**Annex 1 Indicative Drafting Changes to Schedule 17**

# LDNO charging

## IDNO Parties with Distribution Systems that serve Connectees that fall within the scope of the CDCM would have their charges based on standard discount percentages applied to the CDCM all-the-way end user charges.

An IDNO Party with a Distribution System that qualifies as a CDCM “Designated Property” according to the definition set out in condition 50.10 of the Distribution Licences are eligible for portfolio discounts calculated using a price control disaggregation model (method M) consistent with the CDCM.

An IDNO Party with a Distribution Systems that qualifies as an EDCM “Designated EHV Property” according to the definition set out in condition 50A.11 of the Distribution Licences are eligible for discounts calculated using an “extended” price control disaggregation model (extended method M).

## An IDNO Party with a Distribution System that qualifies as an EDCM “Designated EHV Property” could itself have Connectees who would fall under the scope of the EDCM. Since the EDCM is a locational charging method, the host DNO Party would calculate EDCM charges at the DNO Party’s boundary for each EDCM-like Connectee on the IDNO Party’s network. No discounts are calculated for such EDCM Connectees as the DNO Party’s charges are based only on the specific site’s equivalent use of the DNO Party’s network.

## Under the EDCM, the DNO Party’s network is divided into five network levels:

## Level 1 comprises 132 kV circuits

## Level 2 comprises substations with a primary voltage of 132 kV and a secondary voltage of 22 kV or more.

## Level 3 comprises circuits of 22 kV or more, excluding circuits already categorised as being in Level 1.

## Level 4 comprises substations with a primary voltage of 22 kV or more but less than 132 kV and a secondary voltage of less than 22 kV.

## Level 5 comprises substations with a primary voltage of 132 kV and a secondary voltage of less than 22 kV.

## The DNO Party may designate 66 kV circuits belonging to either network level 1 or 3 and substations with a primary voltage of 66 kV into level 2 or level 4 or level 5, depending on their network planning policies.

## The network level of the boundary between the host DNO Party and the IDNO Party’s Distribution System is determined by reference to the asset ownership boundary between the host DNO Party and the IDNO Party.

## Where the IDNO Party’s Distribution System only has one Connectee (whether a designated EHV property or not), the network level of the boundary between the host DNO Party and IDNO Party is determined by reference to the Point of Common Coupling. The Point of Common Coupling is determined in the same way as it is for an EDCM Connectee connected directly to the host DNO Party’s network.

## For EDCM Connectees, the Point of Common Coupling is the point on the network where the power flow associated with the single Connectee under consideration, may under some (or all) possible arrangements interact with the power flows associated with other Connectees, taking into account all possible credible running arrangements.

## IDNO Party Distribution Systems are split into 15 categories based on the network level of the boundary between the host DNO Party and the IDNO Party, and whether or not higher network levels are used by the IDNO Party.

Table 16 Categorisation of designated EHV IDNO Parties

|  |  |
| --- | --- |
| Category | Definition |
| Category 0000 | Boundary at the GSP, whether the GSP is shared or not, with no use of any circuits. |
| Category 1000 | In England or Wales only, boundary at a voltage of 132 kV, unless the Connectee qualifies for category 0000. |
| Category 1100 | Boundary at 22 kV or more on the secondary side of a substation where the primary side is attached to a 132 kV circuit. |
| Category 0100 | Boundary at 22 kV or more, but less than 132 kV, on the secondary side of a substation where the primary side is attached at 132 kV to a co-located GSP with no use of any 132 kV circuits. |
| Category 1110 | Boundary at a voltage of 22 kV or more, but less than 132 kV, not at a substation, fed from a substation whose primary side is attached to a 132 kV distribution circuit. |
| Category 0110 | Boundary at a voltage of 22 kV or more, but less than 132 kV, not at a substation, fed from a substation whose primary side is attached at 132 kV to a co-located GSP with no use of any 132 kV circuits. |
| Category 0010 | Boundary at a voltage of 22 kV or more, but less than 132 kV, fed from a GSP with no intermediate transformation and no use of any 132 kV circuits. |
| Category 0001 | Boundary at a voltage of less than 22 kV on the secondary side of a substation where the primary side is attached at 132 kV to a co-located GSP with no use of any 132 kV circuits. |
| Category 0002 | Boundary at a voltage of less than 22 kV on the secondary side of a substation where the primary side is attached at 22 kV or more but less than 132 kV, to a co-located GSP with no use of any 132 kV circuits. |
| Category 1001 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is attached to a 132 kV distribution circuit. |
| Category 0011 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more, but less than 132 kV, fed from a GSP with no intermediate transformation and no use of any 132 kV circuits. |
| Category 0111 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more, but less than 132 kV, fed through a distribution circuit from a substation whose primary side is attached at 132 kV to a co-located GSP with no use of any 132 kV circuits. |
| Category 0101 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more, but less than 132 kV, fed from the secondary side of a co-located substation whose primary side is attached at 132 kV to a co-located GSP with no use of any circuit. |
| Category 1101 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more but less than 132 kV, with no use of 33 kV circuit, fed from the secondary side of a co-located substation whose primary side is attached to a 132 kV distribution circuit. |
| Category 1111 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more, but less than 132 kV, fed through a distribution circuit from a substation whose primary side is attached to a 132 kV distribution circuit. |

## All references to GSP in the table above relate to interconnections with the main interconnected onshore transmission network.

# The extended “Method M” model

## The extended price control disaggregation model (the extended method M model) calculates discount percentages in a two-part process.

## For the purposes of the first part of the process, the DNO Party’s network is split into four levels: LV, HV/LV, HV and EHV.

## The first part of the price control disaggregation involves the calculation of separate percentages by network level of each element of the DNO Party’s Allowed Revenue: the operating cost, depreciation and return on RAV elements. These are aggregated over the period 2005/2006 to 2009/2010 (the DPCR4 period).

## In order to determine the allocation to network levels of each element of price control revenue, the following cost allocation drivers are used:

Data submitted by the DNO Party to the Authority using the format prescribed in the regulatory reporting pack (RRP) on units distributed and operating expenditure broken down by network level (typically relating to the year 2007/2008).

Data that each DNO Party considers appropriately represents the forecast of net capital expenditure and Connectee contributions for the period 2005/06–2014/15, broken down by network level.

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

## 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 Connectee contributions, but negative figures are replaced with zero. This analysis provides direct costs percentage for each network level.~~ For the purpose of this calculation RRP costs described as “Load related new connections & reinforcement (net of contributions)” are allocated as follows:

(a) Reinforcement costs are allocated to network tiers using data from table 2.4 of the 2007/8 RRP.

(b) Load related connections’ direct costs (net of customer contributions) are allocated to network tiers using data from the FBPQ LR1 table. This table identifies customer contributions in respect of direct costs (by network tier) and indirect costs. For the purpose of this allocation it is the customer contributions that relate to direct costs that are netted off against those costs. Where this allocation results in a negative value for a network tier (i.e. where customer contributions for direct costs are greater than the direct costs) they are replaced with zero. Customer contributions in excess of direct costs are added to the customer contributions relating to indirect costs.

(c) For each network tier the costs reported as “Load related new connections & reinforcement (net of contributions)” is the sum of costs for general reinforcement and the net direct costs for load based connections.

(d) Total activity costs reported under RRP 1.3 are not used in the allocation of these costs. Therefore, unallocated costs relating to “Load related new connections & reinforcement (net of contributions)” are set to zero.

(e) Customer contributions (reported in FBPQ LR1) relating to indirect costs (including surpluses in customer contributions for direct costs) are treated as allowed revenue in the Final Allocation worksheet. They are allocated to network tiers using the opex cost driver (determined using the Opex Allocation worksheet).

## Indirect operating costs are allocated to network levels on the basis of an estimate of MEAV 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 the DNO Party’s unit cost forecasts wherever available. Transmission exit charges are excluded from the allocation because it does not seem reasonable to allocate these charges to different network levels.

## 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 DNO Party’s estimates and forecasts. All figures are aggregated over the 10-year period from 2005/2006 to 2014/2015, taking in actual data or forecasts for each year as available.

## For each network level, the relevant net capital expenditure is calculated by adding up total condition based replacement (proactive and reactive) replacement, combined in the case of LV, HV and EHV with connections spend minus Connectee contributions for connections at that voltage level, general reinforcement capital expenditure at that voltage level, and fault reinforcement capital expenditure at that voltage level.

## Some of these categories allow HV substation and transformer costs to be identified. These costs (and no other costs) are allocated to the HV/LV network level. Some of the expenditure categories do not separately identify HV substation/transformer costs. For these categories costs are allocated to the HV/LV in the same proportion as for the other categories (where these costs are separately identified).

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

## The allocation to each network level of each element of the DNO Party’s Allowed Revenue is then aggregated by network level to create network level totals. These totals are then converted into network level percentages.

## The network level percentages are used to allocate the DNO Party’s Allowed Revenue less the net amount earned or lost by the licensee under price control financial incentive schemes less the DNO Party’s total transmission exit charges. All three numbers relate to a single year (typically 2007/2008).

## The Allowed Revenue allocations are then rescaled by the estimated number of units flowing through each network level, and normalised so that they sum to 100 per cent. The net amount earned or lost by the licensee under price control financial incentive schemes plus the DNO Party’s total transmission exit charges (the unallocated part of the Allowed Revenue) is rescaled by the number of units flowing through the EHV network level. The result of this calculation is a set of percentages for each of the LV, HV/LV, HV and EHV network levels, and one percentage for the DNO Party’s unallocated revenue.

## The second part of the price control disaggregation process is to split the percentage for the EHV network level in the above calculation into separate percentages for the following asset levels:

* 132 kV circuits (England and Wales only);
* 132kV/33kV substations (England and Wales only);
* 33 kV circuits; and
* 33kV/HV substations

## For the purposes of calculating portfolio discounts for Connectees that fall within the scope of the CDCM, the 15 boundary categories between the DNO Party and the IDNO Party are grouped into five discount categories in England and Wales and three in Scotland:

1. Discount category 0000 - This applies to IDNO Party category 0000.
2. Discount category 132kV (in England and Wales only) - This applies to IDNO Party category 1000.
3. Discount category 132kV/EHV (in England and Wales only) - This applies to IDNO Party categories 1100 and 0100.
4. Discount category EHV - This applies to IDNO Party categories 1110, 0110 and 0010.
5. Discount category HVplus - This applies to IDNO Party categories 1111, 0001, 1001, 0002, 0011, 0111, 1101, 0101.

## For each combination of an end user network level and a discount category, the relevant discount for demand end users is calculated as follows:

**For discount categories 0000, 132kV/EHV and HVplus**

Discount percentage = P / (S + U)

**For discount category 132kV**

Discount percentage = (P + ([percentage for 132kV] \* (1 – ([network length split for 132kV] \* [direct cost proportion])))) / (S +U)

**For discount category EHV**

Discount percentage = (P + ([percentage for EHV] \* (1 – ([network length split for EHV] \* [direct cost proportion])))) / (S +U)

Where:

Discount percentage is the discount applicable for each combination of discount and end user type.

P is the sum of the percentages for all network levels below the network level of the DNO Party – IDNO Party boundary up to and including the network level of the end user.

S the sum of the percentages for all network levels in the distribution network above and including the network level of the end user

U is the ratio of the sum of the DNO Party’s total incentive revenue and the transmission exit charge, and the DNO Party’s total Allowed Revenue including any incentive revenue and transmission exit charge.

Network length split is equal to 1 minus the ratio of the average length of circuits on relevant network level (EHV or 132kV) that is deemed to be provided by the IDNO Party to that provided by the host DNO Party. The values for the “network length split” for 132kV and EHV are currently set to 100 per cent.

Direct cost proportion is the percentage share of direct costs in the sum of direct costs and indirect costs (excluding IT and telecoms and property management costs) at EHV. Negative costs will be excluded from the calculation.

## Whereas demand tariffs reflect costs at the network level of supply and at every level above that, generation tariffs only reflect costs above the network level of supply. For example, credits to HV generators do not include anything based on the costs of HV networks.

## In each case, the discount is applied to all CDCM tariff components. Discount percentages are capped to 100 per cent.

# Portfolio EDCM tariffs for Connectees in the EDCM

## For Connectees on an IDNO Party’s Distribution System that would be covered by the EDCM if they were on the DNO Party’s network, the EDCM is applied to calculate a portfolio EDCM charge/credit for each such Connectee.

## These EDCM portfolio charges would be calculated as if each EDCM Connectee on the IDNO Party’s distribution system were notionally connected at the boundary between the DNO Party and the IDNO Party. Both EDCM import and export charges will apply.

## For the purposes of calculating the boundary-equivalent portfolio EDCM tariffs, each EDCM Connectee on the IDNO Party’s network would be assigned the demand Connectee category relating to the 15 IDNO Party boundary categories.

## Such Connectees would attract charges (credits) in respect of any reinforcements caused (avoided) on the DNO Party’s network only, i.e. any network Branches that are on the IDNO Party’s network would be attributed a zero FCP charge/credit.

## The setting of final charges to Embedded Designated EHV Properties including the calculation of charges for assets used on the Embedded network will be established by the IDNO Party.

## All EDCM charges would be calculated using “boundary equivalent” data provided by the IDNO Party to the host DNO Party for each Embedded Designated EHV Property. For the purposes of the EDCM, boundary equivalent data should be what the IDNO Party has allowed for at the DNO Party - IDNO Party boundary, for each EDCM Connectee, after taking into consideration the diversity and losses within the IDNO Party’s network. Data relating to CDCM end users must be considered for the purposes of calculating boundary equivalent data in order to cater for the effect of diversity and losses.

## The EDCM will include in the charges for Embedded Designated EHV Properties a fixed charge relating to any assets on the DNO Party’s network that are for the sole use of an Embedded IDNO Party’s network. These fixed charges would be calculated in the same way as it would be for EDCM Connectees connected directly to the host DNO Party’s network.

## In calculating charges for assets on the DNO Party’s network that are for the sole use of an Embedded IDNO Party’s distribution system, DNO Party’s will charge only for the proportion of sole use assets deemed to be used by Embedded Designated EHV Properties. This proportion will be calculated, in respect of each Embedded Designated EHV Properties, as the ratio of the boundary equivalent capacity of that Connectee to the capacity at the IDNO Party - DNO Party boundary.

## If there are no Embedded Designated EHV Properties on the IDNO Party’s network, no sole use asset charges would apply.

## Demand scaling would be applied as normal to any EDCM portfolio tariff in respect of an EDCM Connectee. For the purposes of scaling, all EDCM Connectees connected to the IDNO Party’s network will be treated as notional EDCM Connectees connected to the DNO Party’s network at the voltage level of the boundary.

## For EDCM Connectees connected to the IDNO Party’s network, the capacity-based charge for the DNO Party’s indirect costs would be scaled down by a factor of 50 per cent.

**Annex 2 Indicative Drafting Changes for Schedule 18**

# LDNO charging

## IDNO Parties with Distribution Systems that serve Connectees that fall within the scope of the CDCM would have their charges based on standard discount percentages applied to the CDCM all-the-way end user charges.

An IDNO Party with a Distribution System that qualifies as a CDCM “Designated Property” according to the definition set out in condition 50.10 of the Distribution Licences are eligible for portfolio discounts calculated using a price control disaggregation model (method M) consistent with the CDCM.

An IDNO Party with a Distribution Systems that qualifies as an EDCM “Designated EHV Property” according to the definition set out in condition 50A.11 of the Distribution Licences are eligible for discounts calculated using an “extended” price control disaggregation model (extended method M).

## An IDNO Party with a Distribution System that qualifies as an EDCM “Designated EHV Property” could itself have Connectees who would fall under the scope of the EDCM. Since the EDCM is a locational charging method, the host DNO Party would calculate EDCM charges at the DNO Party’s boundary for each EDCM-like Connectee on the IDNO Party’s network. No discounts are calculated for such EDCM Connectees as the DNO Party’s charges are based only on the specific site’s equivalent use of the DNO Party’s network.

## An IDNO Party with a Distribution System that qualifies as an EDCM “Designated EHV Property” could itself have Connectees who would fall under the scope of the EDCM. Since the EDCM is a locational charging method, the host DNO Party would calculate EDCM charges at the DNO Party’s boundary for each EDCM-like Connectee on the IDNO Party’s network. No discounts are calculated for such EDCM Connectees as the DNO Party’s charges are based only on the specific site’s equivalent use of the DNO Party’s network.

Under the EDCM, the DNO Party’s network is divided into five network levels:

Level 1 comprises 132 kV circuits

Level 2 comprises substations with a primary voltage of 132 kV and a secondary voltage of 22 kV or more.

Level 3 comprises circuits of 22 kV or more, excluding circuits already categorised as being in Level 1.

Level 4 comprises substations with a primary voltage of 22 kV or more but less than 132 kV and a secondary voltage of less than 22 kV.

Level 5 comprises substations with a primary voltage of 132 kV and a secondary voltage of less than 22 kV.

## The DNO Party may designate 66 kV circuits belonging to either network level 1 or 3 and substations with a primary voltage of 66 kV into level 2 or level 4 or level 5, depending on their network planning policies.

## The network level of the boundary between the host DNO Party and the IDNO Party’s Distribution System is determined by reference to the asset ownership boundary between the host DNO Party and the IDNO Party.

## Where the IDNO Party’s Distribution System only has one Connectee (whether a designated EHV property or not), the network level of the boundary between the host DNO Party and IDNO Party is determined by reference to the Point of Common Coupling. The Point of Common Coupling is determined in the same way as it is for an EDCM Connectee connected directly to the host DNO Party’s network.

## For EDCM Connectees, the Point of Common Coupling is the point on the network where the power flow associated with the single Connectee under consideration, may under some (or all) possible arrangements interact with the power flows associated with other Connectees, taking into account all possible credible running arrangements.

## IDNO Party Distribution Systems are split into 15 categories based on the network level of the boundary between the host DNO Party and the IDNO Party, and whether or not higher network levels are used by the IDNO Party.

**Table**  32  **Categorisation of designated EHV IDNO Parties**

|  |  |
| --- | --- |
| **Category** | **Definition** |
| Category 0000 | Boundary at the GSP, whether the GSP is shared or not, with no use of any circuits. |
| Category 1000 | In England or Wales only, boundary at a voltage of 132 kV, unless the Connectee qualifies for category 0000. |
| Category 1100 | Boundary at 22 kV or more on the secondary side of a substation where the primary side is attached to a 132 kV circuit. |
| Category 0100 | Boundary at 22 kV or more, but less than 132 kV, on the secondary side of a substation where the primary side is attached at 132 kV to a co-located GSP with no use of any 132 kV circuits. |
| Category 1110 | Boundary at a voltage of 22 kV or more, but less than 132 kV, not at a substation, fed from a substation whose primary side is attached to a 132 kV distribution circuit. |
| Category 0110 | Boundary at a voltage of 22 kV or more, but less than 132 kV, not at a substation, fed from a substation whose primary side is attached at 132 kV to a co-located GSP with no use of any 132 kV circuits. |
| Category 0010 | Boundary at a voltage of 22 kV or more, but less than 132 kV, fed from a GSP with no intermediate transformation and no use of any 132 kV circuits. |
| Category 0001 | Boundary at a voltage of less than 22 kV on the secondary side of a substation where the primary side is attached at 132 kV to a co-located GSP with no use of any 132 kV circuits. |
| Category 0002 | Boundary at a voltage of less than 22 kV on the secondary side of a substation where the primary side is attached at 22 kV or more but less than 132 kV, to a co-located GSP with no use of any 132 kV circuits. |
| Category 1001 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is attached to a 132 kV distribution circuit. |
| Category 0011 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more, but less than 132 kV, fed from a GSP with no intermediate transformation and no use of any 132 kV circuits. |
| Category 0111 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more, but less than 132 kV, fed through a distribution circuit from a substation whose primary side is attached at 132 kV to a co-located GSP with no use of any 132 kV circuits. |
| Category 0101 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more, but less than 132 kV, fed from the secondary side of a co-located substation whose primary side is attached at 132 kV to a co-located GSP with no use of any circuit. |
| Category 1101 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more but less than 132 kV, with no use of 33 kV circuit, fed from the secondary side of a co-located substation whose primary side is attached to a 132 kV distribution circuit. |
| Category 1111 | Boundary at a voltage of less than 22 kV on the secondary side of a substation whose primary side is at a voltage of 22 kV or more, but less than 132 kV, fed through a distribution circuit from a substation whose primary side is attached to a 132 kV distribution circuit. |

## All references to GSP in the table above relate to interconnections with the main interconnected onshore transmission network.

# The extended “Method M” model

## The extended price control disaggregation model (the extended method M model) calculates discount percentages in a two-part process.

## For the purposes of the first part of the process, the DNO Party’s network is split into four levels: LV, HV/LV, HV and EHV.

## The first part of the price control disaggregation involves the calculation of separate percentages by network level of each element of the DNO Party’s Allowed Revenue: the operating cost, depreciation and return on RAV elements. These are aggregated over the period 2005/2006 to 2009/2010 (the DPCR4 period).

## In order to determine the allocation to network levels of each element of price control revenue, the following cost allocation drivers are used:

* Data submitted by the DNO Party to the Authority using the format prescribed in the regulatory reporting pack (RRP) on units distributed and operating expenditure broken down by network level (typically relating to the year 2007/2008).
* Data that each DNO Party considers appropriately represents the forecast of net capital expenditure and Connectee contributions for the period 2005/06–2014/15, broken down by network level.
* Forecast data that each DNO Party considers appropriately represents the gross modern equivalent asset values (replacement costs) for various asset types.

## 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 Connectee contributions, but negative figures are replaced with zero.~~ This analysis provides direct costs percentage for each network level. For the purpose of this calculation RRP costs described as “Load related new connections & reinforcement (net of contributions)” are allocated as follows:

(a) Reinforcement costs are allocated to network tiers using data from table 2.4 of the 2007/8 RRP.

(b) Load related connections’ direct costs (net of customer contributions) are allocated to network tiers using data from the FBPQ LR1 table. This table identifies customer contributions in respect of direct costs (by network tier) and indirect costs. For the purpose of this allocation it is the customer contributions that relate to direct costs that are netted off against those costs. Where this allocation results in a negative value for a network tier (i.e. where customer contributions for direct costs are greater than the direct costs) they are replaced with zero. Customer contributions in excess of direct costs are added to the customer contributions relating to indirect costs.

(c) For each network tier the costs reported as “Load related new connections & reinforcement (net of contributions)” is the sum of costs for general reinforcement and the net direct costs for load based connections.

(d) Total activity costs reported under RRP 1.3 are not used in the allocation of these costs. Therefore, unallocated costs relating to “Load related new connections & reinforcement (net of contributions)” are set to zero.

(e) Customer contributions (reported in FBPQ LR1) relating to indirect costs (including surpluses in customer contributions for direct costs) are treated as allowed revenue in the Final Allocation worksheet. They are allocated to network tiers using the opex cost driver (determined using the Opex Allocation worksheet).

## Indirect operating costs are allocated to network levels on the basis of an estimate of MEAV 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 the DNO Party’s unit cost forecasts wherever available. Transmission exit charges are excluded from the allocation because it does not seem reasonable to allocate these charges to different network levels.

## 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 DNO Party’s estimates and forecasts. All figures are aggregated over the 10-year period from 2005/2006 to 2014/2015, taking in actual data or forecasts for each year as available.

## For each network level, the relevant net capital expenditure is calculated by adding up total condition based replacement (proactive and reactive) replacement, combined in the case of LV, HV and EHV with connections spend minus Connectee contributions for connections at that voltage level, general reinforcement capital expenditure at that voltage level, and fault reinforcement capital expenditure at that voltage level.

## Some of these categories allow HV substation and transformer costs to be identified. These costs (and no other costs) are allocated to the HV/LV network level. Some of the expenditure categories do not separately identify HV substation/transformer costs. For these categories costs are allocated to the HV/LV in the same proportion as for the other categories (where these costs are separately identified).

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

## The allocation to each network level of each element of the DNO Party’s Allowed Revenue is then aggregated by network level to create network level totals. These totals are then converted into network level percentages.

## The network level percentages are used to allocate the DNO Party’s Allowed Revenue less the net amount earned or lost by the licensee under price control financial incentive schemes less the DNO Party’s total transmission exit charges. All three numbers relate to a single year (typically 2007/2008).

## The Allowed Revenue allocations are then rescaled by the estimated number of units flowing through each network level, and normalised so that they sum to 100 per cent. The net amount earned or lost by the licensee under price control financial incentive schemes plus the DNO Party’s total transmission exit charges (the unallocated part of the Allowed Revenue) is rescaled by the number of units flowing through the EHV network level. The result of this calculation is a set of percentages for each of the LV, HV/LV, HV and EHV network levels, and one percentage for the DNO Party’s unallocated revenue.

## The second part of the price control disaggregation process is to split the percentage for the EHV network level in the above calculation into separate percentages for the following asset levels:

132 kV circuits (England and Wales only);

132kV/33kV substations (England and Wales only);

33 kV circuits; and

33kV/HV substations

## For the purposes of calculating portfolio discounts for Connectees that fall within the scope of the CDCM, the 15 boundary categories between the DNO Party and the IDNO Party are grouped into five discount categories in England and Wales and three in Scotland:

##### Discount category 0000 - This applies to IDNO Party category 0000.

##### Discount category 132kV (in England and Wales only) - This applies to IDNO Party category 1000.

##### Discount category 132kV/EHV (in England and Wales only) - This applies to IDNO Party categories 1100 and 0100.

##### Discount category EHV - This applies to IDNO Party categories 1110, 0110 and 0010.

##### Discount category HVplus - This applies to IDNO Party categories 1111, 0001, 1001, 0002, 0011, 0111, 1101, 0101.

## For each combination of an end user network level and a discount category, the relevant discount for demand end users is calculated as follows:

**For discount categories 0000, 132kV/EHV and HVplus**

Discount percentage = P / (S + U)

**For discount category 132kV**

Discount percentage = (P + ([percentage for 132kV] \* (1 – ([network length split for 132kV] \* [direct cost proportion])))) / (S +U)

For discount category EHV

Discount percentage = (P + ([percentage for EHV] \* (1 – ([network length split for EHV] \* [direct cost proportion])))) / (S +U)

Where:

Discount percentage is the discount applicable for each combination of discount and end user type.

P is the sum of the percentages for all network levels below the network level of the DNO Party – IDNO Party boundary up to and including the network level of the end user.

S the sum of the percentages for all network levels in the distribution network above and including the network level of the end user

U is the ratio of the sum of the DNO Party’s total incentive revenue and the transmission exit charge, and the DNO Party’s total Allowed Revenue including any incentive revenue and transmission exit charge.

Network length split is equal to 1 minus the ratio of the average length of circuits on relevant network level (EHV or 132kV) that is deemed to be provided by the IDNO Party to that provided by the host DNO Party. The values for the “network length split” for 132kV and EHV are currently set to 100 per cent.

Direct cost proportion is the percentage share of direct costs in the sum of direct costs and indirect costs (excluding IT and telecoms and property management costs) at EHV. Negative costs will be excluded from the calculation.

## Whereas demand tariffs reflect costs at the network level of supply and at every level above that, generation tariffs only reflect costs above the network level of supply. For example, credits to HV generators do not include anything based on the costs of HV networks.

## In each case, the discount is applied to all CDCM tariff components. Discount percentages are capped to 100 per cent.