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# Network regulation in Great Britain

## Indian delegation visit

21 October 2024

OFG1161

# Cost and efficiency benchmarking

# Introduction to Cost Assessment

- Ofgem's principal objective is to **protect the interests of existing and future consumers** in relation to gas conveyed through pipes and electricity conveyed by distribution and transmission systems.

- The RIIO framework implies **ex ante price controls** - i.e., we set the revenues that network companies are allowed to recover at the beginning of the price control. Additional revenue may be allowed during the price control in specified circumstances, such as through Uncertainty Mechanisms and pass-through.

- Thus, a key part of price controls is **setting totex allowances** for network companies. They represent a **material component of customers' bills now and in the future**, and it is important that they reflect an **efficient level of costs**. The aim of **cost assessment** is to determine this efficient level of costs. This ensures **value for money for consumers** and, combined with the broader incentive regime implemented in RIIO, **incentivises companies to become more efficient**, while maintaining safe and reliable networks and delivering an appropriate level of service.

- In general, the approach to cost assessment **builds on regulatory precedent**, is **consistent with the wider GB energy networks sector**, and where appropriate **utilises cost assessment tools that have been used in other regulated utility sectors.**

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## Why do regulators carry out Cost Assessment / benchmarking?

**Why benchmark?**

- Monopoly companies exercise market power and have incentives to inflate forecast expenditure.
- In the short run, the regulator needs to set cost allowances for the price control ahead.
- Will want to set cost allowances that are efficient in the short run, to protect consumer interests.
- This short run "allocative efficiency" is already a strong motivation to do good benchmarking.
- But there is more to it than that…

**The fundamental problem facing a regulator is asymmetric information…**

- In the stylised Principal-Agent models in the literature, higher levels of efficiency arise as higher levels of effort are put in by the firm.
- The regulator doesn't have accurate information on how easy/hard it is to make cost savings, whereas firms do.

**… however benchmarking can be a powerful solution**

- Benchmarking is a critical part of the regulator's toolkit for overcoming asymmetric information.
- It creates pseudo-competition between firms.
- The regulator can use the best performing firms to set allowances.
- Without needing to "pay" the laggards to reveal this.
- Benchmarking can therefore create strong incentives for ongoing dynamic efficiency: firms know if they fall behind, they will be disciplined by benchmarking at the next review

# Benefits and incentive properties associated with benchmarking

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Pseudo competition can unleash strong incentives for companies to improve performance.

**But there are risks**

- Companies compete through their performance on the benchmarking models, not for customers
- They will naturally and entirely rationally seek to “optimise vs the model”
- If the model is poorly designed, incentives created can be perverse and companies can focus on improving/delivering the wrong things

Significant effort and resource was committed to developing our modelling suites, utilising a range of different approaches to address the risks of model optimisation, or perverse incentives.

**So model design is critical**

If the model is well targeted on desired outcomes then it will produce the kind of behaviour that the regulator is seeking to induce.

We are improving and developing reporting on key output areas, to ensure our cost assessment remains focused on desired outcomes.

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# Where is benchmarking used in RIIO?

Allowed Revenue under Price Control = Baseline Revenue (BR) + Rules to adjust BR for company performance + Rules to adjust BR for other factors

**Baseline Revenue (BR)**

**Setting Fair Baseline Allowances**
Baseline Totex Allowances set via Cost Assessment process

**Ensuring NCs Can Finance their Operations**
Other Finance Issues inc financeability, capitalisation rates, depreciation rates, tax allowances

**Providing Clarity on What Allowances will Deliver**
Common & Bespoke Outputs, PCDs, ODIs, LOs

**Legacy items** from previous controls including RAV, close-out adjustments, and **Innovation Allowances**

**Rules to adjust BR for company performance**

**Efficiency Incentives**
Totex Incentive Mechanism (TIM)

**Truth Telling Incentive**
Business Plan Incentive (BPI)

**Ensuring Fair Returns**
Return Adjustment Mechanism (RAM)

**Incentivising Better Outputs**
Output incentives i.e. rewards/penalties for delivery of outputs

**Rules to adjust BR for other factors**

**Managing Uncertainty**
Uncertainty Mechanisms

**Adjusting to In-Period Cost Changes**
Real Price Effects (RPEs)

**Driving Productivity**
Ongoing Efficiency

**Costs Not Renumerated in Allowances**
Directly Remunerated Services and other pass through mechanisms

**Ensuring Fair Returns**
Cost of Capital Framework, CoD, CoE, Inflation indexation

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# Key Cost Assessment Building Blocks

**1. Reporting templates**

- Good benchmarking requires good data. The development of the Business Plan Data Templates (BPDTs) and associated Business Plan Guidance is critical to getting common, robust data to use for Cost Assessment.

**2. Comparability / Normalisation**

- The robustness of a benchmarking exercise relies on comparability across network companies, which might require normalisation / pre-modelling adjustments to submitted costs.
- Regional & Company Specific adjustments were applied to account for certain regions attracting higher or lower costs than elsewhere, or when the inherent characteristics of a particular network attract higher costs than others.

**3. Modelling choices**

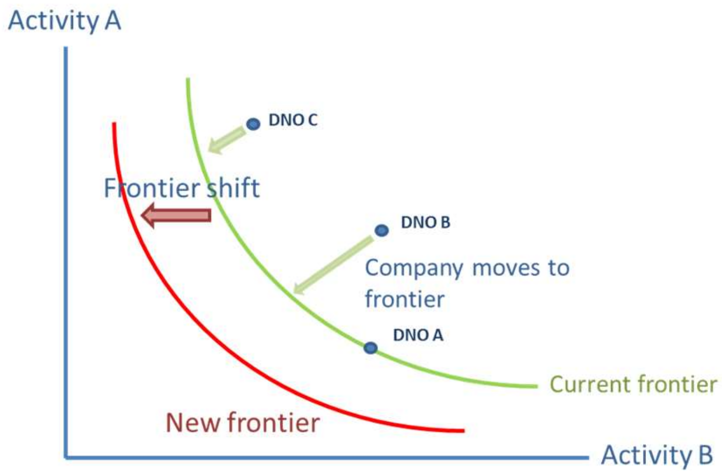
- **Level of aggregation:** For example, for RIIO-ED2 we used both totex (top-down) and disaggregated (activity level) benchmarking, to determine an 'industry average', modelled view of costs, but it is not the only option.
- **Cost drivers:** We used a selection of scale, workload, and growth drivers to control for material differences between companies and outputs.
- **Assessment tools:** regression, unit cost, run-rate, ratio and qualitative analysis etc.

**4. Catch-up efficiency**

- Efficiency challenge, which is used to challenge the less efficient companies to 'catch-up' on expenditure with the most efficient companies.

**5. Ongoing efficiency / Frontier Shift**

- Efficiency challenge, reflecting an overall increase in productivity that we expect even the most efficient companies to deliver.



# Modelling choices – Level of aggregation

- As noted there are several decisions or modelling choices that need to be made when developing the benchmarking approach. One of the most important is the level of aggregation. In RIIO-ED2, consistent with RIIO-ED1, we opted for a blended approach, incorporating both aggregate totex level benchmarking, and more disaggregated activity-level benchmarking.

**Bottom-up benchmarking**
RIIO-T1 and RIIO-T2

**Blended approach**
RIIO-GD1
RIIO-ED1 and RIIO-ED2

**Top-Down benchmarking**
RIIO-GD2
Ofwat PR14 and PR19

*More disaggregated* ⟷ *More aggregated*

## Activity level

- Each cost type entering a different model and being compared to different cost drivers, potentially using very different techniques.
- Has the potential to yield more information to the regulator on why different operators might be efficient or otherwise.
- Increased risk of differences in business model leading to differences in apparent performance.
- Risk of cherry picking.
- Risk of confusing, unintended, perverse incentives being created.
- Resource intensive.

## Totex

- Total resource use can then be compared to the basket of explanatory factors and outputs delivered, to derive an overall assessment of the relative value for money delivered by each operator.
- It is "blind" to the more detailed input choices made by the operator that ultimately lead to the recorded total resource use.
- For example, it is irrelevant whether operators choose to replace or maintain assets, to contract out or keep work in-house.
- Very pure incentives created.
- But provides no narrative on exactly why firms are inefficient.

## Distribution

Econometric (COLS) and non-econometric benchmarking (unit cost, ratio analysis)

Qualitative assessment and expert reviews where benchmarking not appropriate

Catch-up efficiency challenge set as a glide path from the 75th to the 85th percentile

## Transmission

Needs case assessment for assets, then volume and cost efficiency analysis (unit cost benchmarking where feasible)

Historical regression analysis for indirect costs

**Frontier shift**

**Real Price Effects:** indexation

**Ongoing Efficiency:** 1% pa (EU KLEMS data), although initially set at 1.2% pa

# Summary of the impact of RIIO-ED2 Cost Assessment

- DNOs submitted business plans forecasted expenditure of ~£25bn over the RIIO-ED2 period.
- Through cost benchmarking and efficiency challenge we reduced this by ~£3bn to ~£22.2bn, a reduction of 12% against normalised submitted costs.
- Once we account for non-price control allocations[1] and the impact of Access SCR, we provided allowances of ~£21.4bn over the RIIO-ED2 period.
- Figure 1 and 2 below provide a breakdown of the evolution of totex allowances, and the spread of adjustments across DNOs:

**Figure 1: Evolution of totex allowances**

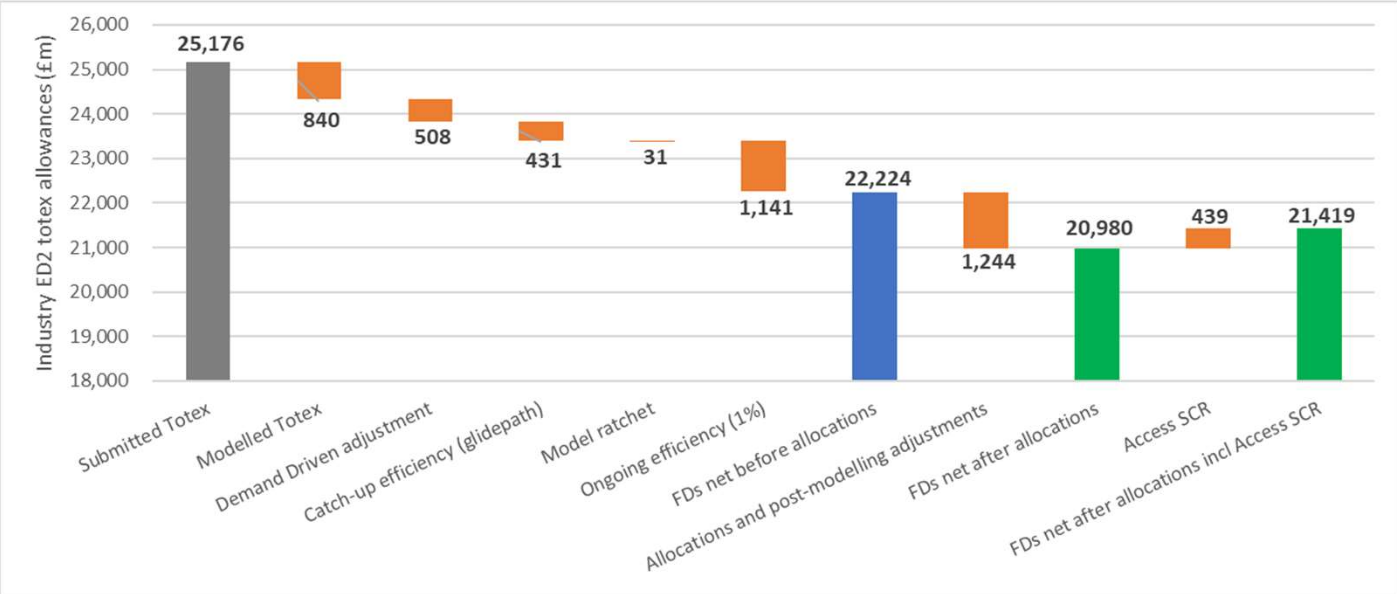
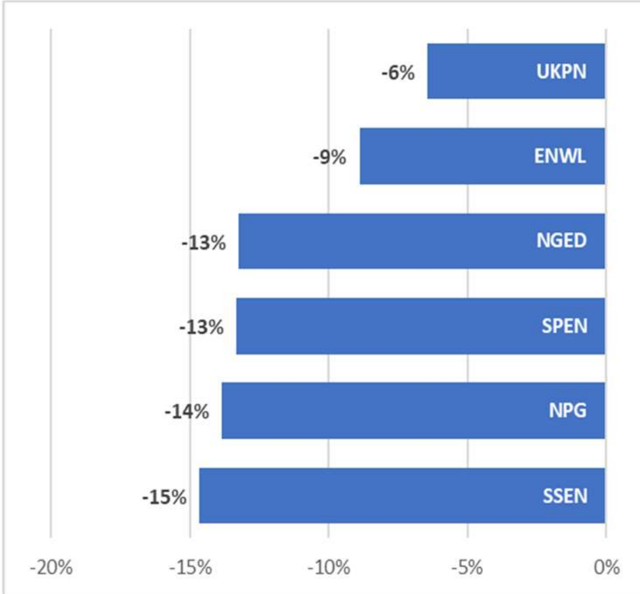



**Figure 2: Overall adjustments by DNO**




1 Non-price control allocations are adjustments to allowances to account for income that sits outside the price control.

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**Ofgem is the Office of Gas and Electricity Markets. We are a non-ministerial government department and an independent National Regulatory Authority, recognised by EU Directives. Our role is to protect consumers now and in the future by working to deliver a greener, fairer energy system.**

**We do this by:**

- **working with Government, industry and consumer groups to deliver a net zero economy at the lowest cost to consumers.**
- **stamping out sharp and bad practice, ensuring fair treatment for all consumers, especially the vulnerable.**
- **enabling competition and innovation, which drives down prices and results in new products and services for consumers.**

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