that indexation of RPEs would be distortionary on incentives, misallocate the risk between company and consumers, and likely to lead cost increases. As part of managing the risk of an indexation mechanism, either companies would need to seek to manage that risk through hedging arrangements or contracting the risk out to the supply chain. Both are likely to lead to increase in costs to consumers once this risk is costed. At this stage, we seek to adopt a competitive procurement approach as required under procurement regulations.

**Question 18: What RPEs should we account for, how should we gauge materiality, and what criteria should we use for index selection?**

We do not believe that indexation of RPEs will provide the appropriate mechanism for RIIO-2. The increase in the volatility of input price indices implies indexation based on annual figures may not be a viable alternative as this will lead to uncertainty in network charges and poor outcomes and shifts the risk solely to consumers. Based on the following criteria, we believe indexation is inappropriate:

- **risk exposure** - indexation is likely to alter network operators' risk exposure compared with the status quo;
- **impact on incentives** - indexation of RPEs would undermine cost-efficiency incentives and therefore needs to be assessed carefully;
- **volatility and predictability in network charges** - indexation could lead to higher volatility in charges for customers, especially if suppliers manage their risk exposure by building the volatility into consumer bills, i.e. the bills change in line with the chosen indices;
- **balance of charges between current and future customers** - input price changes should be reflected in allowed revenues when they occur such that future customers are not unnecessarily burdened or do not unjustly benefit from higher or lower charges;
- **complexity and unintended consequences** - related to introducing a mechanism that is hard to understand and increases complexity of the entire regulatory regime; and
- **resource costs** - which would be imposed on Ofgem and/or on network operators for implementing and monitoring the indexation.

SHE Transmission believe, given the evidence shown, there has not been a consistent relationship between input prices and inflation, and an increase in the volatility in indices. In general terms the major cost items for RPEs remain to be from labour, plant and materials as

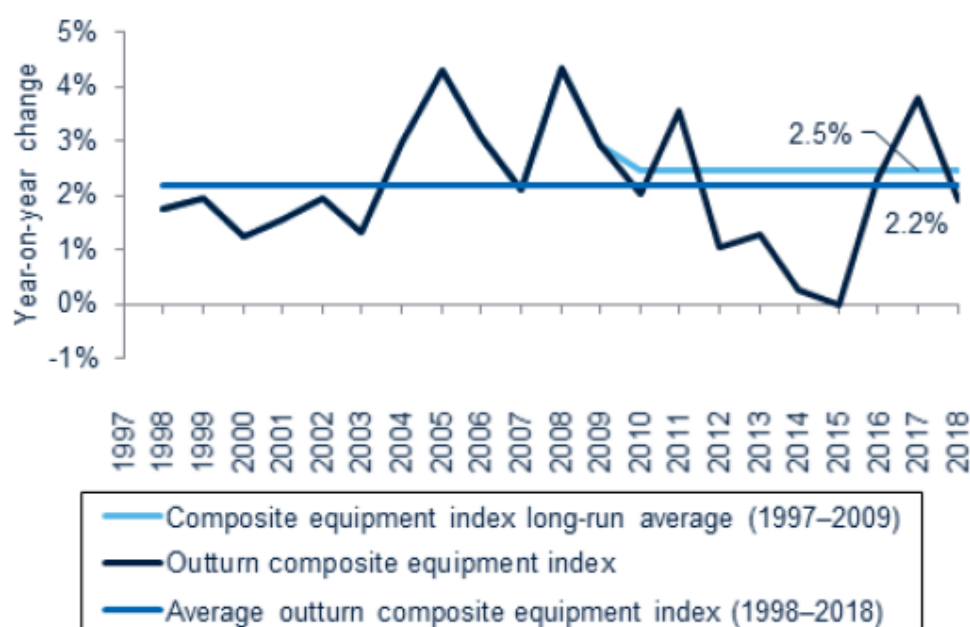
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<sup>3</sup> Scottish and Southern Electricity Network's response to RIIO-2 Framework Consultation <https://www.ofgem.gov.uk/publications-and-updates/riio-2-framework-consultation> and Scottish and Southern Electricity Network's response to RIIO-2 Sector Specific Methodology Consultation <https://www.ofgem.gov.uk/publications-and-updates/riio-2-sector-specific-methodology-consultation>



in RIIO-T1. However, when reviewing forecasted indices and outturn of indices, and also considering averages and indexation lengths, it would be highly speculative to include any indexation of RPEs as we have set out previously. A high bar must be passed to justify this is in the best interest of consumers and is an appropriate allocation of risk without increasing costs to consumers. An example of this analysis for composite equipment as provided by Oxera Economic Consulting in Figure 1 below, in our opinion illustrates that indexation is highly volatile compared to outturns and long-term averages.

**Figure 1 - Outturn values vs long-term trend in composite equipment**



**Note:** The long-run average is estimated from 1997–2009, in line with Ofgem's analysis to avoid the impact of the global recession on long-term trend.

**Source:** Oxera analysis based on official indices data from the ONS.

We intend to provide analysis and evidence in our Business Plan across a range of indices and focus on the criteria to ensure ex ante RPE allowances are only provided where appropriate. We believe that an ex ante allowance remains the most appropriate mechanism for RPEs. We believe the approach taken by Ofwat in PR19 would be appropriate, whereby Ofwat did not allow for any RPEs upfront but instead asked companies to provide evidence on input price inflation. We support this approach and intend to propose an appropriate ex ante allowance for RPEs based on evidence as part of our Business Plan submission which will only likely apply to a few cost categories where a high bar of evidence can be demonstrated.



In relation to materials and plant, with the uncertainty of input prices in terms of import tariffs, duty and supply chain costs, following the exit from the EU, SHE Transmission believe that there needs to be consideration for an uncertainty mechanism to adjust for these costs that will be out of our control. Another area that needs to be considered is the transition to CPIH may result in additional cost pressures where costs are closely related to RPI and this has to be considered by Ofgem.

### Materiality

Ofgem has set out through the Business Plan Guidance and this consultation that they expect the networks to evidence that the RPE impact will be material against Totex and CPIH. SHE Transmission support Ofgem's view that is important to have a materiality test for ensure that both consumers and companies are subject to windfall gains or losses.

We disagree with Ofgem's expectations for RPE materiality set out in the RIIO-2 Business Plan guidance that Ofgem "*expects companies to show that each RPE is material relative to both totex and general consumer price inflation*". This approach to determining materiality is inherent of the cost areas, as a small totex cost area with a large variance from CPIH could have a more significant impact on costs than a large totex cost area with a small variance from CPIH. This is also the case if costs are disaggregated into smaller cost areas, that individually may not have a material impact on costs, but collectively will have a material impact, which would be filtered out if a Totex share threshold is implemented.

An appropriate alternative approach for gauging materiality would be for Ofgem to follow a similar approach to Ofwat for PR19 that sets out criteria that each of the cost areas have to pass, in order to consider RPEs are required for those costs. The three criteria are set out below:

1. *Is there a significant likelihood that the value of the wedge between the input price and CPIH will differ substantially from zero over the period of the price control?*
  - a. *Is the expected value of the wedge between the input price and CPIH materially different from zero? Depends on whether reliance is placed on BEIS forecasts and on weight placed on pre-2010; **OR***
  - b. *Does the wedge between the input price and CPIH exhibit high volatility over time? Depends on weight placed on pre-2011 data*
2. *Are there compelling reasons to think that CPIH does not adequately capture the input price?*
3. *Is the input price and exposure to that input price outside management control during the duration of the price control?<sup>4</sup>*

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<sup>4</sup> <https://www.ofwat.gov.uk/wp-content/uploads/2019/07/Europe-Economics-Real-Price-Effects-and-Frontier-Shift-%E2%80%93-Updated-Assessment.pdf>

SHE Transmission believe that this set of criteria are appropriate for gauging materiality as it better reflects the materiality relationship between RPEs and inflation, compared to Totex. We also believe it is more appropriate to ensure that the allocation of risk and costs is accurate and efficient as well as the incentive impact on companies as we have set out above.

### Indices Selection

First, we do not agree with RPE indexation as a mechanism. As set out in RIIO-ED1 response and our response to Ofgem's RIIO-2 Framework Consultation and Sector Specific Consultation, we believe this could to windfall gains and losses. It is likely to lead to a material increase in costs to consumers through a need to manage uncontrollable risks by Network companies through contracting out this risk through hedging (which is challenging and expensive) or through the supply chain.

We have therefore not considered whether the proposed indices are appropriate and in our own assessment we have sought from Oxera Economic Consulting, we do not believe that Ofgem's proposals adequately consider all indices that would be appropriate for consideration. We intend to set out in our Business Plan submission in December comprehensive evidence and assessment of indices for each cost category noting where ex ante or no allowances are warranted.

If indices selected are reflective of the underlying cost base, then this becomes akin to a pass-through assuming the supply chain cost base moves in line with these indices. If this is contracted out to the supply chain, they have to factor the cost of that risk into their pricing. As we have stated and set out above and previously, this would lead to an increase in cost to consumers unnecessarily. The net impact could be significantly higher than applying no or little RPE allowances and Ofgem has not undertaken that assessment sufficiently to make an informed and evidenced based decision.

Careful consideration is required for how indices are used, grouped, averaged, weighted and modelled and there is insufficient evidence to conclude on appropriate indices without seeing the detailed assessment of each TO's cost base and supply contracts. We do acknowledge that in RIIO-1 indices are less volatile if grouped into larger categories and averaged, meaning they are more stable. However, while that removes the volatility its does not necessarily remove the risk of large variations in allowances compared to the cost base.

Where applicable to cost categories and as discussed in our RIIO-2 responses we believe that the construction of indices should involve a careful selection process. There are two differing options on indices selection:

1. Indices which closely reflect the underlying cost base
2. Indices which do not closely reflect the underlying cost base

For option 1, it could be argued that closely reflecting indices represent the characteristics of a passthrough mechanism and therefore may dampen the Totex incentive mechanism for companies. For option 2, the nature is more uncontrollable and therefore, in the short to medium term there would be a risk of material gains or losses for companies and customers. In the long term, companies would practically need to implement some form of change in their underlying cost base to mirror the indices selected to help control the risks. This would carry transaction costs and would likely take several years to transition to while in the meantime exposing customers and companies to uncontrollable risks.

We believe a high bar of evidence and impact assessment is required for the selection of indices for ex ante totex allowances and also for any use of an RPE indexation mechanism.

**Question 19: What common input and expenditure categories are appropriate for structuring RPEs?**

SHE Transmission believe that the input and expenditure categories used in RIIO-T1 and set out in the consultation document remain appropriate for RIIO-T2.

We agree with the view to retain notional cost structures in RIIO-T2 as we support the sentiment of ensuring that inefficient cost structures are not rewarded. Applying notional cost structures in the application of RPEs should make the calculation fair for the consumer across all operators. However, where justified and clearly evidenced, cost structures should be considered based on actual Business Plans submitted in December. Differences in regional networks and conditions mean that there are variations in both cost structures and proportions. Such differences should be fully considered when establishing an appropriate RPE methodology.

**Ongoing Efficiency**

**Question 20: How should we identify an appropriate ongoing efficiency assumption?**

SHE Transmission broadly support the continuation of Ofgem's approach for setting ongoing efficiency from RIIO-T1. We believe that Ofgem should utilise as much data that is available to them but consider the maturity of the industry compared to historic measures as well as the cost structure and demand within the UK for electricity infrastructure materials, plant and equipment, and skills and expertise.

SHE Transmission consider EU KLEMS to be an appropriate basis for productivity analysis given its widespread use in regulated utility sectors, it specifically contains data to derive value-added (VA) productivity growth measures which can be used to assess ongoing efficiency in the industry. EU KLEMS includes data on economic growth, productivity, capital formation and technological change at the industry level for all EU member states.

However, we also note some limitations of this data source. Firstly, EU KLEMS does not allow users to construct alternative productivity measures such as gross output (GO) based productivity for the UK. The main advantage of using GO-based measures (instead of VA-based) is that gross output includes the contribution of intermediate inputs to production. To derive GO productivity measures, alternative datasets may be considered to collect additional information on intermediate input volumes and prices (e.g. OECD STAN). Secondly, TFP estimates obtained from the EU KLEMS productivity database encompass all productivity changes, including catch-up improvements and scale effects.

As such, some adjustments or assumptions are required to isolate frontier shift. Alternatively, more direct approaches, such as stochastic frontier analysis and data envelopment analysis, can decompose productivity growth achieved by the industry into its constituent parts and therefore isolate the impact of frontier shift. This approach will require company level data as part of the Business Plan submissions at which point this should be considered more fully.

#### **Question 21: How should we determine frontier shift?**

SHE Transmission understand Ofgem's desire to utilise network companies' historical performance data from previous price controls to understand how the outturn frontier shift compares to the RIIO-2 forecast. However, we have concerns that given the extremely uncertain future in the short and medium term, the historic efficiency performance (observable frontier) will not accurately reflect the future efficiency frontier due the changing industry structures and regulatory arrangements. Therefore, we believe more weight should be placed on forward looking data, alongside analysing past trends when conducting the assessment of future efficiency assumptions because of the significant period of change the network companies face in RIIO-2 period.

The approach that Ofgem use should be based on robust evidence and consistent with other aspects of the price control, especially within cost assessment.