

# RIIO-ED2

## Cost Assessment Working Group – meeting 1

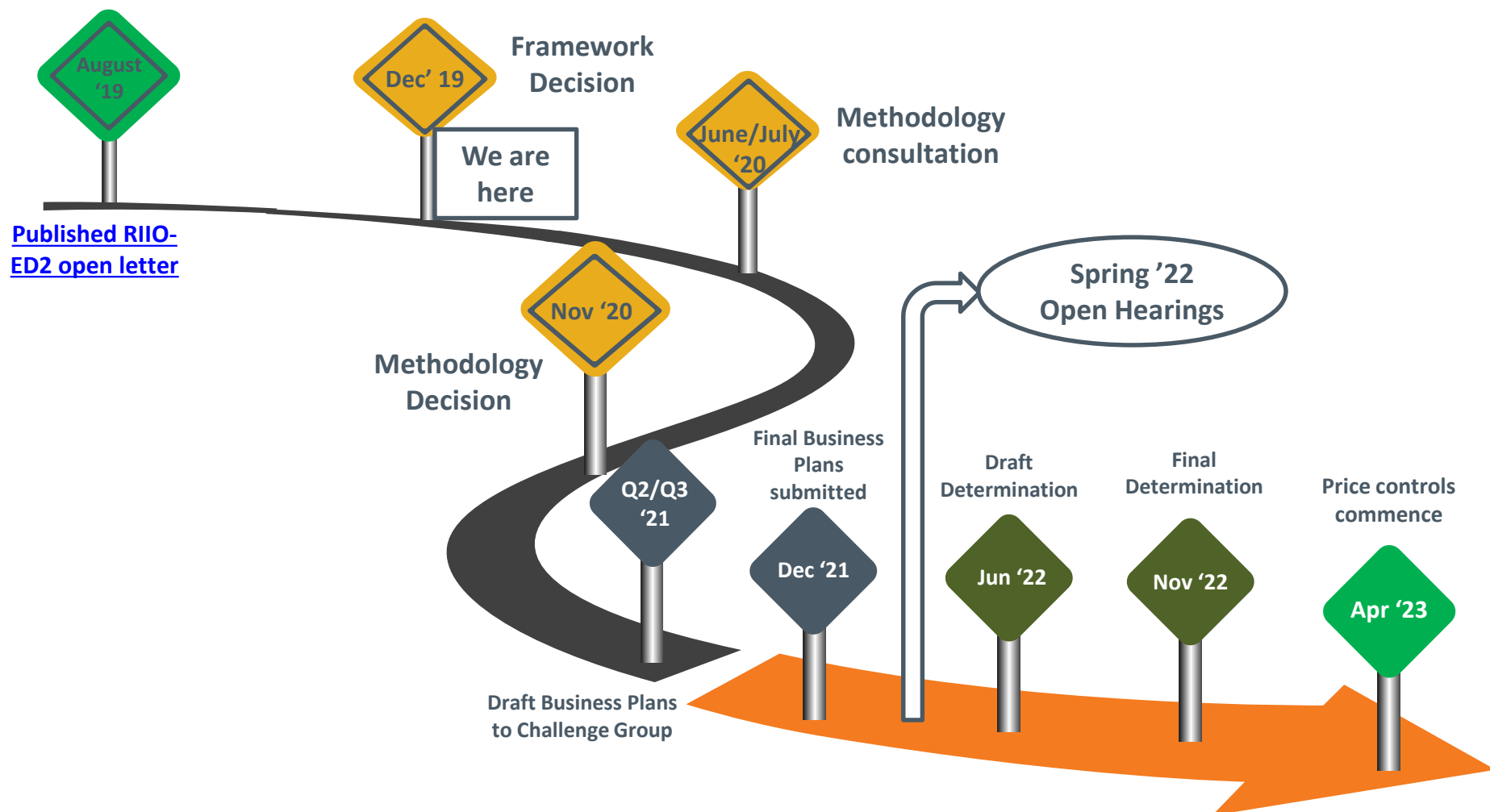


**Electricity Distribution Team**  
14 January 2020

## **Cost Assessment Working Group**

- Welcome and introduction from Ofgem
- Terms of Reference & working group interactions
- DNO responses to RIIO 2 and ED2 open letter consultations
- Ofgem view of priority areas
- Timelines
- Experience and views from ED1 and other sectors
- Potential workstreams for the group
- Actions, Next Steps, AOB

**What we are seeking to achieve**



### Our objectives

A high-quality and reliable service to all network users and consumers, including those who are in vulnerable situations

### Meaning we have DNOs that ....

- Deliver great customer service
- Help fuel-poor households, and those that are most vulnerable from a loss of supply Support new customers in getting connected to the grid efficiently
- Enable people to produce their own energy and sell it easily

**A safe and resilient network that is efficient and responsive to change**

- **Are amongst the safest and most reliable in the world**

Enable the transition to a smart, flexible, low cost, and low carbon energy system for all consumers and network users.

- Support the target of net-zero carbon emissions for 2050 by enabling the rapid roll-out of low carbon technologies, including electric vehicles, and the development of a charging network to support them

Keeps network charges on bills as low as possible

We will achieve through our price control toolkit



### In setting the price control

- Business plan incentive to encourage ambition and discourage gaming
- Cost assessment to root out inefficient costs
- Financial package to allow fair returns and maintain investor confidence
- Uncertainty mechanisms to mitigate the 'known unknowns'

### In delivering the plan

- Totex incentives to drive the companies to beat the plan
- Flexibility solutions as alternatives to network investment
- Innovation to drive down costs
- Competition to use markets to set prices
- Enabling the best 'whole system' solution
- Return adjustment mechanisms to guard against 'unknown unknowns'

## What are some of the key issues? (a sample)

A high-quality and reliable service to all network users and consumers, including those who are in vulnerable situations

- Cost of energy system transition may fall disproportionately on those most vulnerable, how does the price control provide a fairer balance?
- How should we distinguish between DNO and DSO roles in relation to funding and incentives?

**A safe and resilient network that is efficient and responsive to change**

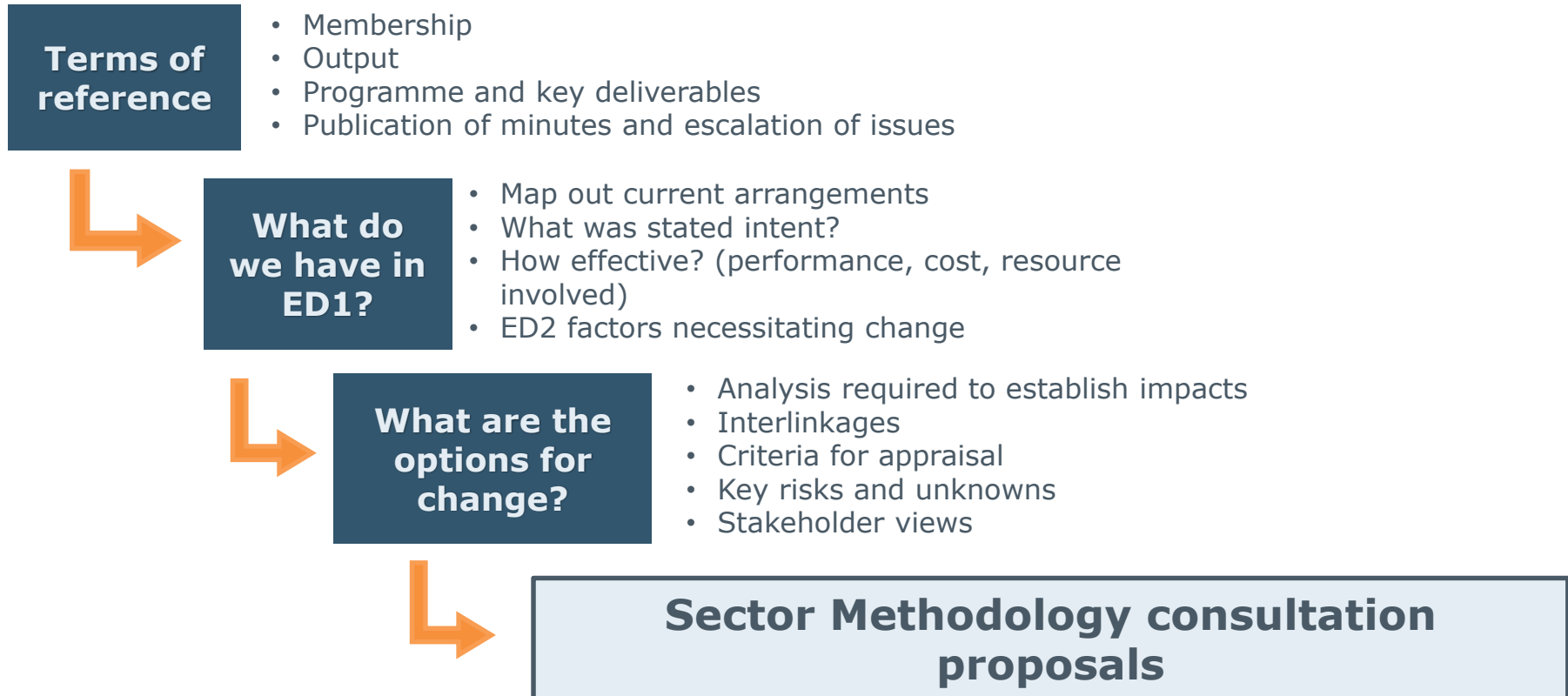
- **Are reductions in the 'average' duration/length of interruptions still appropriate when short interruptions are increasingly disruptive? What about the worst served?**
- **How do we ensure the networks are investing wisely for future resilience?**

Enable the transition to a smart, flexible, low cost, and low carbon energy system for all consumers and network users.

- How is the energy consumer benefit defined in relation to decarbonisation? What does this mean for the role of networks and the scope of the price control; strategic investment ahead of need; and strategic innovation funding?
- Should we promote the interests of low carbon technologies over non-renewables, for example by socialising more of the connection costs for low carbon electric vehicles?
- How do we future proof the networks to anticipate demands in 2050? How do we manage risks of stranding and closing down alternative pathways?

Keeps network charges on bills as low as possible

- Electrification of heat and transport likely to require significant additional expenditure
- How do we ensure flexibility and DER is fully utilised, and that markets between DER and network infrastructure are neutrally facilitated?



- These are **working** groups. Membership is not granted because of interest in the topic but because you can provide information and analysis that will support policy development
- Not all working groups will run through to Summer, some may be short sprints feeding into other working groups
- We may have to adapt our approach once these are up and running

## **Terms of Reference**



- The ToR will need to be reviewed and updated following taking account of stakeholder feedback.

**CAWG ToR RIIO ED2: To inform development of toolkit for assessing efficient costs in RIIO ED1.**

**Advisory not decision making body.**

**Objectives:**

- Review approach in RIIO ED1 - fit for purpose for RIIO ED2?
- Further development of totex benchmarking
- Develop and refine disaggregated benchmarking for: NI, NOCs, CAIs, BS & non-operational capex
- Determine use of disaggregated modelling based activity
- Establish treatment of: fixed costs; organisational design issues, regional factors, RPES, frontier shift, workforce renewal allowance, pension costs
- Establishing principles for using data sources in comparative analysis and expert review
- Determining appropriate cost drivers
- Determining the treatment to be given to innovative solutions, investment avoidance and associated investment costs
- Setting allowances for future activities (e.g. DSO)
- Identifying material uncertainties and developing uncertainty mechanism

- We propose to hold a WG session approximately every three weeks with feedback sessions to make sure all ground is covered and prioritised appropriately.
- We plan to run sessions in the Glasgow and London Ofgem offices.
- Depending on room availability, we may need to restrict the number of representatives that each member organisation sends to meetings of the Group

Date	Location	Summary	Items to cover
14 January 20	London	Introductory session	ToR, Priorities
11-Feb-20	Glasgow	Totex	
25-Feb-20	London	Load, Non load	Eg. Uncertainty
13-March-20	London	NOCs & Indirects	
27-Mar-20	London	TBC	
8-Apr-20	London	TBC	
28-Apr-20	Glasgow	TBC	

## **Consultation feedback and priorities**

- General
  - Early and continuous partnership working and communication
  - Committed team with limited use of consultants (embedding of knowledge)
- Cost assessment
  - Timings of submissions and revisions
  - Early conclusion on cost methodology, benchmarks and cost assessment templates
  - Early trial of forecasting – RIGs reporting 2020?
  - RIGs – significant work completed in the RIGs to inform the BPDTs
  - Detailed benchmarking and regressions caused confusion
    - Model had approx. 130 excel files in RIIO-ED1 – 500 MB in size

Allow benchmarked ex-ante allowances where relevant and make use of appropriately designed volume drivers and uncertainty mechanisms as required

**Totex benchmarking was given a prominent role in RIIO and this should be retained:** Captures trade-offs, mitigates modelling and incentive distortions

There are however many differences between the sectors (and the available data) and so it is vital that Ofgem does not use GD2's cost benchmarking as its starting point for ED2.

Ofgem should adopt models that have a sound economic and regulatory basis. Key to achieving this will be the of cost drivers which are outside of company control, relevant and complete

Using ED1 as a starting point should allow activity and intervention to be targeted to those areas requiring change very early in the process. This is crucial to allow early decisions and clarity to be provided to all companies given the timescales to business plan submission for ED2

Tools for cost assessment be focused on the outcomes of the work rather than the process and theoretical consideration. **Good cost assessment tools consider both engineering and economic logic where the final suite of tools makes sense on both fronts.**

Ofgem should maintain a high bar for making regional adjustments, because every network company faces issues that will raise its costs relative to other companies.

- Ofgem's costs assessment approach to be outlined in July consultation
- Developing and refining totex benchmarking
- Disaggregated benchmarking
- Data (do we have the necessary data and comparative data for benchmarking)
- CBAs
- Capturing costs for DSO functions
- Justification papers and commentary
- Whole life costs and efficient solutions
- Scenarios (range of scenarios, common view)
- Historical v future performance (how projections are made)
- By group, by DNO
- Transparency
- Use of outputs in benchmarking
- Business Plan Data Templates
- Conversion to allowances

**Cost Assessment Working Group – Workstreams  
and RIIO-ED1 approach**

- Totex
- Disaggregated benchmarking
- Network Investment
- Network Operating Costs (NOCs)
- Closely Associated Indirects (CAIs)
- Non-Operational Capex
- Business Support Costs
- Thoughts?



Common issues	Workstreams				
	BSCs	Totex	Network Investment	NOCs	CAIs & Non-op Capex
	Disaggregated modelling				
	Business plan incentive				
	Uncertainty Mechanisms & Future Costs				
	Organisational Design				
	RPEs				
	Regional factors				
	Workforce resilience				
	Pension costs				
	Cost drivers				
	Innovative solutions				
	Data sources and expert review				

Tools	Description
<b>Benchmarking models</b>	
Totex models	Using regression analysis (pooled OLS) 2 different models with different explanatory variables. Also ran analysis using RE and SFA approaches.
Disaggregated	Mixture of : <ul style="list-style-type: none"> <li>•Regression techniques</li> <li>•Ratio analysis</li> <li>•Run-rate analysis</li> <li>•Bespoke modelling</li> <li>•Engineering assessment</li> </ul>
<b>Volume assessment tools</b>	
CBA	Testing whether proposed expenditure is justified relative to other options (e.g. Replacement versus refurbishment) Testing timing of investment
Asset replacement model	Age base modelling supplemented with condition/criticality information and review of scheme paper/narrative justification
Asset health and criticality delivery	Cost relative to outputs delivered

Supported by qualitative / technical assessment of BPs

**We will be running a number of regression models including:**

## **Totex model (top-down)**

- Model benchmarks totex as a single cost

## **Disaggregated models (bottom-up)**

- A number of separate sub-categories of costs
- Regressed and non-regressed (qualitative / technical) assessment
- All results from assessment at sub-category aggregated up to a total cost level

Both approaches result  
in an estimate of  
efficient **TOTAL costs**

## **Why run different models?**

No perfect model – all have advantages / disadvantages

- Totex – captures capex-opex trade-offs
- Disagg – more intuitive cost groups and cost drivers

x Historical data  
x Forecast data

Cherry picking – using the disaggregated model...need to be careful we do not create an artificially low benchmark for companies which in reality no individual company could achieve.

### BPDTs

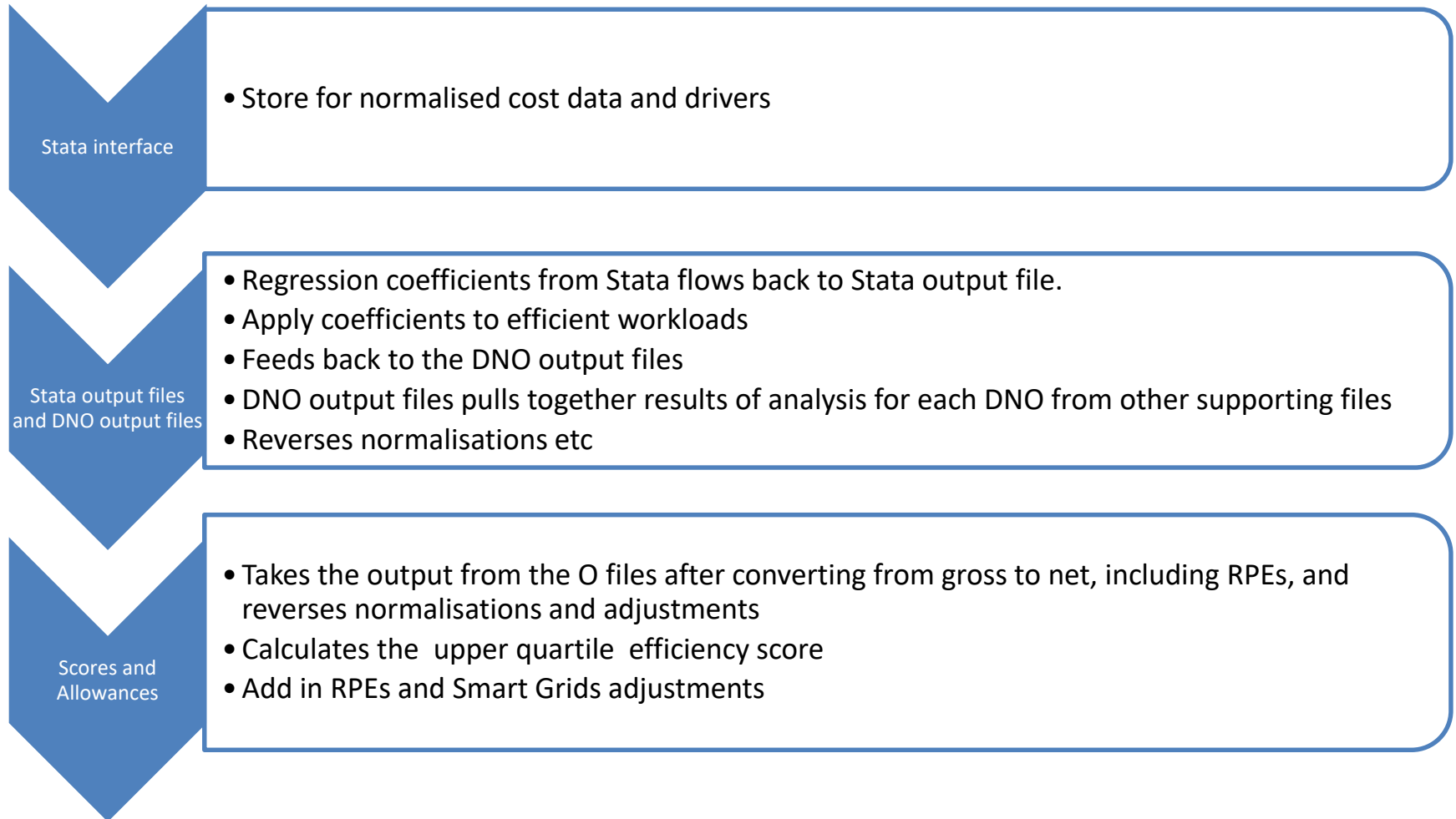
- Submitted historic and forecast cost and volume data
- Updated with information from supplementary questions
- Final BPDTs were recirculated to all DNOs

### Output files

- Central to the management of our assessment
- Pulls the strands together
- Input (from BPDTs, Supporting files)

### Normalisations and Regional Factors

- Applied to ensure that our benchmarking of DNOs' expenditure is robust and comparable
- Regional labour – three areas using ONS Annual Survey of Hourly Earnings – London, South East England, and elsewhere
- Company specific – cases included additional costs of transporting plant and equipment and congestion charging, excavation of the public highway, security, additional property and insurance costs, remote location travel and staff costs, SP Manweb interconnected network



### Sensitivities

- Investigated a number of possible alternatives:
  - Allocation of indirects;
  - Dropping DNOs;
  - Time periods for regressions, etc.
- Tested our results based on these

### IQI

- Applies 75:25% interpolation between DNO and Ofgem view
- Calculates additional income, final cost allowance and efficiency incentive rate

# TOTEX AND REGRESSIONS

## Ofgem approach to econometric benchmarking

- We have been using econometric benchmarking as part of our price controls since the 1990 but our approach has evolved over time
- Early econometric benchmarking typically focused on operating costs –
  - typically based one year of data, high level drivers (e.g. Customer numbers units distributed, network length), OLS
  - Other approaches for capex (e.g. Survivor modelling, engineering assessment)
  - Major focus on normalising data
- Over time the scope has expanded, assessment has changed and have used analysis differently
  - Opex ,capex, and repex
  - Activity-level regressions, different levels of aggregation
  - Use of panel data
  - Consideration of different techniques (DEA, RE, GLS, different flavours of SFA)
  - Benchmarking forecasts as well as historical data
  - Econometrics increasingly seen as first step with need to apply a qualitative overlay based on evidence provided by companies
- More recently have championed use of totex approaches to both incentives and benchmarking



## Regression methodology for regressed areas

- Cobb-Douglas production function
  - $\text{Log}(Y) = C + \beta * \text{Log}(X) + \varepsilon$
  - Same as in DPCR5 and RIIO-GD1
- Used Corrected Pooled Ordinary Least Squares (COLS)
  - Pooling combines the years being assessed into one dataset
  - Investigated Random Effects and Stochastic Frontier Analysis
    - Considered a range of evidence regarding this including Oxera, Frontier and Zachary and Gibbens papers
    - Remained with COLS (example 1, 2) but also examined results using RE
      - Used 2010/11 – 2012/13 data

## Regression methodology for regressed areas

- Starting point was to use drivers sought from industry, building on DPCR5 approach
  - Number of data points limited the number of cost drivers
- Final decision on regression models was balanced between engineering knowledge, quantitative assessment, descriptive and statistical testing
- Descriptive and Statistical testing
  - Between and Within variation of the cost drivers, and cost data
  - Ramsey RESET for model specification
  - White test for heteroscedasticity
  - Skewness and Kurtosis test for normality
  - F-test for pooling – formula error corrected post publication, but all tests passed
- Cost model results that passed the above were then used in the Stata interface and rolled forward for ED1 period, based on the forecast driver(s)
  - Where submitted costs are lower than modelled costs a scaling factor was applied

## Totex regressions

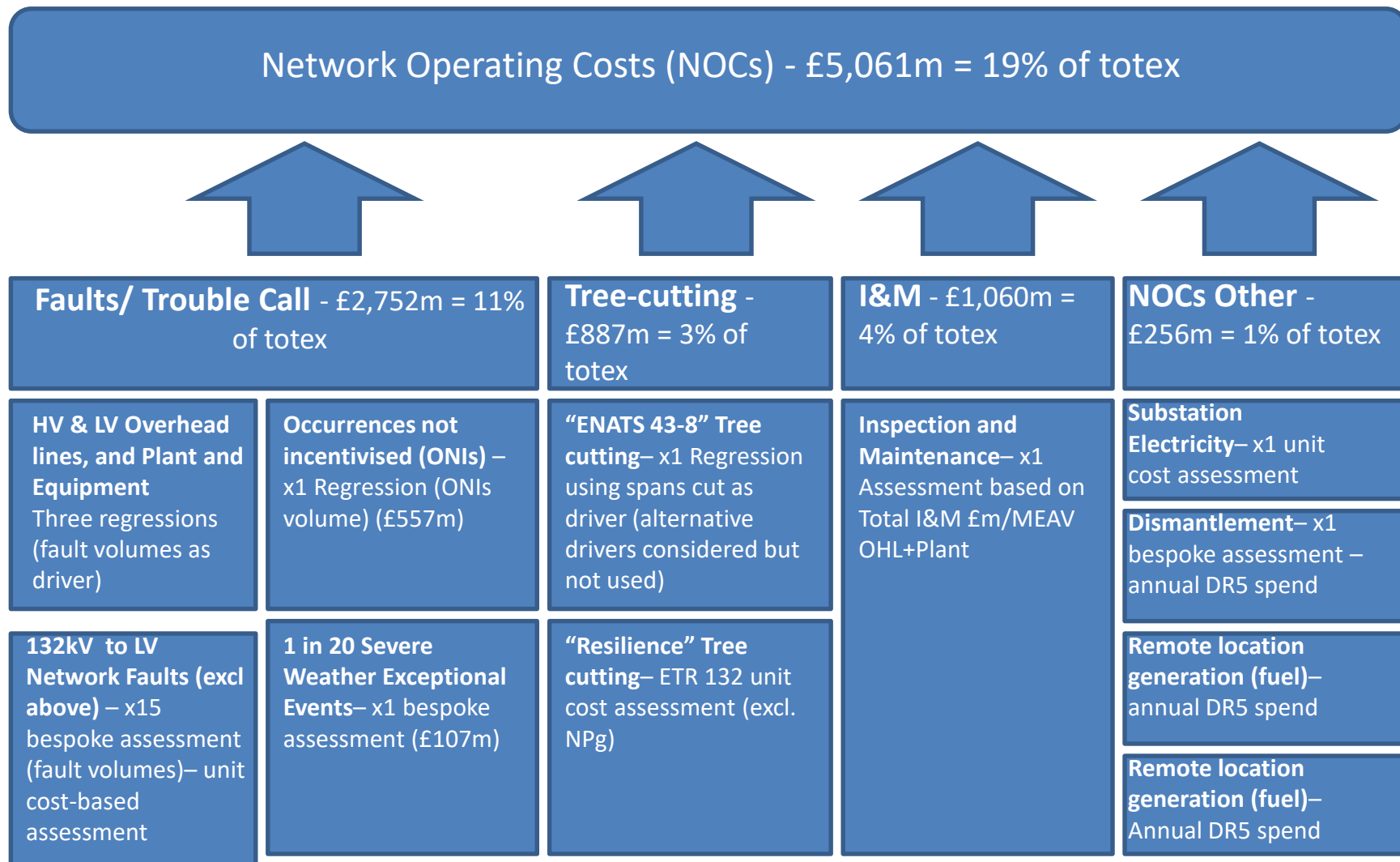
- Assess Totex using a single regression
- Two versions – high and activity level, both composite scale variables (CSV)
  - High level – equally weighted CSV using customer numbers, network length, and units distributed
  - Activity level – industry expenditure weighted CSV using MEAV, customer numbers, line length, faults, etc.
- Totex high level
  - Approach based on theory that expenditure is a function of the outputs that a firm delivers, input prices, and environmental variables
- Totex activity level
  - Disaggregated activity level assessments are combined to form a view of totex, using the driver as identified in the disaggregated assessment

## Activity level regression analysis

- Similar approach was adopted for the activity level regressions
  - Tree cutting,
  - Trouble call (LV/HV Overhead lines, LV P&E, HV P&E),
  - ONIs, and
  - CAI
- Data characteristics were identified –
  - Limited variation over time,
  - Statistical testing, and
  - Driver choice
- Used 2010/11 – 2012/13 normalised data and volumes to estimate the cost function
- Scaling factor was applied
- An efficient volume adjustments of the cost driver was applied.

**RIIO-ED1**

Network Operating Costs



## **LRE analysis overview**

## REINFORCEMENT

### Ofgem starting point;

- Reinforcement total in C1 (£m) equals Reinforcement total in CV101
- Tabs CV102- CV104 provide subsets within this total at a lower level

### How tabs map into analysis blocks within I/O files

“General reinforcement” = CV101 total minus “LCT reinforcement” and “Fault level reinforcement”

“LCT reinforcement” = Secondary network costs from CV103

“Fault level reinforcement” = Fault level reinforcement costs from CV101

### How analyses carried out map to blocks within I/O files

“General reinforcement” = Primary substation load modelling (CV102)  
HVLV assessment (secondary network CV101 minus secondary network CV103)  
Scheme paper unit cost assessment (CV104 sheets)

“LCT reinforcement” = LCT driven reinforcement assessment file

“Fault level reinforcement” = Fault level reinforcement assessment file

### Sensitivities explored

1. Expansion of Primary substation modelling to allow for inclusion/ exclusion of variety of cuts of reinforcement volumes/ costs
2. Assessed HVLV LCT costs both separately and in combination with non-LCT HVLV reinforcement
3. Range of high-level assessment approaches developed for use as a sense check on overall results



## REINFORCEMENT

### General adjustments/ normalisations;

- Regional labour variation (normalisation)
- Streetworks (separate assessment)

### Normalisations for specific DNO factors

- Feed through to analysis from each DNO I/O file based on Ofgem assessment of DNO proposed normalisations

### Adjustments/ reclassification of cost data within I/O file to line up with assessment process

- Exclusion of Primary network costs on LCTs (as these were required to have scheme papers the danger would have been to double count in assessment)
- Specific re-direction of costs associated with unbundling of looped-services
- Pre-analysis adjustment relating to use of “optimism bias” within Transform model

## Primary substation load modelling (CV102)

### Unit cost benchmark:

Averaged for each DNO from their performance on the following three adjustment factors:

1. Ratio of forecast expenditure vs. indicative historical cost of adding specific level of capacity  
$$= (\text{£m forecast} \div (\frac{\text{MEAV}}{\text{Starting capacity}}) \times \text{forecast capacity to be added})$$
 DNO ratio expressed as percentage of industry median ratio
2. DNO forecast MVa unit cost of primary vs. industry median forecast unit cost
3. Scheme paper unit cost adjustment  
$$= ((\text{difference between expert unit cost and unit costs within scheme papers}) \times \text{forecast volumes})$$
 expressed as a percentage of forecast DNO costs in scheme papers

### “Volume” benchmark:

Ratio of capacity added relative to growth in demand

- Only relevant to sites on which an intervention is forecast
- Only growth in demand above firm capacity at site included in calculation

## HV/LV (non-LCT) analysis

Starting assumption – non- LCT reinforcement on HV/LV assets will be fairly consistent across years, with variations between DNOs expenditure likely to relate to variations in network characteristics

1. Each DNO receives the industry median allowance for this type of work
2. This median value is adjusted in line with particular DNO characteristics in comparison to the “average DNO”
  - DNO MEAV as a percentage of industry average MEAV
  - Percentage of DNO MEAV that relates to HV & LV assets as a percentage of industry average percentage of MEAV relating to HV & LV assets

An option of run rate MVa unit costs was also considered, but discounted due to concerns about the robustness of volume data in this area.

LCT sensitivity also run

## Primary network Scheme paper review (CV104)

### Use of asset replacement expert unit cost

Scheme paper unit cost adjustment factor

$$= ((\text{difference between expert unit cost and unit costs within scheme papers}) \times \text{forecast volumes})$$
 expressed as a percentage of forecast DNO costs in scheme papers

In addition to the use of this adjustment within the CV102 load modelling, this adjustment factor was applied to remainder of primary network costs (CV101 minus CV102 total)

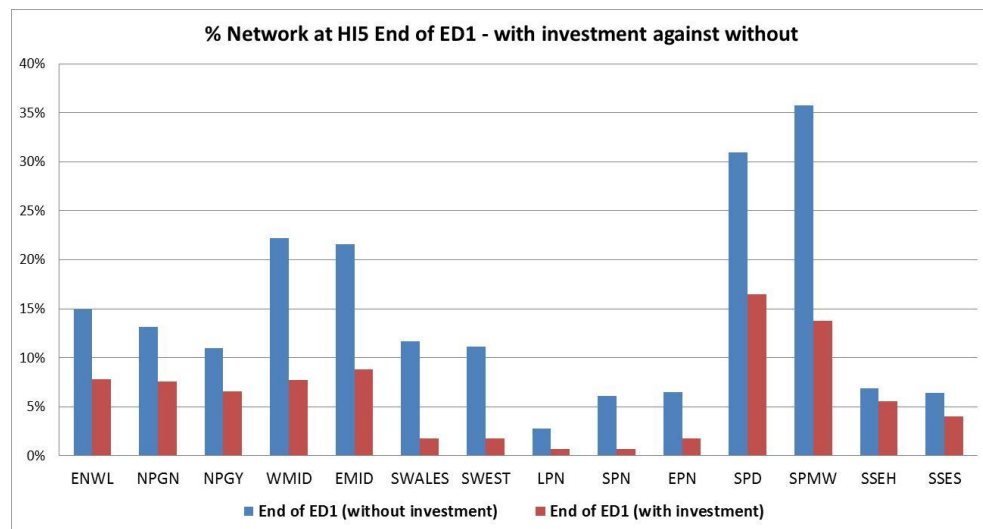
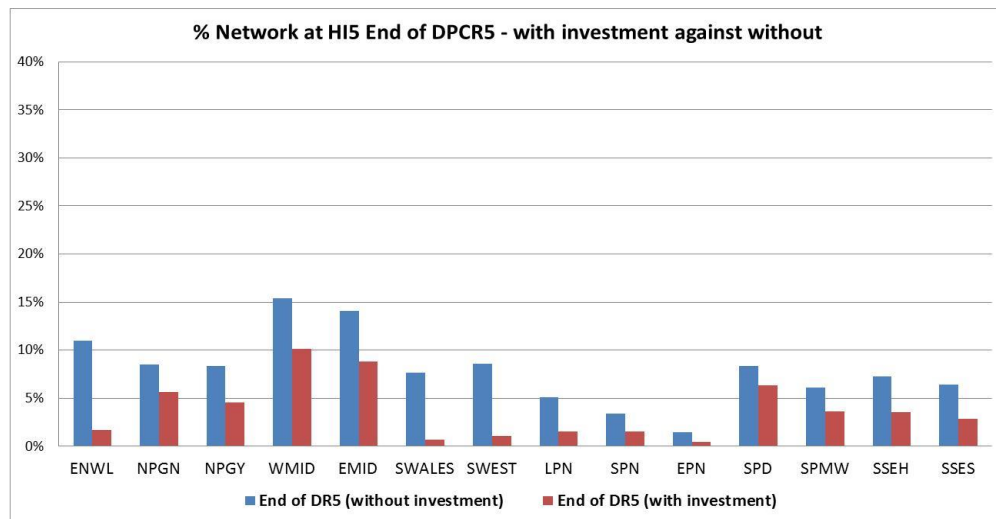
### Volume assessment

For the fast-track process, we did not individually assess named schemes

Sample technical review of accompanying scheme papers was carried out as part of the wider qualitative review of load-related expenditure forecasts

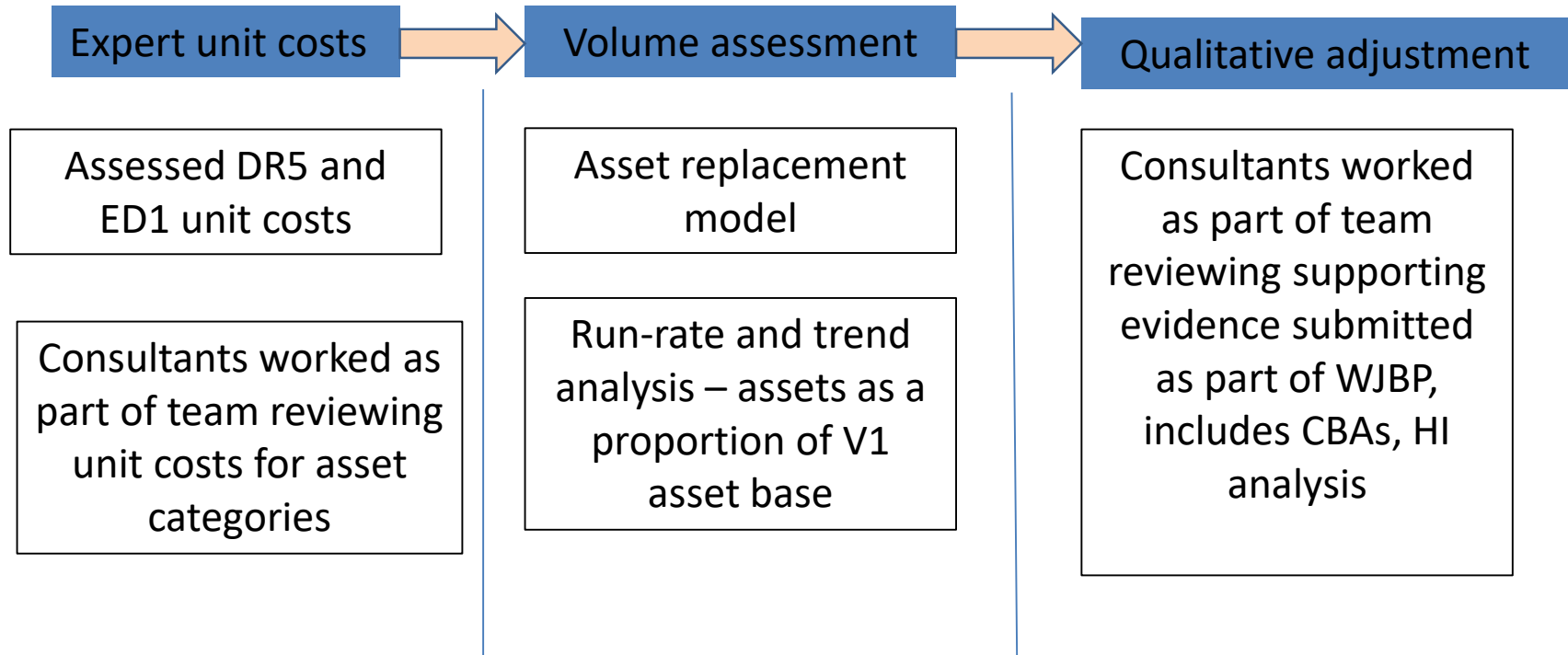
# **RIIO-ED1**

## **Non-Load Related Expenditure**



- Comparison of some DNOs forecast number of HI 5 assets with their age profiles for assets highlight some possible discrepancies.
- Variation in the proportion of HI 5 assets that different DNOs feel comfortable with retaining on their networks.
- Have decided to ask DNOs to report their probabilities of failure for HI ratings as a step towards establishing common methodology/assessment.

## Overview of assessment methodology



## (i) Expert view of unit costs

### Expert unit costs

Assessed median DR5  
and ED1 unit costs

Included consultant  
review of unit costs  
for asset categories

Expert view asset  
replacement unit  
costs are also those  
used to calculate  
MEAV

### Issues raised:

- Cherry-picking between unit costs of 132kV tower components.
- Grouping of asset categories - composite unit cost is calculated based on industry distribution of volumes rather than DNO distribution of volumes.



### (ii) Volume assessment

#### Volume assessment

Asset replacement  
model

Run-rate and trend  
analysis – assets as a  
proportion of V1  
asset base

Issues raised:

- Used non-modelled (run-rate analysis) assessment where (i) there were issues over data quality (ii) or the spread of implied asset lives from the model was very large.
- Non-modelled volumes – run-rate benchmark set based on assessment of mean / median / qualitative assessment for each activity area.
- Grouping of assets – where assets are not replaced on a like-for-like basis. Expert review to identify these assets. e.g. air insulated switchgear vs gas insulated switchgear. Also aggregated further assets following feedback from DNOs when cost models were shared.

### (iii) Qualitative adjustment – workload assessment

#### Qualitative adjustment

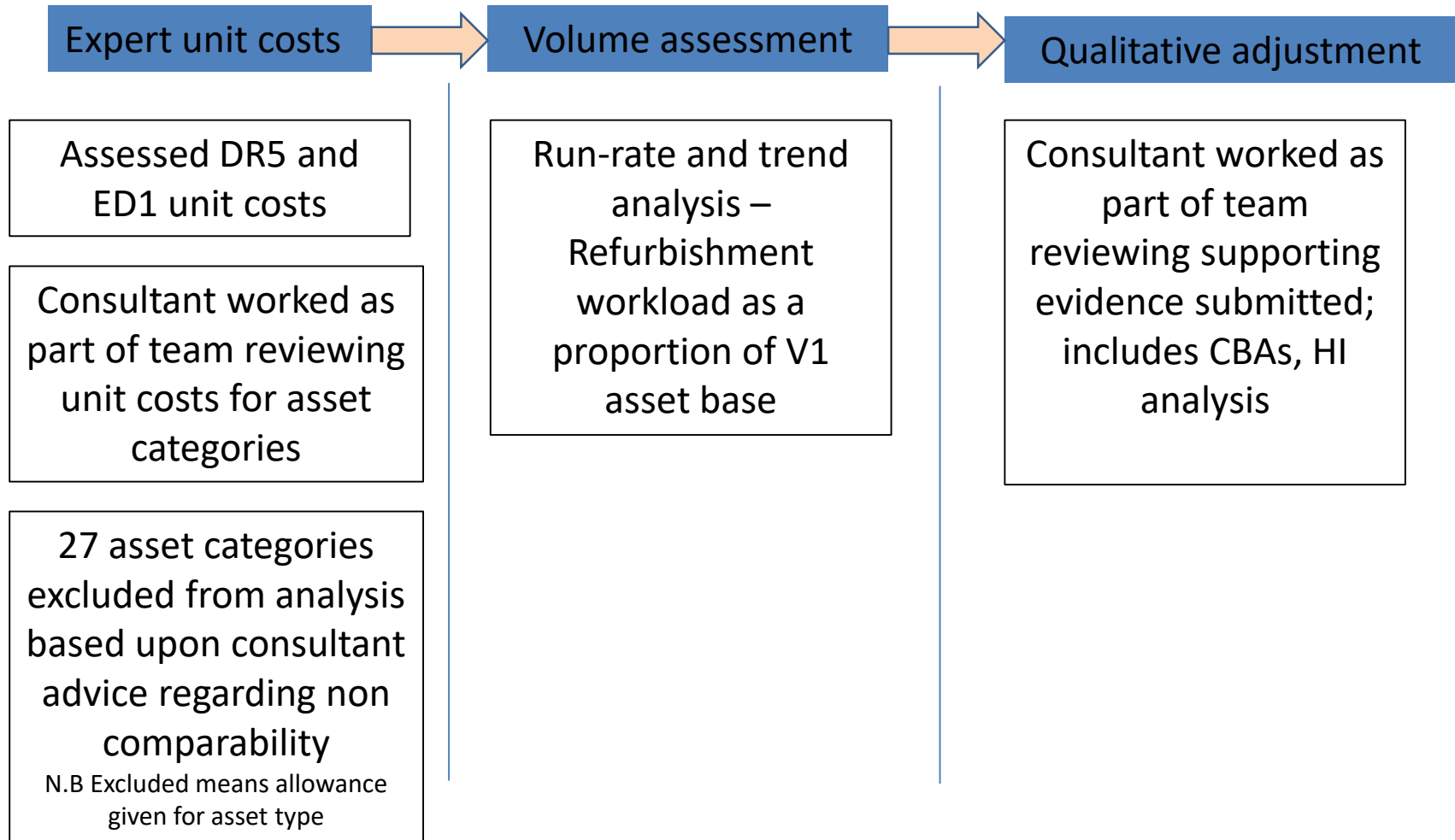
Consultants worked as part of team reviewing supporting evidence submitted as part of WJBP, includes CBAs, HI analysis

Issues raised:

- Approach not transparent.
- Technical assessment of business plan narrative and other evidence supplied by DNOs.
- R-A-G rating on whether the asset replacement strategy and associated workload was justified (based on published assessment criteria).
- Cross-checked this assessment against the quantitative volume assessment.

	Assessment		Adjustment
	Quant	Qual	
Type 1	Amber	Green	50% of quant adj reversed
Type 2	Red	Green	75% of quant adj reversed

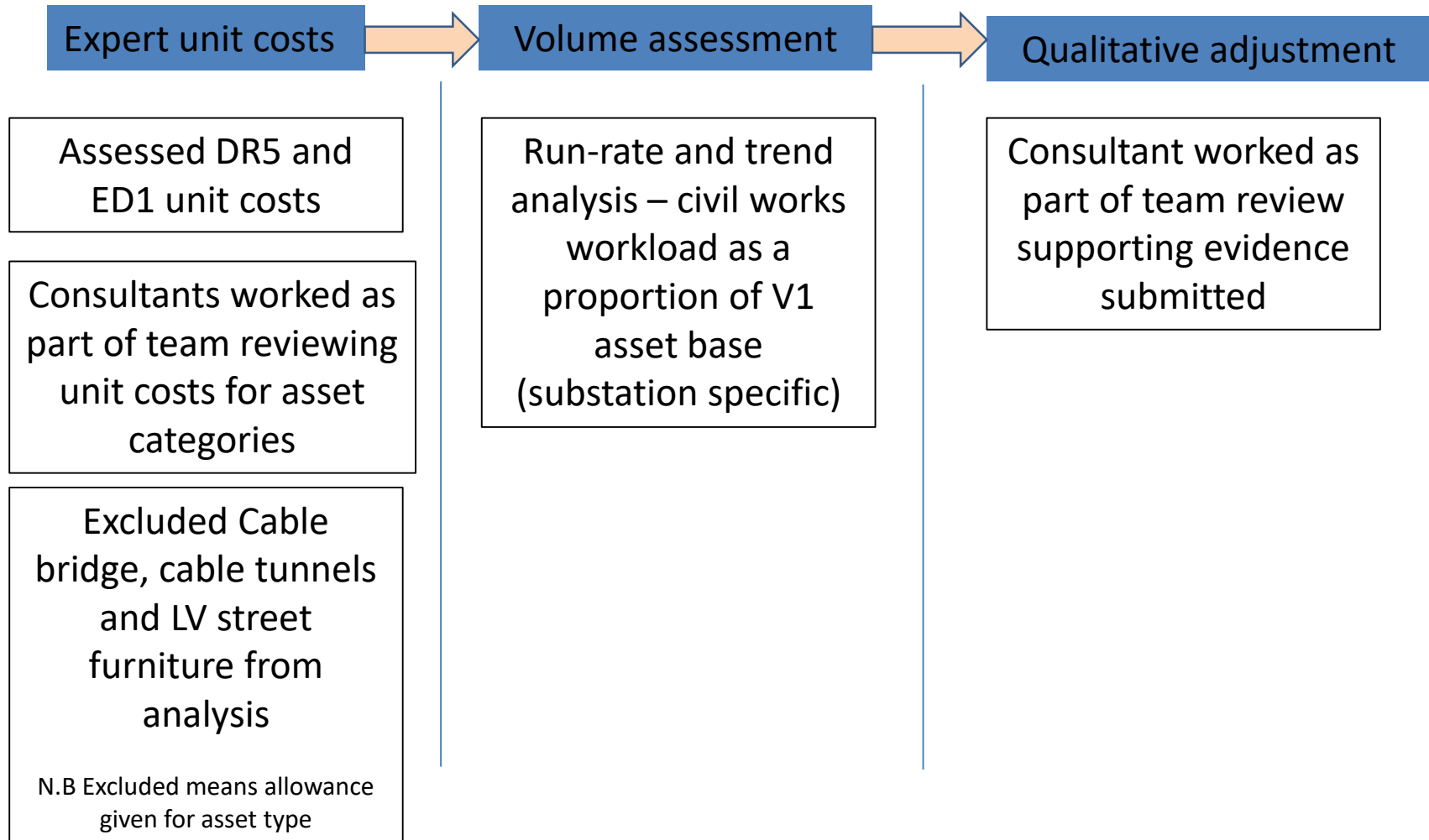
## Overview of assessment methodology - Refurbishment



## Refurbishment: Highlighted issues and initial thoughts for slow track

<b>Refurbishment vs replacement trade-off</b>	<ul style="list-style-type: none"> <li>- Further work on trade-offs</li> <li>- Ratio analysis undertaken but no significant issues were highlighted</li> <li>- Currently assessing the refinement of methodology (testing asset replacement model with asset refurbishment)</li> <li>- Comment from engineers - wish to see greater evidence in the business plans regarding schedule of work; better documented trade offs between replacement and refurbishment. This will allows us to make a better informed qualitative cost adjustments</li> <li>- Only a handful of DNO's submitted CBAs relating to refurbishment</li> </ul>
<b>Cherry picking unit costs between historical and RIIO</b>	<ul style="list-style-type: none"> <li>- Unit costs were chosen based upon the lowest industry median between historical, DPCR5 actuals and RIIO forecast</li> <li>- We do not expect industry median unit costs to increase significantly year on year</li> <li>- If unit costs were to significantly increase, we would have expected justifications in the business plans</li> </ul>
<b>Non comparability of scope of work</b>	<ul style="list-style-type: none"> <li>- Difficulty in comparing like for like scopes of work for the listed asset categories due to the nature of refurbishment work</li> <li>- 25 asset categories have already been excluded (and costs given a pass through) based upon engineering advice</li> <li>- For slow track, we will ask for greater level of clarity regarding scopes of work for the ten asset categories that have the greatest levels of unit costs variance. This will hopefully allow us to undertake a more detailed review of the evidence</li> </ul>

## Overview of assessment methodology – Civil works



Civil Works: Highlighted issues and initial thoughts for slow track	
<b>Cherry picking unit costs between historical and RIIO</b>	<ul style="list-style-type: none"> <li>- Unit costs were chosen based upon the lowest industry median between historical, DPCR5 actuals and RIIO forecast</li> <li>- We do not expect industry median unit costs to increase significantly year on year</li> <li>- If unit costs were to significantly increase, we would have expected justifications in the business plans</li> </ul>
<b>Non comparability of scope of work</b>	<ul style="list-style-type: none"> <li>- Improved DNO explanation of nature of civil works to aid comparability</li> <li>- Consult further with engineers regarding refining approach to civil works</li> <li>- Limited number of CBAs for civil works and limited discussion around civil works within business plans. Difficult for us to make qualitative assessment and cost adjustments</li> <li>- For slow track, we will directly ask for ratio between number of civil works per number of substations to more accurately gauge levels of workload across DNOs</li> <li>- We welcome any comment or suggestions from DNOs regarding methodology for analysis of civil works</li> </ul>

# Overview of assessment methodology – High Value Projects (HVP)

## Qualitative assessment

- Review of supporting HVP schemes submitted
- Some scheme papers not sufficiently detailed so as to enable cost assessment
  - We have therefore used efficiency assessment from our asset replacement and primary network reinforcement – combined with the qualitative assessment from consultant
  - Where scheme was sufficiently detailed – we used consultants view of unit cost
- Where DNO had submitted a project that were also in DPCR5 business case, we made adjustment for the feasibility of these project being completed over RIIO-ED1 ratio of expected expenditure on these projects against DPCR5 final settlement

## Issues raised

- Why a scheme that was considered as ‘justified’ was still subject to adjustment
  - The adjustments were due to concerns that the scheme’s unit cost was too high and we proposed different unit cost
- Why the project completion factor is different for different schemes
  - Where a scheme was funded under the last price control, but only a portion of the allocated allowance is forecasted to be spent, then we have made an adjustment for the likelihood of project completion. The amount spent from the last price control varies from scheme to scheme hence the likelihood factor is different

### Real Price Effects (RPEs) and Ongoing Efficiency (OE) (PE101)

#### Analysis and assessment

- Looked at RPEs and OE separately as well as net position.
- Assessment based on two aspects:
  - The quality of the justification for the choice of indices and the evidence provided, including consistency between consultants' reports (if used), narrative and PE101,
  - Comparison of cost indices between DNOs – including impact of the remaining years of DPCR5 in average annual percentage growth in indices.



# **Cost Benefit Analysis**

**Cost Benefit Analysis** was used extensively in RIIO-ED1 to support a significant number of investment proposals. A common model was used across all DNOs for consistency.

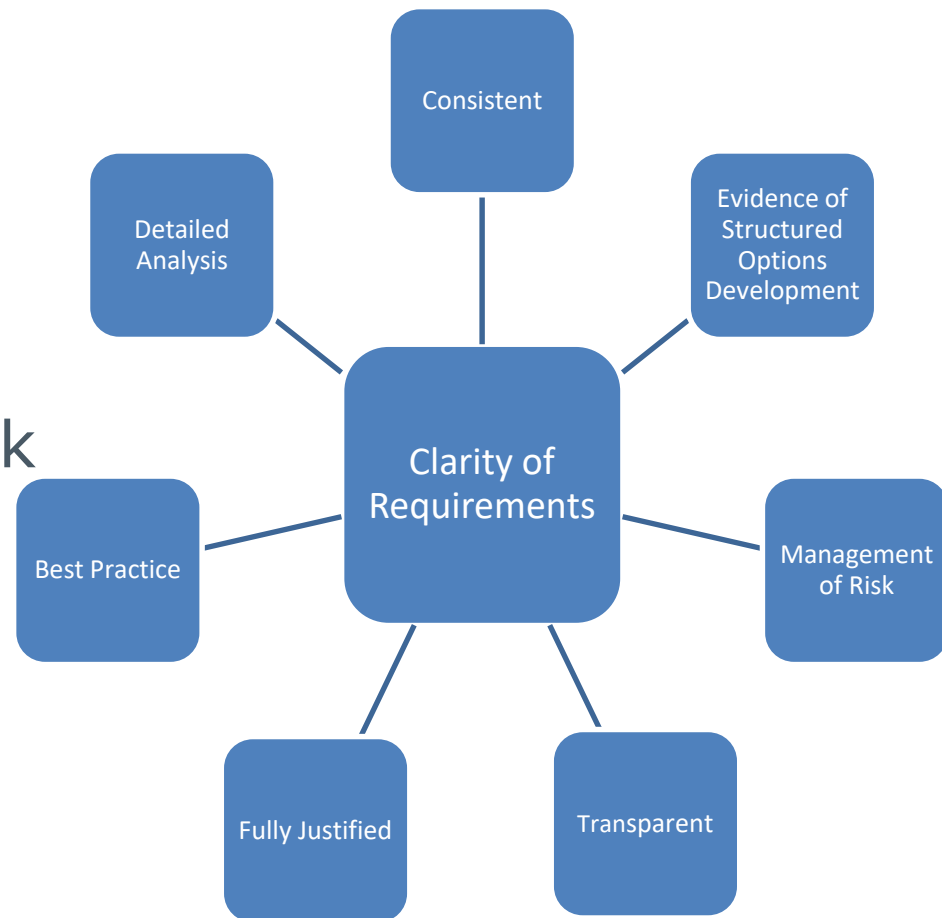
- Based on guidance from “HM Treasury: Green Book”
- NPV analysed over 4 main time periods - 16, 24, 32 and 45 years
- Short list of options created from engineering judgement and past experience
- Deterministic values used for cost benefit analysis:
  - Main Cost Inputs
    - Capital investment
    - Inspection and Maintenance
  - Main Benefit Inputs
    - Customer Interruptions/Customer Minutes Lost savings
    - Capital cost savings
    - Losses savings
- Likelihood of outcomes given equal weighting
- All options evaluated against the baseline option which represents the “Do Minimum” approach
- NPVs evaluated and used to inform investment decision

### **CAWG must work to develop CBAs to inform ED2**

- What are the risks and limitations of the ED1 model?
- How should CBAs be used?

## Key Principles

Derived from:  
ED1 Guidance  
Stakeholder Feedback  
WG Outputs  
SWW process  
Framework Decision



**Actions, Next Steps, AOB**

- The next meeting will take place on 11<sup>th</sup> February. It will be in Glasgow.
- We will circulate notes and an actions log from this meeting.
- Based on the prioritisation exercise, we will set out the anticipated topics to be covered at the upcoming meetings.

**Our core purpose is to ensure that all consumers can get good value and service from the energy market. In support of this we favour market solutions where practical, incentive regulation for monopolies and an approach that seeks to enable innovation and beneficial change whilst protecting consumers.**

**We will ensure that Ofgem will operate as an efficient organisation, driven by skilled and empowered staff, that will act quickly, predictably and effectively in the consumer interest, based on independent and transparent insight into consumers' experiences and the operation of energy systems and markets.**