DCP 198 — draft legal text

This is a draft for consideration by the working group. The author makes no representation about the suitability of this draft for any purpose.

Schedule 16, paragraphs 97 to 113, ~~version 6.2~~proposed

97.   For the purposes of price control disaggregation the network is split into five levels: LV services, LV mains, HV/LV, HV, and a single level covering EHV and 132kV (including EHV/HV).

98.   The determination of discount percentages involves the following steps:

> (a)   ~~Allocation~~ Breakdown of price control allowed revenue between operating expenditure, depreciation, and return on regulatory asset value.
>
> (b)   Allocation of each of these components of price control allowed revenue ~~elements~~ to network levels.
>
> (c~~b~~)   Determination of a percentage allocation of total revenue per unit to network levels.
>
> (d~~c~~)   Determination of the proportion of the LV mains deemed to be used by LV-connected embedded networks.
>
> ~~(d)   Allocation of 100% of the LV services to LV-connected embedded networks (the "[LV services allocation]").~~
>
> (e)   Determination of the proportion of the HV network deemed to be provided by HV-connected embedded networks.~~ with HV end users.~~
>
> (f)   Calculation of the discount percentage for each combination of boundary network level and end user network level.
>
> ~~(g)   Application of discount percentages to determine portfolio tariffs.~~

Allocation of price control revenue elements to network levels

99.   ~~The calculation of percentage allocations of price control revenues to network levels is based on separate percentages by network level for the operating cost, depreciation and return on the regulatory asset value elements of the DNO Party's allowed revenue~~Not used.

100.   In order to determine the allocation to network levels of each element of price control revenue, the DNO Party uses the cost~~s~~ allocation drivers calculated from the following sources:

> (a)   RRP data on units distributed and operating expenditure broken down by network level.

(b) Data that each DNO Party considers appropriately represents the forecast of net capital expenditure and customer contributions for the period 2005/2006–2014/2015, broken down by network level.

(c) Forecast data that each DNO Party considers appropriately represents the gross modern equivalent asset values (replacement costs) for various asset types.

(d) The value of all notional assets calculated in each DNO Party's EDCM model. This comprises the aggregate of:

(I) the sum of notional site-specific asset values of all network levels allocated to capacity for all customers in the DNO Party's EDCM model;

(II) the sum of notional asset values at all network levels allocated to demand for all customers in the DNO Party's EDCM model;

(III) the sum of sole use asset values allocated to demand for all customers in the DNO Party's EDCM model; and

(IV) the sum of sole use asset values for generation only for all customers in the DNO Party's EDCM model.

(e) The CDCM notional asset values for each network level as referred to in paragraph 63 of this schedule.

Allocation of operating expenditure to network levels

~~101. Data from the RRP are used to distinguish between direct and indirect costs, with direct costs coded by network level. For the purpose of this calculation, capital expenditure is included, net of customer contributions, but negative figures are replaced with zero. This analysis provides direct costs percentage for each network level, based on RRP data. The direct cost percentage for LV mains is denoted "[LV mains direct proportion]" and the direct cost percentage for HV is denoted "[HV direct proportion]".~~

101. The DNO Party allocates operating expenditure in the 2007/2008 RRP by network level. The RRP already allocates some operating expenditure by network level. For categories of expenditure for which the table below reports "MEAV" in the column headed "Allocation key", the DNO Party allocates, on the basis of modern equivalent asset values, the difference between total operating expenditure and the operating expenditure that is allocated to network levels.

Table: Allocation rules

	Allocation key	Percentage capitalised	Direct cost indicator
Load related new connections & reinforcement (net of contributions)	MEAV	100.0%	1
Non-load new & replacement assets (net of contributions)	MEAV	100.0%	1
Non-operational capex	MEAV	23.5%	1

Faults	MEAV	23.5%	1
Inspections, & Maintenance	MEAV	23.5%	1
Tree Cutting	MEAV	23.5%	1
Network Policy	MEAV	52.57%	
Network Design & Engineering	MEAV	52.57%	
Project Management	MEAV	52.57%	
Engineering Mgt & Clerical Support	MEAV	52.57%	
Control Centre	MEAV	52.57%	
System Mapping - Cartographical	MEAV	52.57%	
Customer Call Centre	MEAV	52.57%	
Stores	MEAV	52.57%	
Vehicles & Transport	MEAV	52.57%	
IT & Telecoms	Do not allocate	52.57%	
Property Mgt	Do not allocate	52.57%	
HR & Non-operational Training	MEAV	52.57%	
Health & Safety & Operational Training	MEAV	52.57%	
Finance & Regulation	MEAV	52.57%	
CEO etc	MEAV	52.57%	
Atypical cash costs	Do not allocate		1
Pension deficit payments	Do not allocate	57.7%	1
Metering	Do not allocate		1
Excluded services & de minimis	Do not allocate		1
Relevant distributed generation (less contributions)	Do not allocate		1
IFI	Do not allocate		1
Disallowed Related Party Margins	Do not allocate		1
Statutory Depreciation	Do not allocate		1
Network Rates	Do not allocate		1
Transmission Exit Charges	Deduct from revenue		1
Pension deficit repair payments by related parties	Do not allocate		1
Non activity costs and reconciling amounts	Do not allocate		1

102.   For the categories of expenditure for which the table reports "MEAV" under "the column "Allocation key", the DNO Party allocates the difference between total and allocated operating expenditure Indirect operating costs are allocated to network levels on the basis of an estimate of modern equivalent asset value by network level. The operating cost percentage for each level is a weighted average of the direct and indirect percentages. Estimated gross modern equivalent asset values used for this purpose are derived from asset counts and gross modern equivalent asset values (replacement costs) for various asset types. The DNO Party maps assets to network levels using the mapping shown in the table headed "Mapping of assets to network levels", and calculates the share of MEAV allocated to each of the network levels. The estimated gross modern equivalent asset value at the EHV and 132 kV network level is adjusted by multiplying it by the EHV Reduction Ratio (see Glossary).

102A. The DNO Party adjusts the operating costs allocated to each network level — equal to the sum of the operating costs already allocated to network levels in the 2007/2008 RRP and

the operating costs allocated in line with the previous paragraph — by multiplying, for each operating cost category, the allocated cost by one minus the capitalisation percentage specified in the table headed "Allocation rules". On the basis of summing this adjusted allocation of operating costs across cost categories for each network level, the DNO Party calculates the share of operating costs of each network level. These are denoted as [Expensed proportions].

103.   Transmission exit charges are not allocated to any of the voltage tiers. These charges are deducted from the allowed revenue. (see paragraph 111).

Table: Mapping of assets to network levels

Asset	Network level
LV mains overhead lines	LV mains
LV services overhead lines	LV services
LV overhead support	LV mains
LV mains underground cable, consac	LV mains
LV mains underground cable, plastic	LV mains
LV mains underground cable, paper	LV mains
LV services underground cable	LV services
LV pillar, indoors	LV mains
LV pillar, outdoors	LV mains
LV board, wall-mounted	LV mains
LV board, underground	LV mains
LV fuses, pole-mounted	LV mains
LV fuses, tower-mounted	LV mains
6.6/11 kV overhead line, open	HV
6.6/11 kV overhead line, covered	HV
20 kV overhead line, open	HV
20 kV overhead line, covered	HV
6.6/11 kV overhead support	HV
20 kV overhead support	HV
6.6/11kV underground cable	HV
20kV underground cable	HV
HV submarine cable	HV
6.6/11 kV circuit breaker pole-mounted	HV
6.6/11 kV circuit breaker ground-mounted	HV
6.6/11 kV switch pole-mounted	HV
6.6/11 kV switch ground-mounted	HV/LV
6.6/11 kV ring main unit	HV/LV
6.6/11 kV other switchgear, pole-mounted	HV
6.6/11 kV other switchgear, ground-mounted	HV
20 kV circuit breaker, pole-mounted	HV
20 kV circuit breaker, ground-mounted	HV
20 kV switch, pole-mounted	HV
20 kV switch, ground-mounted	HV/LV
20 kV ring main unit	HV/LV

20 kV other switchgear, pole-mounted	HV
20 kV other switchgear, ground-mounted	HV
6.6/11 kV transformer, pole-mounted	HV/LV
6.6/11 kV transformer, ground-mounted	HV/LV
20 kV transformer, pole-mounted	HV/LV
20 kV transformer, ground-mounted	HV/LV
33kV overhead pole line	EHV and 132kV
33kV overhead tower line	EHV and 132kV
66kV overhead pole line	EHV and 132kV
66kV overhead tower line	EHV and 132kV
33kV pole	EHV and 132kV
33kV tower	EHV and 132kV
66kV pole	EHV and 132kV
66kV tower	EHV and 132kV
33kV underground cable, non-pressurised	EHV and 132kV
33kV underground cable, oil	EHV and 132kV
33kV underground cable, gas	EHV and 132kV
66kV underground cable,non-pressurised	EHV and 132kV
66kV underground cable, oil	EHV and 132kV
66kV underground cable, gas	EHV and 132kV
EHV submarine cable	EHV and 132kV
33 kV circuit breaker, indoors	EHV and 132kV
33 kV circuit breaker, outdoors	EHV and 132kV
33 kV switch, ground-mounted	EHV and 132kV
33 kV switch, pole-mounted	EHV and 132kV
33 kV ring main unit	EHV and 132kV
33 kV other switchgear	EHV and 132kV
66 kV circuit breaker, indoors and outdoors	EHV and 132kV
66 kV other switchgear	EHV and 132kV
33 kV transformer, pole-mounted	EHV and 132kV
33 kV transformer, ground mounted	EHV and 132kV
33 kV auxiliary transformer	EHV and 132kV
66 kV transformer	EHV and 132kV
66 kV auxiliary transformer	EHV and 132kV
132kV overhead line pole conductor	EHV and 132kV
132kV overhead line tower conductor	EHV and 132kV
132kV pole	EHV and 132kV
132kV tower	EHV and 132kV
132kV tower fittings	EHV and 132kV
132kV underground cable, non-pressurised	EHV and 132kV
132kV underground cable, oil	EHV and 132kV
132kV underground cable, gas	EHV and 132kV
132 kV submarine cable	EHV and 132kV
132 kV circuit breaker, indoors and outdoors	EHV and 132kV
132 kV other switchgear	EHV and 132kV
132 kV transformer	EHV and 132kV

132 kV auxiliary transfomer	EHV and 132kV
132 kV/EHV remote terminal unit, pole-mounted	EHV and 132kV
132 kV/EHV remote terminal unit, ground-mounted	EHV and 132kV
HV remote terminal unit, pole-mounted	HV
HV remote terminal unit, ground-mounted	HV

Allocation of depreciation and return to network levels

104.   Both the depreciation and return on capital elements of allowed revenue are allocated to network levels on the basis of net capital expenditure data derived from the appropriate capital expenditure forecast. All figures on net capital expenditure are aggregated over the 10-year period from 2005/2006 to 2014/2015, taking in actual data or forecasts for each year as available.

105.   The DNO Party calculates the net capital expenditure split by LV, LV/HV, HV, and EHV and 132kV. For each of these four segments, network level, the relevant net capital expenditure is calculated by adding up expenditure on total condition based replacement (proactive and reactive replacement), combined in the case of LV services, LV mains, HV and EHV with connections spend minus customer contributions (directs) for connections at that voltage level, general reinforcement capital expenditure at that voltage level, and fault reinforcement capital expenditure at that voltage level. The net capital expenditure at the EHV and 132kV network level is adjusted by multiplying it by the EHV Reduction Ratio (see Glossary).

106.   Some of these net capital expenditure categories allow HV substation and transformer costs to be identified. These costs (and no other costs) are allocated to the HV/LV network level. The ratio of the expenditure in these categories on HV substations and transformers to the expenditure in these categories on other HV assets is denoted as [HV/LV capital expenditure ratio].

107.   Some of the net capital expenditure categories do not separately identify HV substation/transformer costs and report a single figure for HV.   For these categories, the costs reported under HV costs are split between the HV/LV network and the HV network level so that the ratio of the amount allocated to the HV/LV network level to the costs reported under HV is equal to [HV/LV capital expenditure ratio]. in the same proportion as for the other categories (where these costs are separately identified).

108.   Generation-related capital expenditure is not included in the net capex attributable to each network level.

108A. The DNO Party splits the net capital expenditure allocated to LV by dividing it between the LV mains and the LV services network levels. It does this on the basis of the ratio of net capital expenditure on total condition based replacement costs for each of those two network levels.

Determination of a percentage allocation of total revenue per unit to network levels

109.   The percentage allocation of costs to network levels is determined as a weighted average of the percentage allocation for each of the elements of price control revenue, rescaled by units flowing.

110.   The DNO Party determines a breakdown of price control allowed revenue over the period from 2005/2006 to 2009/2010 between (1) operating expenditure, (2) depreciation and (3) return on regulatory asset value. Each of these ~~3~~ three components of price control allowed revenue is then allocated across each network level using the percentage cost drivers as calculated for each such network level in accordance with the provisions of paragraphs 99-108A above. ~~The~~ ~~resultant~~ allocations of each of the three components of price control allowed revenue are aggregated by network level to obtain a percentage per network level of total price control allowed revenue ~~for the period 2005/2006 to 2009/2010~~.

111.   ~~For the purpose of paragraph 110, t~~The price control allowed revenue for 2007/2008 (~~denoted~~stated as the "[Total allowed revenue]~~"~~ in the price control disaggregation model) is adjusted by deducting from it ~~for the relevant charging year is adjusted by deducting~~ the [Revenue not to share]. The [Revenue not to share] comprises the aggregate of:

> (a)   the net amount earned ~~or lost~~ by the DNO Party under price control financial incentive schemes for 2007/2008 (this may be a negative number); and

> (b)   Transmission exit charges for 2007/2008.

112.   This adjusted price control allowed revenue (denoted as ~~stated in the model as the~~ "[Total revenue to share]~~"~~) is then allocated to each network level using the weighted average percentage allocations calculated in accordance with paragraph 110. Before making this allocation however, the [Total revenue to share] must be further adjusted to deduct a portion of the price control allowed revenue that is to be recovered from EHV customers. This adjusted Total revenue to share is derived by deducting the following:

> [EHV Revenue] * [Total revenue to share] / [Total allowed revenue]

> Where:

> Total allowed revenue = the price control allowed revenue

> Total revenue to share = Total allowed revenue − Revenue not to share

> EHV Revenue = the revenue to be recovered from EHV customers in 2007/2008 ~~for the relevant charging year.~~

112A   The revenue not to share must also be adjusted to deduct a portion of the price control allowed revenue that is to be recovered from EHV customers. This adjusted Revenue not to share is derived by deducting the following:

> [EHV Revenue] * [Revenue not to share] / [Total allowed revenue]

> Where

> Revenue not to share = as per paragraph 111 above.

> Total allowed revenue = the price control allowed revenue

> EHV Revenue = the revenue to be recovered from EHV customers in 2007/2008 ~~for the relevant charging year.~~

113.   The adjusted price control allowed revenues allocated to each network level are then rescaled by the estimated number of units flowing through each network level loss adjusted to LV. The result is denoted by [Revenue to share per unit], for each network level. The Revenue not to share is re-scaled by all units flowing into the DNO Party's EHV network loss adjusted to LV, the result is denoted as [Revenue not to share per unit]. ~~The resultant revenues, scaled by units flowing, are then normalised so that they add up to 100 per cent. The result of this calculation is a set of percentage allocations for each of the LV services, LV mains, HV/LV, HV and EHV network levels and the Revenue not to share.~~

113A. The DNO Party calculates the number of units flowing through each network level, loss-adjusted to LV in two steps.

113B. The first step is to calculate adjustment factors for units distributed at LV, at HV and at EHV and 132kV in respect of each of the LV, HV and EHV and 132kV levels.

(a)   For units distributed at LV, the adjustment factor is 1 (one).

(b)   For units distributed at HV, the adjustment factor is 0 (zero) in respect of the LV level, and (U + 0.5*Losses) / (U + Losses) in respect of the other levels, where U is the number of units distributed at LV plus half of the number of units distributed at HV plus a quarter of the number of units distributed at EHV and 132kV.

(c)   For units distributed at EHV, the adjustment factor is 0 (zero) in respect of the LV and HV levels, and (U + 0.25*Losses) / (U + Losses) in respect of the EHV and 132kV level, where U is defined as above.

113C. The second step is to calculate, for each of the LV, HV and EHV and 132kV networks, the sum of the product of the three adjustment factors and the units distributed at each of LV, HV, and EHV and 132kV. This gives the number of units loss adjusted relative to LV flowing through each of the LV, HV, and EHV and 132kV networks. The number of units loss adjusted relative to LV flowing through the LV services, the LV mains and the HV/LV network levels are the same as the number flowing through the LV network.

113D. For each network level, the DNO Party calculates the percentage that the [Revenue to share per unit] represents of the sum of the [Revenue to share per unit] across all network levels and the [Revenue not to share per unit]. The results are denoted as [LV mains allocations], [LV services allocation], [HV/LV allocation], [HV allocation] and [EHV and 132kV allocation].

Calculation of direct proportions

113E. The DNO Party calculates the [HV direct proportion] and the [LV direct proportion] on the basis of the allocation of RRP operating expenditure across network levels set out in paragraphs 101 and 102 (before the adjustment for capitalisation rates is made).

(a)   The [HV direct proportion] is the ratio of the sum of the operating expenditure allocated to the HV network level across the expenditure categories identified as "Direct costs" in the table headed "Allocation rules" to

the sum of the operating expenditure allocated to the HV network level across all operating expenditure categories.

(b)   The [LV direct proportion] is the ratio of the sum of the operating expenditure allocated to the LV services or the LV mains network levels across the expenditure categories identified as "Direct costs" in the table headed "Allocation rules" to the sum of the operating expenditure allocated to the LV services or LV mains networks level across all operating expenditure categories.

Schedule 16, paragraphs 118 to 123, ~~version 6.2~~proposed

Calculation of discount percentages

118.   The discount percentages are determined as follows. ~~(where "[LV mains allocation]" is the percentage of total costs that are allocated to the LV mains network level).~~

119.   For embedded networks with an LV boundary, the discount is equal to:

[LV: LV discount] = [LV services allocation] + ([LV mains allocation]*(1 – [LV mains split]*[LV ~~mains~~ direct proportion])).

120.   For embedded networks with an HV boundary, three percentage discount figures are used~~.~~:

~~121.~~   (a) The percentage discount applicable to tariffs for LV network end users is:

[HV: LV discount] = [LV services allocation] + [LV mains allocation] + [HV/LV allocation] + [HV allocation]*(1 – [HV split]*[HV direct proportion]).

~~122.~~   (b)   The percentage discount applicable to tariffs for LV substation end users is:

[HV: LV Sub discount] = ([HV/LV allocation] + [HV allocation]*(1-[HV split]*[HV direct proportion]))/(1-[LV mains allocation] – [LV services allocation]).

~~123.~~   (c)   The percentage discount applicable to tariffs for HV end users is:

[HV: HV discount] = [HV allocation]*(1 – [HV split]*[HV direct proportion]) / ~~——~~(1 – [LV services allocation] – [LV mains allocation] - [HV/LV allocation])

Schedule 16, glossary entry for EHV Reduction Ratio, ~~version 6.2~~proposed

EHV Reduction Ratio	A factor applied to the EHV network drivers in the price control dissagregation that reduces the allocation of costs to the EHV network level to account for revenues recovered from EDCM customers. The EHV

	Reduction Ratio is calculated as follows:
	[EHV Reduction Rate] = [EHV and 132kV assets in the CDCM model] / ([EHV and 132kV assets in the CDCM model] + [All notional assets in the EDCM model])
	where: EHV and 132 kV assets in the CDCM model = the sum of the notional values in £ of the EHV assets described in paragraph 100(e) of this schedule, namely 132kV, 132kV/EHV, EHV, EHV/HV, and 132kV/HV assets; and ~~all~~ All notional assets in the EDCM model = the total notional value in £ of the assets described in paragraph 100(d) of this schedule.~~; and~~ ~~EHV assets in CDCM model = the sum of notional asset values of EHV assets in the CDCM model.~~