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# Cost Assessment Working Group (CAWG)

Meeting 5

10 July 2012

# Today's agenda

**Morning session**

- Update on actions
- Items from last CAWG
  - Real Price Effects and productivity efficiency
  - Uncertainty mechanisms
- Real options and whole life costs – James Grayburn, DNOs

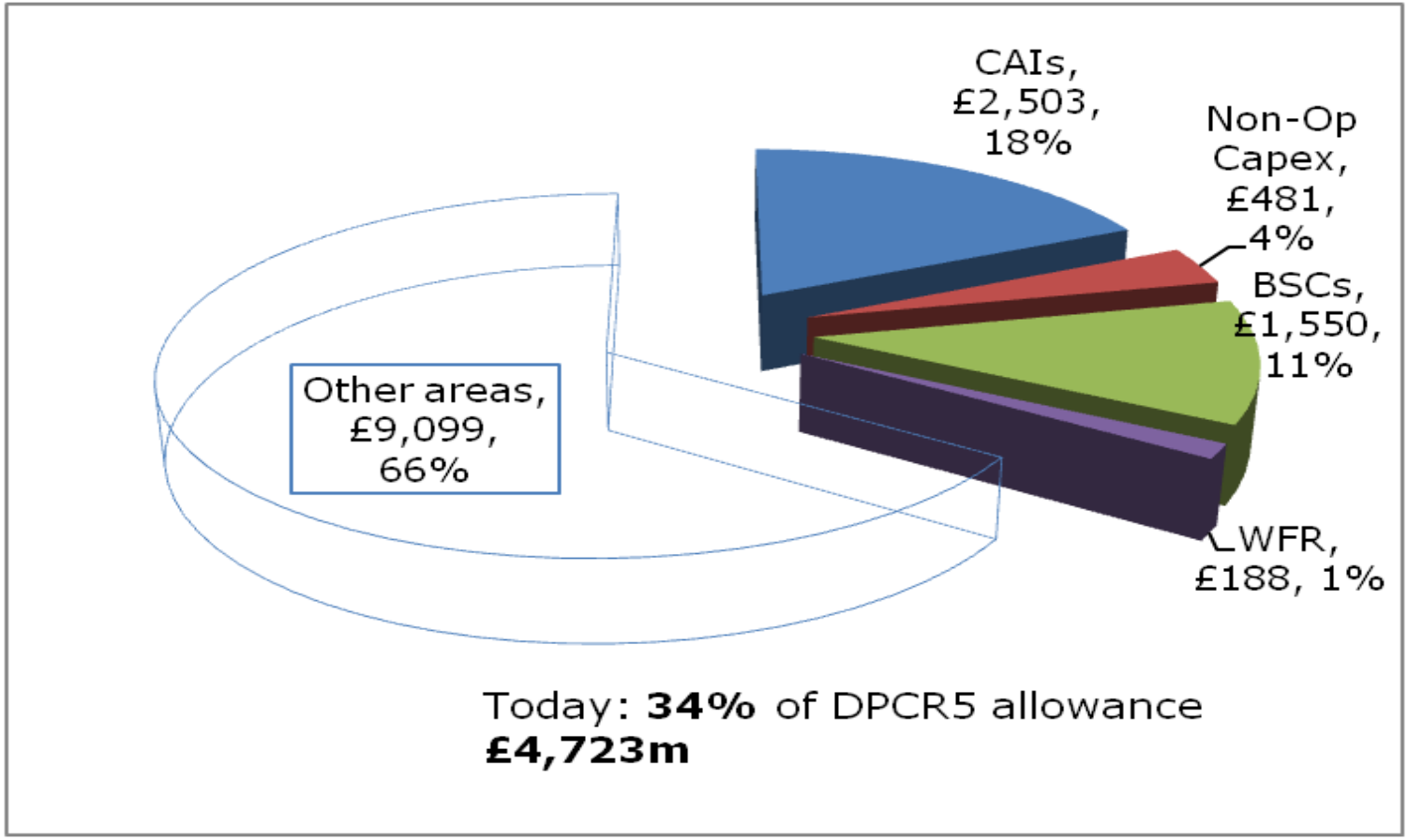
**Afternoon session**

- CAIs
- Non-op Capex
- Business Support
- Workforce Renewal

# Purpose of Today (1)

- Develop further thinking in seven areas:
  1. Real price effects
  2. Uncertainty mechanisms
  3. Whole Life Costs
  4. CAIs
  5. Non-op Capex
  6. Business support costs
  7. Workforce renewal
- Recap on DNOs responses and input to date
- Present Ofgem views
- DNOs to bring propositions

# Purpose of Today (2)



# Purpose of Group

- Build a suite of tools for Cost Assessment element of the WJBP
- While justification is vital in the WJBP, the models play a crucial role in decision of fast tracking (and in slow track)
- Models: Totex, middle up and disaggregated
  - Both for fast track and slow track

# Update on Actions

- Continue to sent spreadsheet with the minutes
- Gathering a wealth of information from DNOs
- Opportunity to influence and inform the September consultation
- Areas requiring input:
  - Action 27: use of volumes for faults and allowances
  - Action 31: appropriate cost drivers and splits in CAIs on which to develop cost drivers
  - Action 32: elements of CAIs that will be fixed and elements that will flex depending on scenarios
  - Action 35: suggestions of an appropriate output for WFR
  - Action 37: data, what level of granularity and what length of data required to input to models

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# Real Price Effects and Uncertainty Mechanisms

# Real Price Effects (1)

- RPEs: measure the expected real input price inflation of the DNOs
  - Avg RPEs of 1.1% per yr for Network Investment
  - Avg RPEs of 1.4% per yr for Operational activities
- These were based on assumptions made from
  - CEPAs April 2009 report
  - input from the DNOs FBPQs
- Element of risk - conflicting evidence was received from the DNOs in DPCR5
- RPEs are to be submitted in the 2012 Forecast Pack

What assumptions can be made taking account of uncertainty?

# Example - Transmission BP - RPE estimates by main cost category

**RPE estimates provided by First Economics for SHETL, NG, SPTL**

| | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 to 2020/21 |
|---|---|---|---|---|---|---|
| **Labour – general** | (3.2) | (0.9) | 0.6 | 0.8 | 0.7 | 1.05 |
| **Labour – specialist** | (1.95) | 0.35 | 1.85 | 2.05 | 1.95 | 2.3 |
| **Materials – general/civil** | (0.7) | 1.1 | 1 | 0.9 | 0.7 | 1.3 |
| **Materials – electrical** | (0.2) | 1.6 | 1.5 | 1.4 | 1.2 | 1.8 |
| **Materials – steel for pipelines** | 14.8 | 1.6 | 1.5 | 1.4 | 1.2 | 1.8 |
| **Plant and equipment** | (1.2) | 0.6 | 0.5 | 0.4 | 0.2 | 0.8 |

# Real Price Effects (2)

- RPEs are to be justified in WJBPs
- The fast track companies in T1 were allowed their requested RPEs
  - Non-fast tracked companies RPEs reviewed
- Problems with transparency in DPCR5
- Ensure consistent application across working groups
  - Eg application within WS3 model
- Productivity improvements
  - Assumptions were made by First Economics for DPCR5
    - 1% per yr for both NI and operational activities
    - Limited challenge from DNOs on figures
    - Do smart grids and new technologies offer up scope for greater productivity gains in RIIO-ED1?

Do efficiency assumptions balance with RPEs?

# Uncertainty mechanisms

**Uncertainty mechanisms fully-calibrated at price control review**

- **Indexation (e.g. RPI)**
- **Volume driver** (calibrated at price control review)
- **Revenue trigger** (calibrated at price control review)
- **Use it or lose it mechanism**

**Forward-looking revenue adjustment determined by Ofgem during price control**

- **Revenue adjustment based on updated cost assessment if trigger event occurs (e.g. specific re-opener)**

**Revenue allowance determined after company incurs relevant expenditure**

- **Pass-through items**
- **Logging-up of actual expenditure subject to ex post efficiency review**
- **Backward-looking revenue adjustment based on benchmarking analysis of outturn costs**

# Potential areas requiring uncertainty mechanisms – DNO view

- TMA including lane rental
- Rising & lateral mains
- Reinforcement spend
- High value projects
- Blackstart/CNI/ other centrally mandated spend
- Smart meter roll-out costs

# Approach for ED1 – Ofgem view

- Where possible we will endeavour to provide ex-ante allowances, rather than relying on uncertainty mechanisms
- 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
- We believe that a number of the areas highlighted by DNOs on the previous slide could be settled via ex ante allowances (eg Blackstart)

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# Real Options and Whole Life Costs

# Closely Associated Indirects (CAIs)

# DNO responses to ENWL investment template – CAI 1

- The DNOs were asked to complete ENWLs DPCR5 cost investment assessment template under DNO action 21 taking into account materiality and applicability
  - Responses to action 21 - Group 1
    - Consensus on the inappropriate use of pounds spent as a cost driver
    - It is likely that economies of scale exist at the DNO group level within certain activities
    - Arguments raised that each activity should be assessed separately as each activity has its own cost driver
    - Noted that there may be a case to review the CA activity groups of DPCR5
    - Possibly some regional factors for a number of defined indirect roles e.g. field supervisors
    - Modelling did not take account of insourcing/outsourcing trade off between capex unit cost assessment methodology and NOC/Indirect cost regression
    - Mechanistic allowance setting in DPCR5 did not take account of any interaction between activity costs e.g. additional expenditure in Network Design may result in capex efficiencies, need to assess cost base in its entirety

# DNO responses to ENWL investment template – CAI 2

- The DNOs were asked to complete ENWLs DPCR5 cost investment assessment template under DNO action 21 taking into account materiality and applicability
  - Group 1
    - One view taken was that an improved DPCR4 CSV Driver (fitted coefficients) preferable to incorrectly specified DPCR5 model. This level of disaggregation is inappropriate regardless of driver - "inefficiency" more likely than not simply network heterogeneity. Some constituent costs almost entirely unexplained by any available driver.
  - Group 2
    - As Group 1
  - Wayleaves
    - Wayleave payments should be excluded from EMCS before any cost assessment of EMCS is undertaken.
    - Wayleave payments should be assessed independently.
    - Continue as DPCR5

# DPCR5 FP split of primary and secondary drivers

| Regression cost group | | Primary driver | Secondary driver |
|---|---|---|---|
| LV & HV Underground Faults | | LV & HV Underground faults | Length of cable replaced |
| LV and HV Overhead Faults | | Lv & HV Overhead faults | |
| Inspection & maintenance | | Asset Hours Work driver for Inspection & Maintenance | |
| Tree Cutting | | Spans Cut | Spans affected |
| Group 1 | Network Design, Project Management, System Mapping | Load & Non-Load costs | MEAV |
| Group 2 | Engineering Management & Clerical Support, Control Centre, Customer Call centre, Stores, Health & safety | Total Direct Costs (less non-operational capex £m) | MEAV |
| Group 3 | Network Policy, HR & Non-operational Training, Finance & Regulation, CEO, IT & property | MEAV | Total Direct Costs (less non-operational capex £m) |
| Single Group | As for Groups but amalgamating the three groups of costs into a single regression | Total Direct Costs (less non-operational capex £m) | MEAV |
| Top Down | Single regression of all the above costs. | MEAV | Load & Non-Load costs |

# DNO Responses to Actions 31 & 32 – CAI 1

- DNOs were asked to identify an appropriate treatment of closely associated indirects as part of actions 31 & 32
  - provide their thoughts on drivers, potential splits in CAI in order to develop cost drivers and their thoughts on which activities contain fixed costs
- There was consensus between the DNOs on how to group the different CAI activities:
  - 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)

# DNO Responses to Actions 31 & 32 – CAI 2

- There were differing opinions as to which activity should fall into which group (Operational training and system mapping)
- 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
  - Allows to test for
    - Efficiency of costs that will be funded by DUoS customers
    - The extent to which different allocation methodologies may be distorting calculated efficiency

Regressions run in DPCR5 close to 1000

# CAI – Potential grouping in RIIO-ED1 (Option 1)

- Potentially adjustments could be made to the groupings initially set out in DPCR5
- Using DNO feedback the most appropriate grouping is:
  - Group A
    - Network Design & Engineering
    - Project Management
    - System Mapping
    - Vehicles & Transport (transparency)
  - Group B
    - Engineering Management & Clerical Support (Some view taken that it should be assessed in group A)
    - Control Centre
    - Call Centre
    - Stores (Some view taken that it should be assessed in group A)
    - Operational Training (admin and recruitment costs are substantially fixed, argued that it should be assessed separately)

# CAI – Potential grouping in RIIO-ED1 (Option 2)

- DNOs have expressed in their feedback on actions 31 & 32 that Ofgem should
  - Decrease the number of regressions from DPCR5
  - Use a driver as closely aligned to the activity as possible
- It was also noted that there maybe the opportunity to combine areas for assessment
  - Deemed sensible to pull together areas that are being assessed using the same cost driver
    - this may abandon the grouped approach of DPCR5
- Sensible to add in benchmarked costs provided by any experts as in GD1
- DNOs argued that within group B it is appropriate to assess the level of costs relative to the scale of the DNO company
  - MEAV  was a suggested as an appropriate cost driver,

# Possible RIIO-ED1 CAI Activities Group A

| | WPD Driver of Variable Cost from model | DNO View | C1 Gross DNO Expenditure £m 2011 |
|---|---|---|---|
| **Group A** | | | **272.26** |
| **Network Design And Engineering** | | | **80.26** |
| Strategic planning of the distribution network | MEAV | Driver must be a measure of the effectiveness of direct activities undertaken | 12.31 |
| General and Fault level reinforcement | Gross Network Investment (Table C1 Cell Q52) plus Connections Non Price Control (Table C1 Cell AX52) plus Excluded Services ES2 and ES3 (Table C28 Cells G6 and G7) | | 14.06 |
| Demand connections | | | 23.17 |
| Relevant Distributed Generation Connections | | | 6.71 |
| Other Network Investment | | | 24.01 |
| **Project Management** | Gross Network Investment (Table C1 Cell Q52) plus Connections Non Price Control (Table C1 Cell AX52) plus Excluded Services ES2 and ES3 (Table C28 Cells G6 and G7) | | **83.38** |
| **System Mapping** | Total network length | | **18.59** |
| **Vehicles And Transport** | Total direct employees | | **90.03** |

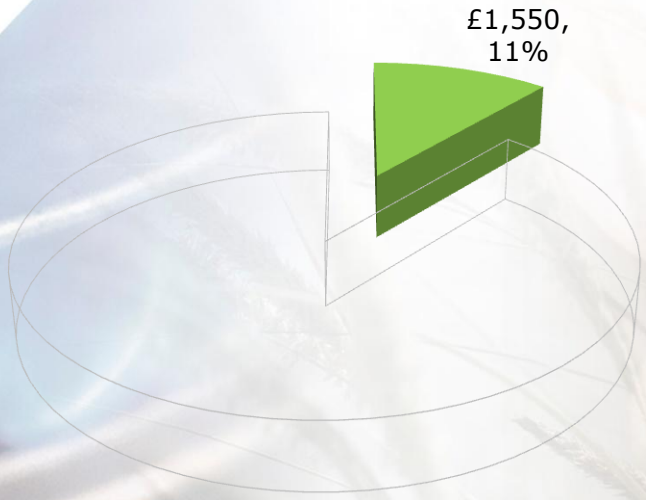
# Possible RIIO-ED1 CAI Activities Group B

| | WPD Driver of Variable Cost from model | DNO View | C1 DNO Gross Expenditure £m 2011 |
|---|---|---|---|
| **Group B** | | | **450.86** |
| **Engineering Management & Clerical Support** | | | **292.67** |
| Identification and Implementation of Improvement Initiatives | MEAV | MEAV | 3.49 |
| Strategic Network Plan Development and Implementation | MEAV | MEAV | 12.16 |
| Work Planning, Budgeting, Allocation and Control | MEAV | MEAV | 123.97 |
| Health & Safety | MEAV | MEAV | 18.79 |
| Streetworks Admin: Customer Funded | Demand Connections Expenditure | MEAV | 3.1 |
| Streetworks Admin: DUoS Funded | Demand Connections Expenditure | MEAV | 5.4 |
| Wayleaves Payments | Actuals | MEAV | 38.04 |
| Wayleaves and Easements/Servitudes: Admin Costs | Wayleaves Payment numbers | MEAV | 15.06 |
| Clerical Support | MEAV | MEAV | 72.66 |
| **Control Centre (Inc Dispatch)** | | | **52.62** |
| Outage Planning and Management | Total network length | MEAV | 5.88 |
| Real Time Control and Monitoring | Total network length | MEAV | 29.59 |
| Dispatch | Total network length | MEAV | 14.75 |
| Major Incidents & Emergency Planning | Total network length | MEAV | 2.4 |
| **Call Centre** | Customer Numbers | MEAV | **21.92** |
| **Stores** | MEAV | MEAV | **34.44** |
| **Operation Training** | | | **49.21** |
| Cost of staff receiving classroom and on job training | Actuals | MEAV | 30.76 |
| Cost of staff providing training | Classroom Training Days - Total | MEAV | 12.25 |
| Cost of facilities for providing training | Classroom Training Days - Total | MEAV | 6.2 |

# Developments for RIIO-ED1 CAI

- 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
- It is important not to tie our hands at this early stage but suitable assessment methods must be in place for non-fast tracked companies

# Business Support Costs (BSCs)



| Area | Basis of Ofgem Assessment | Consensus | Work | Comments |
|---|---|---|---|---|
| "Group 3" - Business support indirects exc property & IT | Range of econometric modelling<br>Majority based on regression against MEAV and Directs costs on ownership group basis (IT including in model but allowance set separately) | weak | significant | -Account for Groups<br>-More appropriate CDs<br>-Reduce model variants<br>-Consider fixed v variable costs<br>-BSCs or CAIS?<br>-Justification of differences |
| Property | Expert review but unclear:<br>- how Ofgem utilised to set allowances<br>- if it included in regressions (contradiction on ITT and Property in FP) | weak | significant | -Account for Groups<br>-Account for trade offs<br>-Approve use of expert review<br>-Include appropriate non-op capex |
| IT & T | Expert review but unclear if it included in regressions (contradiction on ITT and Property in FP) | weak | significant | -Account for trade offs<br>-Better expert review<br>-Include appropriate non-op capex |
| Property rents | Allowance = forecast | weak | medium | -Account for Groups<br>-Account for trade offs<br>-Prop Mgt indirect activity should be assessed<br>-Continue as in DPCR5 |
| Terrorism insurance | Minimum of forecast, glide path, average of actuals with 1% pa frontier shift.<br>LPN - an adjustment to the cost base in the benchmarking rather than an allowance.<br>Expert review but unclear how Ofgem utilised to set allowances | medium | limited | -Account for Groups<br>-Exclude from modelling<br>-Better Data now available<br>-Justification of differences |

# BSCs – views from DNOs (1)*

- Cross sector benchmarking appropriate but must be like with like
- Included in totex to allow comparison of companies with different approaches

- Challenges for ED1:
  - Appropriate modelling of fixed costs
    - based on industry knowledge not econometrics
  - Developing appropriate cost driver for variable costs
  - Model that accounts for and considers:
    - Different approaches
    - Groups and vertically integrated companies
  - Boundaries between BSCs and CAIs
    - Network insurance, claim handling and DNO payouts
    - Network telecoms

*Note: this does not imply a consensus view

# BSCs – views from DNOs (2)

- Cost Drivers:
  - In DPCR5 IT, finance, HR assessed with compound driver of MEAV and direct costs
    - Questioned: what is the relationship between value of asset base and spend on such activities?
  - Simple and intuitive
  - Caution: ED has peculiarities (Income Management function)
  - Different views on IT support costs per end user
  - WPD: independent assessment of each element as have different cost drivers; NPG: an aggregate approach

# Update on RIIO-T1 / GD1 (1)

- Finalised the work with Hackett
- Developed similar benchmarks from network companies (ED, GD, T)
- Used both benchmarks in the development of allowances for IP for GD and T – published end July. NB not the only factor
- Greater understanding of how we can use the benchmarks in the development of allowances

# Update on RIIO-T1 / GD1 (2)

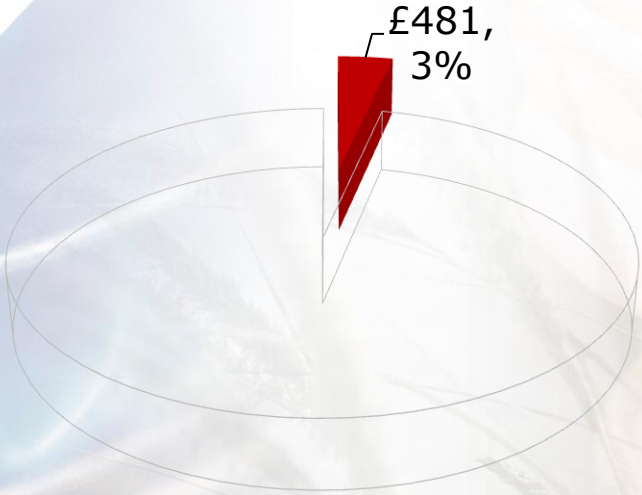
- Looked at the robustness of the plans and evidence provided
- Previous historical spend
- Business support costs v direct costs (opex and capex)
- Intend to apply the same methodology to ED1
- We have **not** used benchmarking alone

- Network Policy – part of closely associated indirect costs (T and GD) could use costs as % of MEAV or direct costs

# Suggested Benchmark Metrics

| Business Support Category | Metric Used |
|---|---|
| Network Policy | Could use Costs as % of MEAV or Direct Costs |
| Human Resources and Non Operational Training | Cost per Employee |
| Finance and Regulation | Cost as a % of Revenue |
| CEO and Other Corporate Function | Cost as a % of Revenue |
| Information Systems and Telecoms | Cost Per End User |
| Property Management | Cost as a % of Revenue |

# Non-Op Capex



# Responses to Investment Template – Non-op Capex 1

- The DNOs were asked to complete ENWLs DPCR5 cost investment assessment template under DNO action 21 taking into account materiality and applicability

- DNO responses on IT & Telecoms
  - Need to identify experts better placed to review DNO costs.
  - Need to consider how the trade-offs with modelled costs are taken into account
  - Include in relevant indirect cost group on an average basis
  - It was not made clear why you Property and IT were included in regressions once they had already been assessed for efficiency in expert review
- DNO responses on Property
  - Repeat of IT & Telecoms

# Responses to Investment Template – Non-op Capex 2

- DNO responses on Vehicles & Transport
  - The calculation of how allowances are calculated for costs associated with capex must be transparent
  - Include in relevant indirect cost group on an average basis
  - It was noted that some DNOs are not in favour of factoring V&T into Direct cost categories.
  - Companies should justify V & T costs within their business plan which should highlight the different requirements between companies (leasing vs purchasing)
  - For RIIO-ED1 it was suggested that comparison against historic cost trends should provide a further insight into whether a company is proposing a change in its approach
- DNO responses on Plant & Equipment
  - The calculation of how allowances are calculated for costs associated with capex must be transparent
  - It was raised that some DNOs do not report any non-op expenditure on Plant and equipment;
    - For cost assessment purposes, non-op capex plant and equipment should be absorbed into direct labour.
  - Do not favour factoring into Direct cost categories.
  - Companies should present their justification within their business plan. This should provide adequate information for Ofgem to make comparisons between companies

# DNO Action 33 Responses – Non-op Capex 1

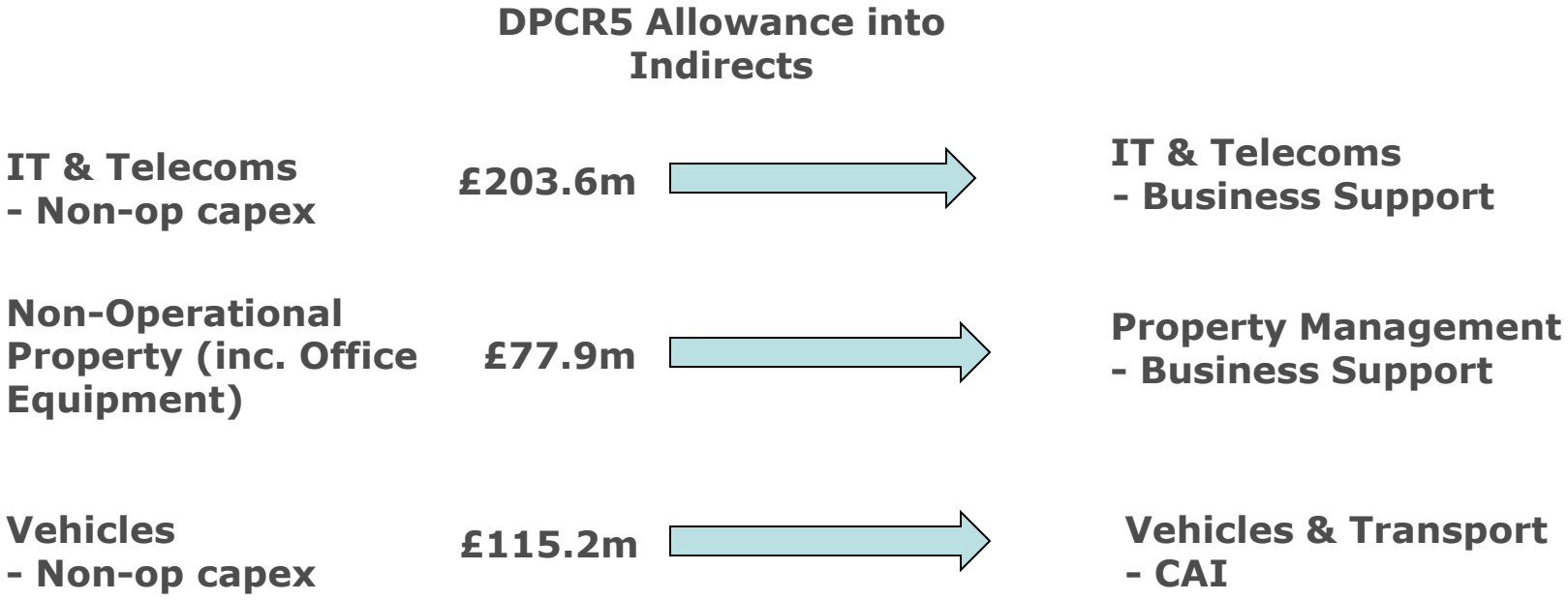
- DNOs were asked to identify an appropriate treatment of non-op capex as part of action 33. These two slides show views taken from the DNOs.
  - provide their thoughts on cost drivers and potentially where different elements of non-op capex should be reported
- Agreement from some DNOs that non-op capex costs are added to relevant indirect activity when assessing efficiency of spend
  - Negates decisions of the DNOs to own or rent assets
    - Assess non-op IT with IT & Telecoms business support
    - Assess non-op property costs with property business support
    - Assess vehicles non-op capex costs with vehicles & transport indirect costs (Use companies replacement policy to determine "capital consumption" to make comparisons between those that own or rent assets)
    - Tools and equipment? Possibly stores or EMCS depending on how it is regressed

# DNO Action 33 Responses – Non-op Capex 2

- Companies should present evidence of tendering as a means to obtain the best prices (particularly for high value assets)
- IT expenditure associated with smart metering should be considered separately
- DNOs have recommended that IT & telecoms and property together with the associated indirect opex, are considered through expert review
  - Some DNOs have put themselves forward to assist ofgem in the selection of experts
  - Puts clear obligation on the DNO to justify their expenditure

# Development for RIIO-ED1 Non-op Capex

- Preferred option
  - Add Non-op capex activities to their relevant activity within indirects
  - Appropriate for both Property and IT & Telcoms activities assessments to be undertaken by external consultants



# Development for RIIO-ED1 Non-op Capex

- Vehicles
  - Use of a cost driver to assess comparative costs for both the non operational capital expenditure and the indirect activity
  - Possible cost drivers are
    - Total direct labour FTEs
    - Total direct labour costs
- Small tools, Equipment, Plant & Machinery
  - Some DNOs have not reported any costs within this activity
  - Two approaches
    - The reported expenditure could be apportioned to all direct activity. This apportionment should be on the basis of direct labour
    - A cost driver of Total direct labour cost can be used for assessment removing any DNOs with zero expenditure from the analysis.

Necessary to smooth the profile of expenditure using an average annual value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