

The background features a large, stylized white arrow pointing to the right, set against a blurred image of a modern building with a glass facade and a large, glowing, multi-tiered structure resembling a gas burner or a decorative light fixture. The overall color palette is dominated by blues, oranges, and whites.

Cost Assessment Working Group (CAWG)

Meeting 6
31 July 2012

Today's agenda

Morning session – Ofgem presentation

- Review of DPCR5 template
- **Totex Modelling** – top-down, middle-up and disaggregated
- **Detailed Analysis:** load-related expenditure; non-load related expenditure; network operating costs; closely associated indirects; business support costs and workforce renewal
- **Cross cutting issues:** real price effects; regional factors, uncertainty mechanisms, whole life costs, no worse off and scenarios

Afternoon session

- DNO view of Ofgem model – presentation by SP
- Pensions – presentation from ENWL
- IQI – presentation from Ofgem
- Connections – presentation from Ofgem
- Workforce renewal – presentation from UKPN

Totex (1)

Discussion to date

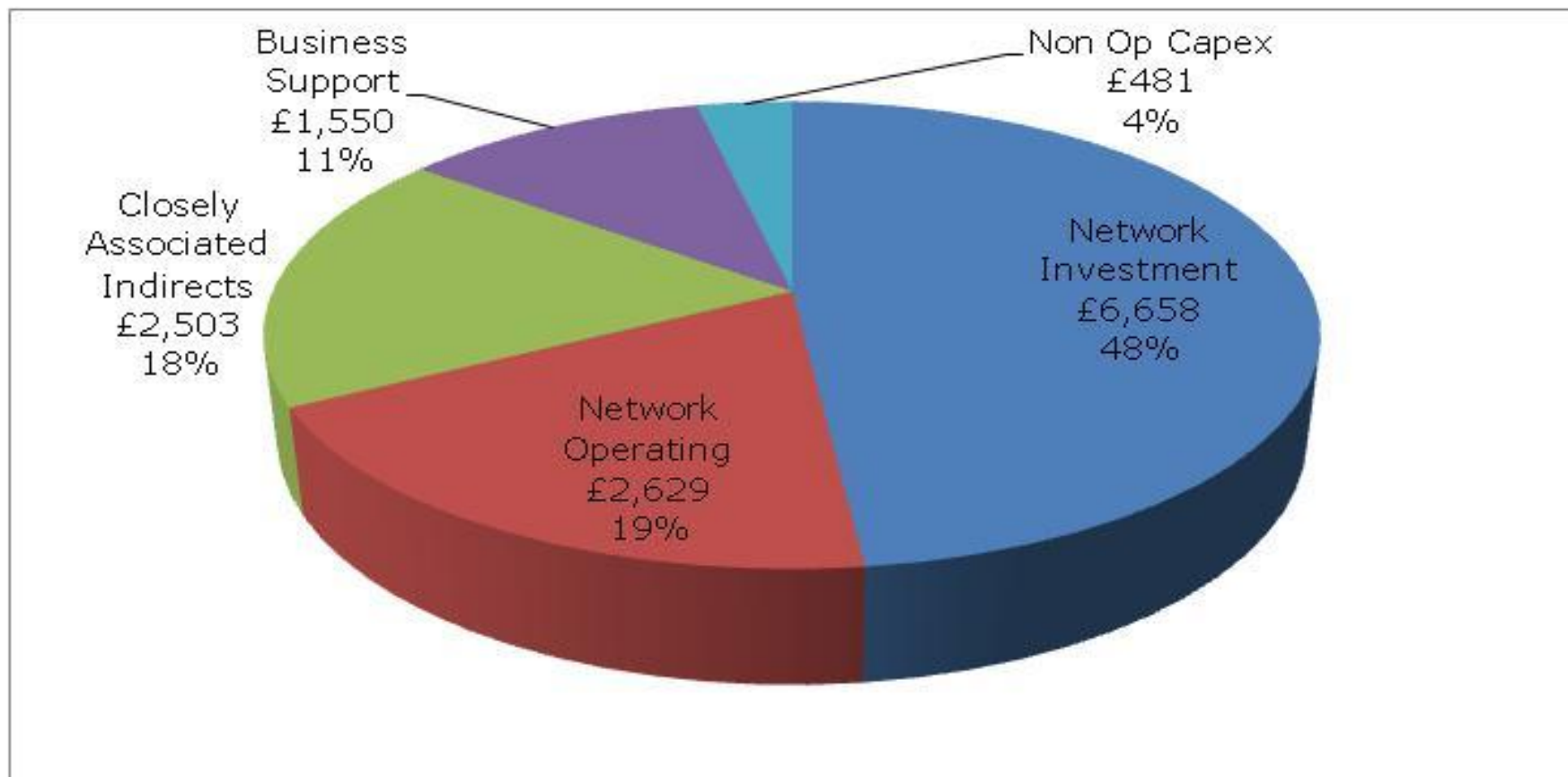
- General support for totex approach (avoids cost boundary issues, differences in operating models, etc)
- But different views on Totex models
- Top-down (“true totex”)
 - Frontier Economics commissioned to develop model by September
 - Challenge in developing appropriate totex cost driver
- Middle-up
 - Aggregating bottom-up
 - Common cost drivers
- Bottom-up/disaggregated
 - 90-95% of common DNO costs
 - Based on intuitive and causal cost drivers
 - Aggregate of disaggregate – not “true totex”
 - Too many cost drivers – closer to DR5 approach but without multiple runs and regressions

Totex (2)

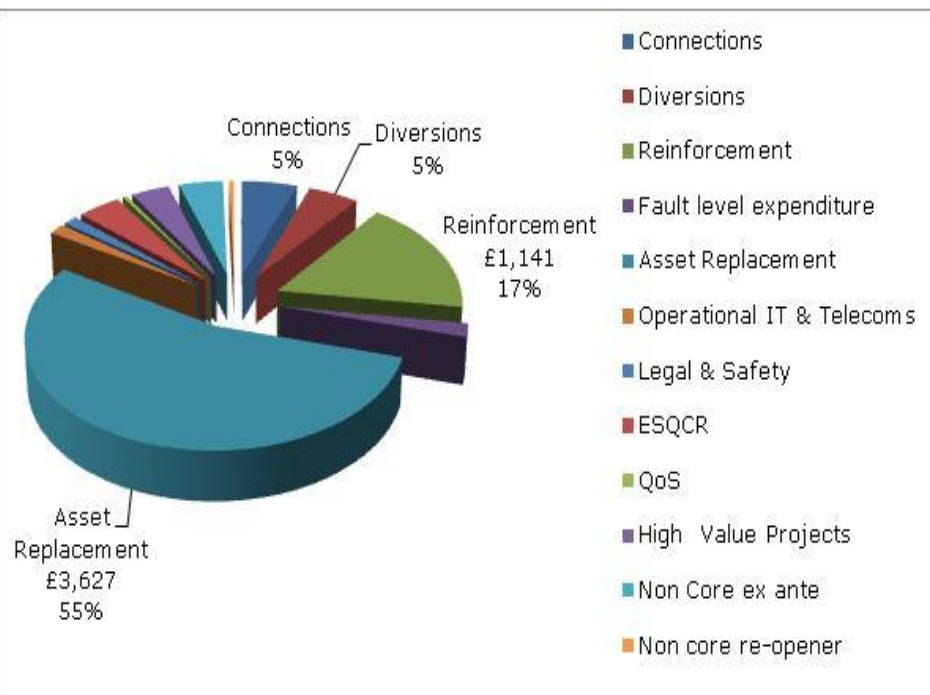
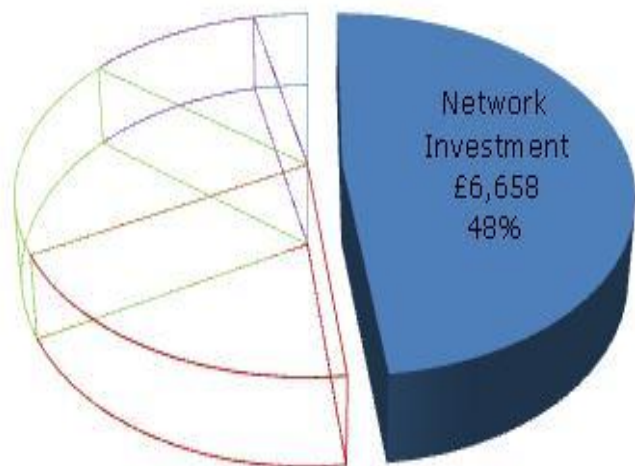
Minded to position/questions

- Ofgem to review all 3 models in detail
- Adopt, adapt or reject (develop our own)
- Test and use 3 models with DR5 actuals to date; DR5 remainder; 9 years ED1
- Toolkit approach to totex
- Capital costs will be expenditure and not consumption (as per T1/GD1)
 - Smoothing through using a rolling average for capex
- Q for the models:
 - what is total costs?
 - what are appropriate cost drivers and how should they be weighted (scale, context, outputs)?

Detailed Cost Assessment DR5 allowances, £m



Network Investment DR5 allowances , £m



September paper (1)

PRIMARY NETWORK

➤ OUTLINE OF FRAMEWORK

- LI operating as a secondary deliverable for reinforcement expenditure justified against primary outputs
- Consistent approach to LI1-LI5 scoring
- Cost Assessment approach based on DPCR5 approach

➤ AREAS OF ONGOING WORK

- Accounting for DSR
- Potential developments for DG
- Approach for fast-tracking process vs. detailed assessment

➤ POTENTIAL OPTIONS

- Approach to uncertainty
- Use of scenarios

➤ LIKELY INTERACTIONS

- Asset replacement (wrt. Whole-life costs & asset upsizing)

IS ANYTHING MISSING?

September paper (2)

SECONDARY NETWORK

➤ OUTLINE OF FRAMEWORK

- Volume indicator of number of Load-related interventions required in period
- Cost Assessment approach based on p/problem-solved unit cost

➤ AREAS OF ONGOING WORK

- Defining/ capturing when a problem arises/ is solved
- Interaction with any Flexibility & Capacity output
- Approach for fast-tracking process vs. detailed assessment

➤ POTENTIAL OPTIONS

- Use of LI or LCTs as indicator of volume of work/ funding required
- Approach to uncertainty
- Use of scenarios

➤ LIKELY INTERACTIONS

- Flexibility & Capacity work & WS3
- Asset replacement (wrt. Whole-life costs & asset upsizing)

IS ANYTHING MISSING?

Ongoing work

1. Cost Visits

- Looking to use visits to understand the processes taken to identifying likely schemes and the robustness of systems and decision-making process on reinforcement
- Review of likely N-2 schemes
- Evaluate approaches to upsizing assets

2. Clear view of assessment process for February document

- Requirements for Business plan
- Approach to Fast-tracking vs. detailed

Non-Load Related Expenditure (1)

Discussion to date

- High materiality but relatively less concern with Ofgem's approach
 - “Survivor” based asset replacement model used in DR5 (&4)
 - Backsolves benchmark asset life from industry age profiles and actual/ forecast volumes, uses this to forecast DNO volumes
 - some assets could not be modelled – required ad hoc examination eg historic trend, consultant review
- Support from DNOs at working group level, with some expectations management
 - Model only a tool to consider DNO proposals, not just “cranking the handle” to determine allowances
 - The change in reporting templates at DPCR5 may allow for more assets to be modelled in ED1, but limits historic data set

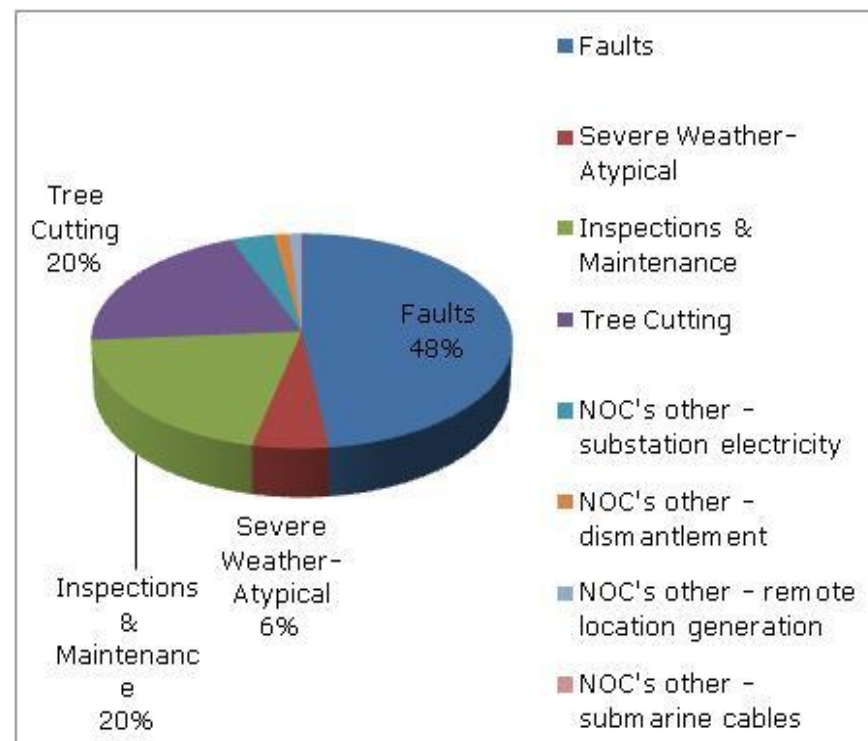
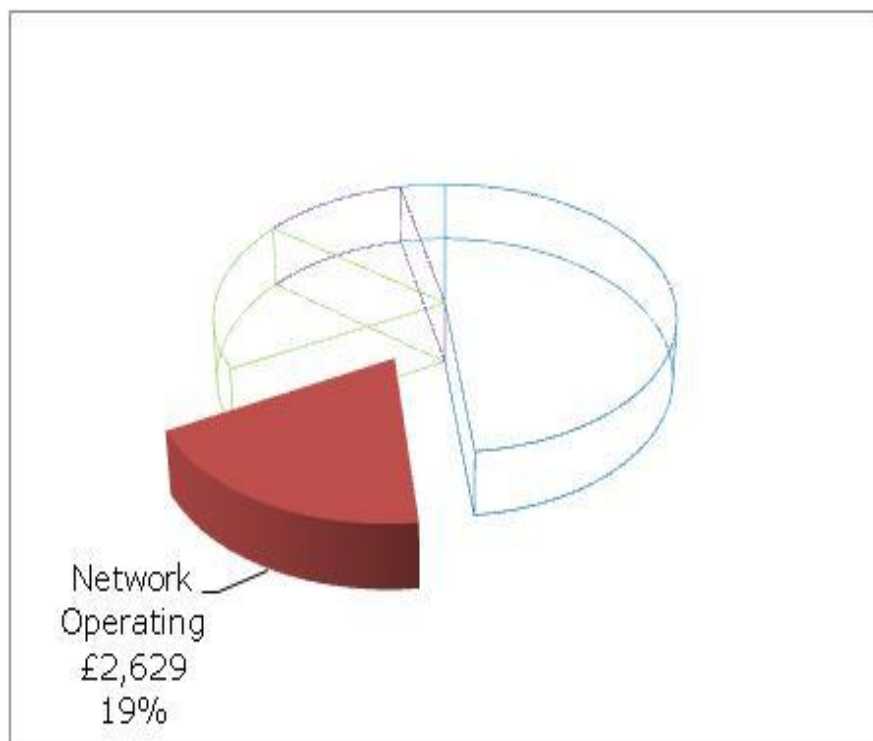
Non-Load Related Expenditure (2)

Minded to position/questions

- Use DR5 model as an assessment tool for replacement expenditure
- Use of the T1 model
- Onus on DNOs to justify departure from model outputs
- Use July data submission to test model/ templates and identify data gaps
- Consider improvements utilised in T1 (eg monte carlo analysis)

- Q: how many years of historic replacement data are needed to generate robust model outputs? Likely to want some DPCR4/5 data to “tune” asset lives.
- Q: what NLRE asset types cannot be modelled, and how best to analyse?

Network Operating Costs (NOCs) (1) DR5 allowances, £m



NOCs (2)

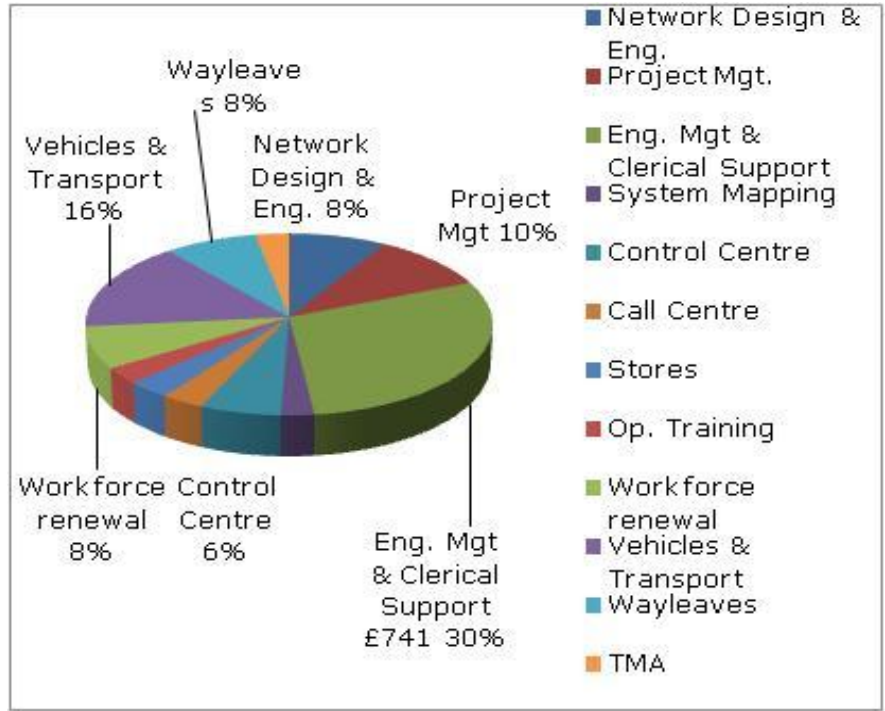
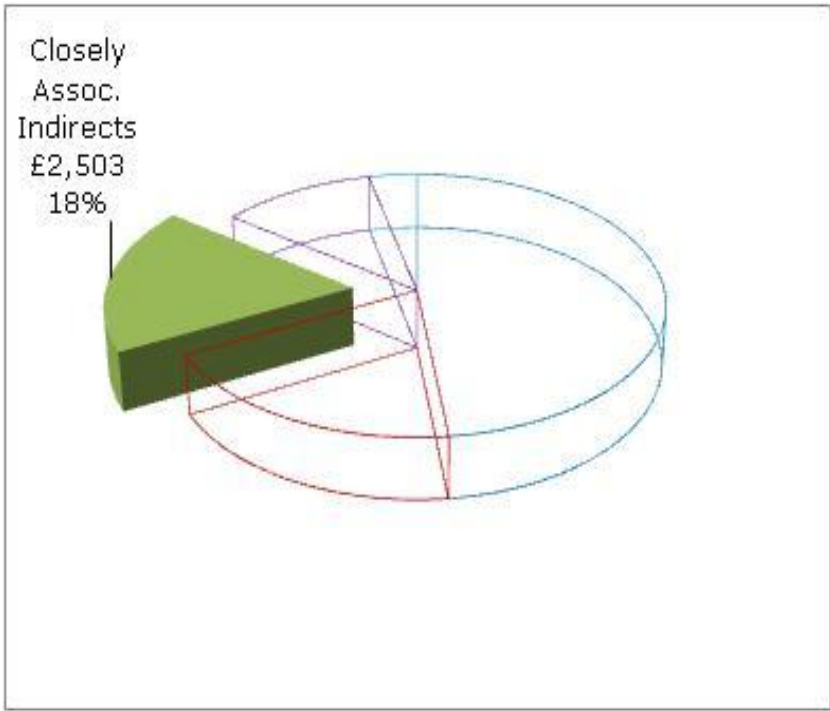
Discussion to date

- Area that **does not** require significant changes from DPCR5
 - Companies are broadly happy with drivers from DR5,
 - some tweaks have been suggested for consideration in relation to Faults, and I&M
 - Improved consistency of reporting in most areas due to our RIGs work over the last two years
- Issues to be addressed include:
 - Consideration of models to be used, or any amendments to the DR5 models
 - Data consistency for reporting of Non Quality of Service
 - Mindful of robustness and use of forecasts

Minded to position/questions

- Further work required but initial thoughts:
 - Proposing to follow DR5 approach *but only where appropriate, and where no better alternative available*
 - Will outline alternative approaches to NOCs assessment as put forward by DNOs, in the September paper
 - High level approach in the September Paper

Closely Associated Indirects (CAIs) (1) DR5 allowances, £m



CAIs (2)

Discussion to date

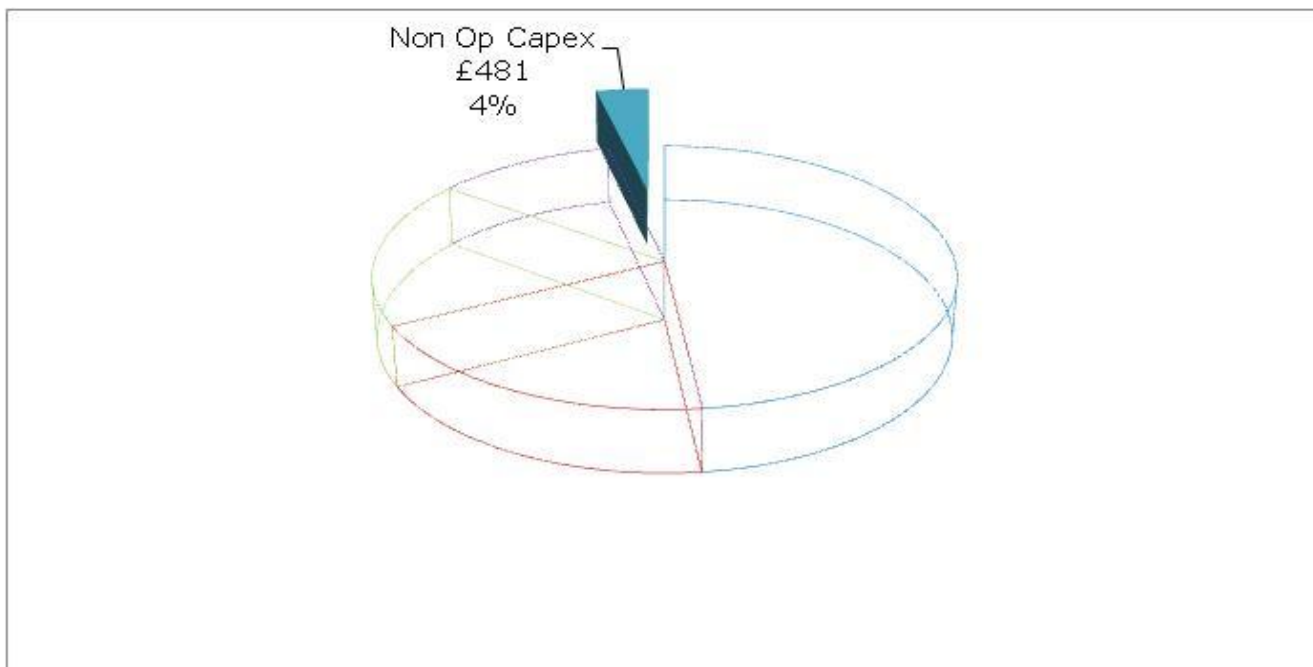
- The DPCR5 approach would disadvantage companies that are committed to providing innovative solutions to Network Investment
- Indirects should be assessed both before and after reallocation to non-distribution activities
- Decrease the number of regressions from DPCR5 (100+)
- DNOs will be submitting their allocation methodologies in 2012 submission
- Use cost drivers which are as closely aligned to the activity as possible
- Two categories of CAI:
 - The first group contains activities that exist almost entirely to support the delivery of direct activities,
 - Driver – a measure of the effectiveness of direct activities undertaken
 - The second group contains costs do not vary with respect to network activity (contain a fixed cost proportion)
 - Driver – assess the level of costs relative to the scale of the company (ie, MEAV with adjustment to recognise fixed costs)

CAIs (3)

Minded to position/questions

- Opportunity to combine areas for assessment
 - sensible to pull together areas that are being assessed using the same cost driver
 - this would abandon the grouped approach of DPCR5
 - Reduce regressions
- Sensible to add in benchmarked costs provided by any experts as in GD1
- Three totex models have been discussed within the CAWG; aggregate, middle up and a disaggregated model
 - Groupings of indirects maybe dependent on the model chosen
 - All assessment method must take account of materiality
- Q: how do we take account for innovative solutions, balance of direct and indirects? Answer should be Totex.

Non-Op Capex (1) DR5 allowances, £m

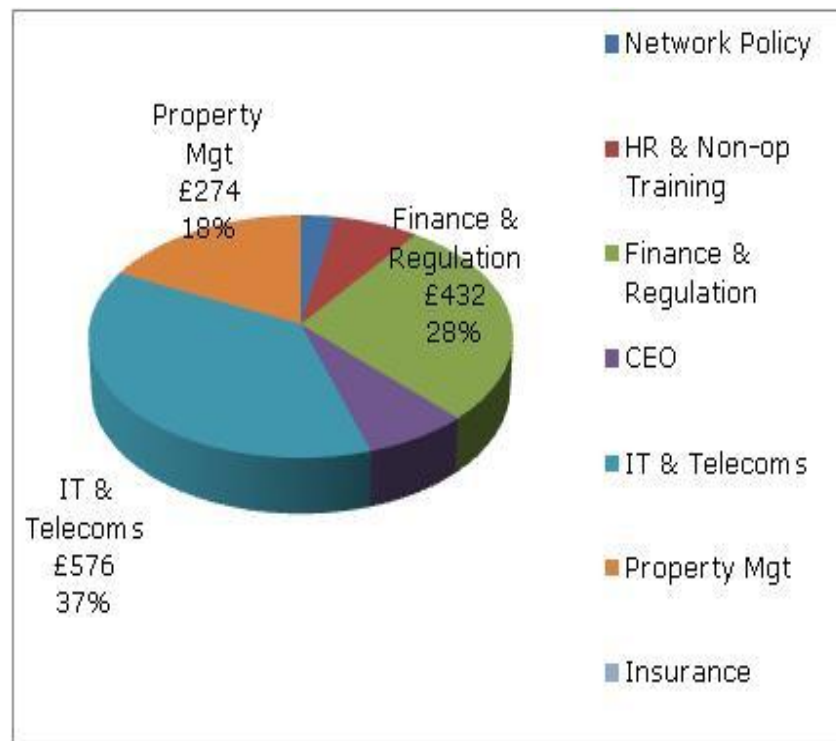
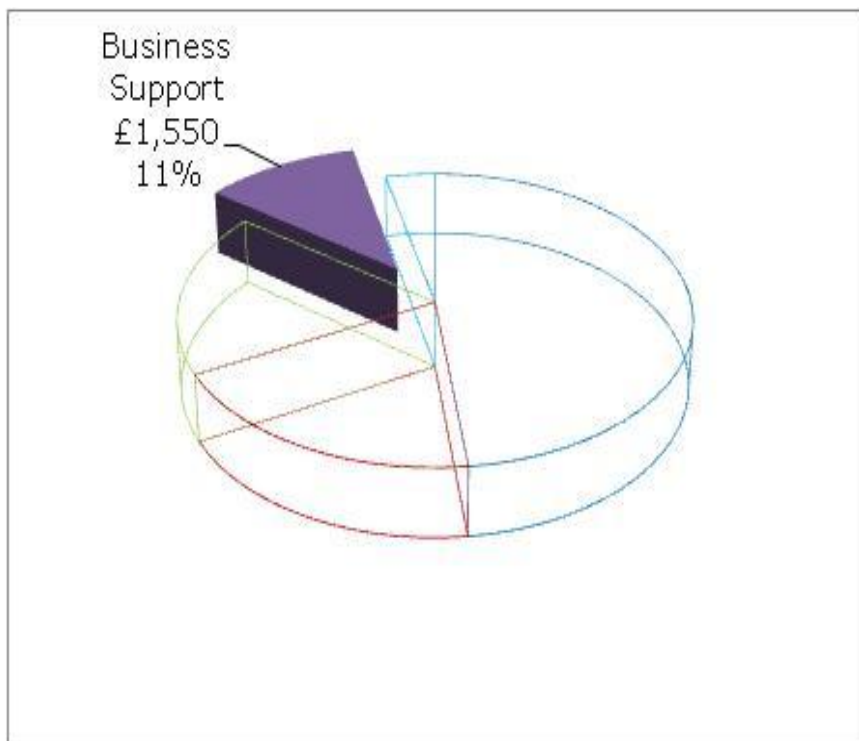


Non-Op Capex (2)

Discussion to date/Minded to position

- Add Non-op capex activities to their relevant activity within indirects
- Leaves two areas Vehicles and Small tools
 - Two approaches to assessment
 - The reported expenditure could be apportioned to all direct activity. This apportionment should be on the basis of direct labour
 - Potential use of total direct labour cost as the cost driver for assessment
- Necessary to smooth the profile of expenditure using an average annual value – lumpy area historically
- Q: IT expenditure associated with smart metering should be considered separately?
- Appropriate for both Property and IT & Telcoms activities assessments to be undertaken by external consultants?

Business Support Costs (BSCs) (1) DR5 allowances, £m



BSCs (2)

Discussion to Date

- Area that requires significant changes from DPCR5
- Welcome *appropriate* expert review in IT&T and property
- Issues to be addressed include:
 - Identification and separation of fixed and variable costs
 - Use of appropriate cost drivers (from DPCR5 and for ED1)
 - Account for groups and vertically integrated companies
 - Should include appropriate non-op capex
 - Differences between ED and T/GD
 - Real concerns re IT per end user as cost driver for IT&T; non-separation of fixed and variable cost to establish cost drivers; cost drivers set on actuals and not efficient costs
 - Network policy should not be a BSCs but in CAIs

BSCs (3)

Minded to position/questions

- Further work required but initial thoughts:
 - Lends itself well to cross-sector, cross-industry comparisons
 - As a minimum would be looking for cross sector and external benchmarking but not wedded to drivers being the same
 - Follow T1/GD1 approach *but only where appropriate*
 - Suggest different cost drivers for IT&T and possibly expert review
 - Remove Network Policy to CAIs
 - Include elements of non op capex (avoids boundary issues)
 - Detail in the September Paper
- Asked DNOs to respond specifically to the T1/GD1 BSC element of IPs – discussion on 18 September 2012
 - Not intended to input to September publication
- Q: what are most appropriate cost drivers?
- Q: how do we treat fixed costs for groups and vertically integrated companies?

Real Price Effects (RPEs)

Discussion to date

- Problems with transparency in DPCR5
- The fast track companies in T1 were allowed their requested RPEs
 - Non-fast tracked companies RPEs reviewed
- Ensure consistent application across working groups
 - Eg application within WS3 model
- Do efficiency assumptions balance with RPEs? Smart grid and new technologies offer scope for productivity improvements

Minded to position/questions

- RPEs are to be justified in WJBPs
- RPEs explicit in a separate table and not embedded (transparency)
- Separate tables for RPEs and productivity improvements
- Appropriate for *ex ante* not necessarily uncertainty mechanisms
- Productivity improvements through T1/GD1 and expert review

Regional Factors

Discussion to date

- Reducing the number of regional factors from DPCR5
- General agreement from DNOs
- The possibility of materiality factor (single or combination)
- Concerns that less likely to be fast track if include regional factors

Minded to position/questions

- There will be no regional adjustment...
- ...Unless DNO can demonstrate:
 1. It is justifiable via robust and transparent evidence
 2. The DNO has managed those factors appropriately
- The onus is placed firmly on the licensee to justify in WJBP
- This is in line with the GD1 approach
- Q: should there be a materiality factor for regional adjustment?

Workforce Renewal

Discussion to Date

- Ageing profile of workforce but also additional challenges (Smart Grid world, carbon emission targets, uncertain world)
- Continue “use-it-or-lose it” basis or ex ante allowance?
- ENA commissioned EU Skills to undertake detailed analysis of requirements – aim to be able to share with Ofgem in August 12
- Inclusion of contractor training costs (Y=ENWL, NPG, SP, UKPN; N=SSE, WPD)

Minded to position/questions

- *Ex ante* allowance
- Wrap up in HR/Training costs (should cover contractor cost issue)
- WFR output is challenging
- Trajectory in DPCR5 will influence ED1
- ED1 output performance will influence ED2 allowance
- Evidence in WJBP is vital - skills issues (EU Skills, STEM etc), costs affected must be stipulated, scenarios

Uncertainty Mechanisms

Discussion to date

- Areas may require uncertainty mechanism (DNO response): TMA including lane rental; Rising & lateral mains; Reinforcement spend; High value projects; Blackstart/CNI/ other centrally mandated spend; Smart meter roll-out costs

Minded to position/questions

- Where possible provide ex-ante allowances, rather Ums
 - Also prefer revenue drivers to reopeners
- Onus on DNOs to provide robust information as part of their WJBP
- DNOs will need to show how and why it is in customers' interest to adopt uncertainty mechanism ahead of ex-ante approach
- A number of the areas highlighted by DNOs could be settled via ex ante allowances – Blackstart, RLMs and potentially TMA (areas where a greater degree of certainty)

Whole Life Costs (1)

Discussion to date

- Tensions between:
 - Short term cost minimisation
 - Whole life cost minimisation
 - Whole life value optimisation
- Solution pricing – consider the optimum solution to the problem (replace or refurb.)
 - Demand side response – buys time
 - No regrets upsizing where marginal costs
 - Investment ahead of need
- But how do we determine what is optimum?
 - DNOs wary of over-complication
 - Whilst it may be difficult to model and perhaps easier to justify in the narrative we will also need companies to demonstrate via modelling for key areas
 - But this raise questions regarding consistency and ability to test optimal solution

Whole Life Costs (2)

Minded to position/questions

- Work to be done
- WLCs not appropriate for all areas but only some
 - Will be identified in our DR5/ED1 assessment template
- Consider the parameters of a “optimum decision model” (if appropriate)
 - Time, discount rate, uncertainty
- Q: what areas is it appropriate to apply WLCs?
- Q: how to model?
- Q: what parameters should be uniform/mandated in business plan guidance?

No Worse Off Principle

Discussion to date

- DNOs raised concerns about how this would work in practice
- IQI must be such that it will always be larger than the potential out performance of the slow-track companies
- Ofgem committed to reviewing this for September paper – DNO wanted sooner
- Ofgem - first proposal should be best effort, benefits of fast-tracking outweigh slow track (financial, reputational), no “opt out”

Minded to position/questions

- Ofgem set IQI on first submission – unless no-one is fast-tracked

Information Quality Incentive (IQI)

- We need to take into consideration the following when setting the IQI matrix:
 - The interpolation (i.e. whether the usual 75:25 split or something else)
 - The range of additional income and penalties
 - The range of sharing factors
- IQI matrix set using first submissions (if at least one DNO fast-tracked)
- For an equivalent position v the Ofgem view, then fast-tracked DNO would receive a higher sharing factor than DNO on slower track

Scenarios

- Smart grids forum workstream 3 paper contains four scenarios
 - Low, Medium 1, Medium 2 and High
- All DNOs are currently working through the model and aiming to provide us with their view of the likely materiality of each scenario by the end of 2012.
- We are not suggesting to “tie” DNOs to a particular scenario
 - All of our CAWG discussions have been clear that it is their business plan, so they can propose their own scenario

Why do we want scenarios?

- We intend to use this information to assist with the layout and detail required for the detailed data tables as part of next June's business plan submissions.
- Envisage being able to understand and compare where each DNO believes they'll be in RIIO-ED1
- To have visibility of where the DNO has pitched its proposals
- To understand the costs of moving between scenarios
- To be able to benchmark costs and possibly volumes associated with comparable scenarios
 - E.g. if DNO A is the only DNO putting forward a high case and traditionally it has had high unit costs, then we can compare its costs of delivering in a high scenario with the industry benchmark of delivering in that scenario

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Setting connection expenditure baselines

Customer-specific load-related expenditure - Connections

DPCR5 APPROACH:

High Volume Low Cost connections:

- Small-scale LV and other LV only: DNO forecast volumes x lowest of industry median/ DNO own gross unit cost of each subset
- LV w/ HV: DNO forecast volumes x lowest of industry UQ/ DNO own gross unit cost
- Net to gross ratio set based lowest of industry UQ/ DNO own ratio
- Baseline based on DNO volumes: volume driver true-up will amend DNO revenue
- Ex-post assessment of net to gross ratio could amend baselines

Low volume High Cost connections

- All connection expenditure forecast at EHV+: ex-ante allowance set based on projects in progress/ projects in planning stage for DPCR5 and projects forecast to be carried out by ICPs/ IDNOs
- Net to gross ratio set based lowest of industry UQ/ DNO own ratio

Customer-specific load-related expenditure - Connections

DEVELOPMENT FOR RIIO-ED1:

- Where possible, the intention is to carry out analysis and set baselines from volume of projects delivered per market segment, rather than per MPAN
- Include DUoS-funded work carried out by third parties within volume driver/ uncertainty mechanism

FURTHER WORK REQUIRED BEFORE APPROACH TO ANALYSIS IS DEVELOPED:

- Clarification of CAF rules
- Details of incentive for quicker connection times
- Policy details on anticipated reinforcement investment
- Policy details on any further movement in the contestable/ non-contestable boundaries
- Policy landing on DG incentive

Customer-specific load-related expenditure - Connections

1. Still believe that volume driver is an appropriate tool for setting baselines for this area
 - Logical that more connections = more overall costs
 - Only dealing with reinforcement element: Fairly uniform across DNOs per market segment
2. Detailed DPCR5 reporting should be helpful guide to setting gross unit costs
 - Hopeful that reporting will deliver important steers on the costs of specific connection types/ LCT types in time to inform our analysis
 - If possible, minded to look at whether connection project rather than mpan is a better “volume” to use as the driver
3. Cost of Customer-specific reinforcement should be broadly aligned with general reinforcement (albeit, customer will fund part of reinforcement as part of a connection)
 - Essentially same sorts of work but with different driver
 - Appropriate to maintain the primary and secondary network split that currently exists between HVLC and LVHC

September paper - connections

➤ OUTLINE OF FRAMEWORK

- DPCR5 as starting point: HVLC volume driver / LVHC assessment based on specific schemes and expected volumes

➤ AREAS OF ONGOING WORK

- Implications of Part-funded work
- Unit costs for LCT reinforcement vs. demand
- CAF rules clarification

➤ POTENTIAL OPTIONS

- Use of projects in volume driver?
- Use of scenarios – potentially as an uplift on a bare unit cost?
- Standardisation of indirects per market segment?

➤ LIKELY INTERACTIONS

- General Reinforcement
- Flexibility and Capacity developments – DSR, Anticipatory investment

Essentially, applying the same approach as DPCR5 would be acceptable, but if we can make improvements we should – look again at regression for high volume connections

Anything missing?

Next Steps

- No meetings in August but:
 - WPD V2 of model will be shared
 - Mid model to be developed and shared
 - Up date on progress of Frontier Economics Totex Work
 - Actions on DNO including responding to Business Support Cost in T1/GD1 Initial Proposals
- 18 September 2012 Meeting
 - BSCs
 - Totex further thinking
- Further meetings:
 - Tuesday 13 November 2012
 - Monday 3 December 2012
 - Thursday 17 January 2013

The background of the slide is a composite image. On the left, there are rows of solar panels under a bright sun. On the right, a hand is shown holding a white document. In the bottom left corner, a blue gas burner is visible. The overall theme is energy and customer service.

ofgem

Promoting choice and value
for all gas and electricity customers