

DCP 139 – Proposed Legal Text

It is proposed that a new paragraph 5.2 be added to DCUSA Schedule 17, as shown in redlined text below.

DCUSA Schedule 17

5 Application of FCP charge 1 to demand tariffs

5.1 The tariffs for the application of charge 1 is given by the formulas:

For Connectees with zero average kW/kVA:

$$[\text{p/kWh super-red rate}] = ([\text{parent charge 1 } \text{£/kVA/yr}] * (\text{abs}[A1] / (\text{SQRT}(A1^2 + R1^2))) / [\text{Super-red hours}] * 100) + ([\text{grandparent charge 1 } \text{£/kVA/yr}] * (\text{abs}[A2] / (\text{SQRT}(A2^2 + R2^2))) / [\text{Super-red hours}] * 100)$$

$$[\text{p/kVA/day capacity charge}] = ([\text{network charge 1 } \text{£/kVA/year}] / [\text{days in Charging Year}] * 100) + ([\text{parent charge 1 } \text{£/kVA/yr}] * (-R1 * \text{Average kVAr/kVA}) / (\text{SQRT}(A1^2 + R1^2))) / [\text{days in Charging Year}] * 100 + ([\text{grandparent charge 1 } \text{£/kVA/yr}] * (-R2 * [\text{Average kVAr/kVA}]) / (\text{SQRT}(A2^2 + R2^2))) / [\text{days in Charging Year}] * 100)$$

For all other Connectees:

$$[\text{p/kWh super-red rate}] = [\text{parent charge 1 } \text{£/kVA/yr}] * (\text{abs}[A1] - (R1 * ([\text{Average kVAr/kVA}] / [\text{Average kW/kVA}]))) / (\text{SQRT}(A1^2 + R1^2)) / [\text{Super-red hours}] * 100 + ([\text{grandparent charge 1 } \text{£/kVA/yr}] * (\text{abs}[A2] - (R2 * ([\text{Average kVAr/kVA}] / [\text{Average kW/kVA}]))) / (\text{SQRT}(A2^2 + R2^2)) / [\text{Super-red hours}] * 100)$$

$$[\text{p/kVA/day capacity charge}] = [\text{network group charge 1 } \text{£/kVA/year}] / [\text{days in Charging Year}] * 100$$

Where:

A1 and R1 are the values of the active power flow and reactive power flow modelled through the parent network group in the maximum demand scenario.

A2 and R2 are the values of the active power flow and reactive power flow modelled through the grandparent network group in the maximum demand scenario.

If both A1 and R1 are equal to zero, in respect of that network level in the formulas above, the term $(\text{abs}[A1] / (\text{SQRT}(A1^2 + R1^2)))$ is set equal to 1, $(-R1 * \text{Average kVAr/kVA}) / (\text{SQRT}(A1^2 + R1^2))$ is set equal to zero, and $([\text{Average kVAr/kVA}] / [\text{Average kW/kVA}]) / (\text{SQRT}(A1^2 + R1^2))$ is also set to zero.

If both A2 and R2 are equal to zero, in respect of that network level in the formulas above, the term $(\text{abs}[A2] / (\text{SQRT}(A2^2 + R2^2)))$ is set equal to 1, $(-$

$R2 * \text{Average kVAr/kVA}} / (\text{SQRT}(A2^2 + R2^2))$ is set equal to zero, and $([\text{Average kVAr/kVA}] / [\text{Average kW/kVA}]) / (\text{SQRT}(A2^2 + R2^2))$ is also set to zero.

Super red hours are the number of hours in the DNO Party's super-red time band.

The average kW/kVA and average kVAr/kVA figures are forecasts for the Charging Year, based on data from the most recent regulatory year for which data were available in time for setting charges for the Charging Year. Specifically, active and reactive power consumptions are averaged over a super-red time band, which is a seasonal time of day period determined by the DNO Party to reflect the time of peak, and then divided by the Maximum Import Capacity (averaged over the same financial year). If the DNO Party considers that the reactive consumption data relates to export rather than import (e.g. the average kVAr figure exceeds half of the Maximum Import Capacity) then the Maximum Import Capacity in the denominator should be replaced by the Maximum Export Capacity of the same Connectee. The average kVAr divided by kVA is restricted to be such that the combined active and reactive power flows cannot exceed the Maximum Import Capacity. Should the restricted kVAr divided by kVA be negative, then it is set to zero.

5.2 Charge 1 is not applicable to Category 0000 demand connectee.

6 Application of FCP charge 2 to demand

6.1 Charge 2 is not applied to demand.

7 No application of negative charges

7.1 Under FCP, charge 1 is either zero or positive. Negative charge 1 values are not applied in any demand tariffs.