RIIO-ED1 Cost Assessment Working Group:
Totex benchmarking

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Benchmarking in RIIO-ED1

- RIIO model envisages a change in approach to benchmarking through use of:
  - Proportionate Assessment
  - An assessment toolkit
- Total Cost Benchmarking was identified as a key component of that toolkit:
  - Reflects desire to see companies deploying the lowest-cost whole-life solution – opex or capex
  - Acknowledges that there will be greater diversity of approaches as smart technology is rolled out e.g. reinforcement vs demand side management, and as companies strive to deliver their Output commitments.
  - Recognises the need to address sole reliance on disaggregated benchmarking by adding an alternative, but complementary perspective.

Benefits of Totex Benchmarking

- The logical consequence of the decision to equalise incentives between opex and capex
- It enables the different DNO strategies to be reconciled in benchmarking e.g. mix of replacement, refurbishment and maintenance
- Consistent with a focus on Outputs
- Will by definition take account of certain factors which have previously required normalisation adjustments/allocations e.g. insource vs outsource, sole use v shared use connections, boundary issues etc
- Provides holistic view – trade offs of expenditure in one cost category to facilitate efficiency in another
- The potential to inform Investment decisions, as well as being a benchmarking tool.

The challenges of Totex Benchmarking

- Whilst there is plenty of literature extolling the virtues of Totex, there are few case studies of practical implementations – see recent ORR report commissioned from CERRE
- There is a major question over how capex is accounted for within a Totex model, and whether the data exists to support this.
- There is still the requirement to debate cost bases, cost drivers, methods, company-specific factors etc
- There is a natural inertia within our industry over investing time and money in Totex - it might show we are inefficient!

Totex Benchmarking – Previous research

- UKPN commissioned a study re the implications of Total Cost Benchmarking from Professors of Economics at UCL, Andrew Chesher and Ian Preston.

- Key conclusions:
  - Endorsed the shift in emphasis to forward-looking benchmarking, whilst recognising the need for comprehensive uncertainty mechanisms
  - Welcomed moves towards a more integrated benchmarking model alongside a focus on Outputs and some continued use of disaggregated measures
  - Concluded that the tricky issue is the calculation of capital costs: Capital Expenditure vs Capital Consumption.
    - Calculating capital expenditure is much easier, but it is the inferior option – 'lumpiness' is a consideration, investment cycles are long. (NB a moving average of capex does not resolve these issues)
    - From an economic perspective, capital consumption is superior, but without question is more difficult to derive.
    - Recommendation is to attempt both as picking one or the other may give a false picture.

Totex Benchmarking – proposed approach

- Discuss with Ofgem our desire to make progress on Totex and our approach – checkpoint based on Ofgem response
- Inform DNOs about our approach and test willingness to participate
- Appoint an expert advisor to build a prototype totex model which can be tabled with Ofgem/Industry
- Work with similarly motivated DNOs to broaden sources of ideas, knowledge and data
- Consider how cross-sector experience can enhance the model:
  - Obtain visibility of current Water Industry study on Totex via NWL
  - NWL keen to participate in our project. NGN to be invited.
- 'Donate' the model to Ofgem/Industry – decision with Ofgem whether they seek to adopt any/all of the model

Key questions to be answered (1)

- What is the cost base?
  - Definition of ‘total cost’?
  - Balance between forecast and historic?
  - How do you deal with capital costs?
    - Capital Expenditure vs Capital Consumption (or both!)
  - *Direct opex + Indirects (inc Business Support) + ‘Capital Costs’?*
  - *Balance towards future: DPCR5 + RIIO-ED1 + ED2 periods?*
  - *We should attempt both*

Key questions to be answered (2)

- What are the appropriate cost drivers and how do you weight them?
  - Workload
  - Scale
  - Context
  - Outputs

  - *Workload: Avoid cost proxies if at all possible – how has this been addressed in GD1?*
  - *Scale: Network length, Number of installations, MEAV, Energy carried*
  - *Context: Number of customers served, population density?*
  - *Outputs: Does Output-led regulation lead you to Outputs as drivers i.e. measure cost performance in the context of delivery of outputs, such as CMLs, LIs/HIs etc*
  - *Weighting? More important that it is unambiguously robust from a statistical point of view*

Key questions to be answered (3)

- What are the appropriate statistical methods to use?
  - Least Squares, SFA, DEA?
- Assumed functional form?

  - *Inclination towards Least Squares – best understood – however DEA has been commonly employed in this context*
  - *Is there scope to use fixed effects modelling to take account of company-specific factors*
  - *Functional form: Choice needs to be justified!*

Summary of UKPN position

- Wholly support the rationale for its inclusion in the assessment toolkit:
  - Asset management strategies will diverge over time, as economy decarbonises – Totex is the only tool to support meaningful comparisons
  - Inherently resolves many of the issues that bedevilled DPCR5 cost assessment – boundary issues, different operating models etc
  - Consistent with a focus on forward-looking regulation which is concerned with delivery of Outputs
- However there is no question that it will require concentrated and expert input to realise a working model