

## Joint consultation on the longer term charging framework

### Explanatory Note

There is an error in the Statement of Charging Methodology for Connection to Southern Electric Power Distribution Plc's Distribution System 2007 – 2008. In Section 4 paragraph 3.5.

The note to Table 4 says:

Under a full accountancy treatment, the O & M charge for demand connections would include an element for replacement of 2.5% over 40 years at 6.9% discount factor.

The discount factor has not been applied here since the sum of 2½% p.a. over 40 years is 100%. Applying the discount factor in the normal sinking fund formula produces an annual replacement charge of 0.514%.

However, experience has shown that network development and load migration over a lengthy period means that replacement on a like for like basis is not always required for customer specific assets. Thus a reduced allowance for replacement is used.

The allowance of 1.7% is lower than the incorrect 2½% p.a. but itself is much greater than the discounted sinking fund of 0.514%. So, if the correct accounting formula is used, the reduced life does not reflect the reduction of replacement cost but increases it.

If the replacement is reduced by 0.0951% p.a. over 40 years, then the average life is 20 years. The reduction accumulates to 4% over the 40 years so replacing 96% of the assets reduces the sinking fund to 0.495%.

The note refers to the intention to use experience to reflect true distribution costs. In our experience a value of 55 years for the physical life of distribution assets reflects practice better than the 40 years normal depreciation life. With a 55 year physical life and reduction of slightly less than 1% p.a., the average life is 20 years. The reduction accumulates to 40% over the 55 years and replacing 60% of the assets results in a sinking fund of 0.108%.

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### Cocal Limited's views on paragraph 6.4

#### Replacement of Sole Use Assets

6.4 It is proposed that EHV customers fund replacement assets when these are needed, and that this may be either via a capital contribution or ongoing charges set to recover the cost over the nominal life of the assets as described in 6.3 above.

It would be better to fund replacement assets by ongoing charges rather than capital contribution. The need for replacement may not arise at the end of life because the assets may no longer exist.

Recovering the replacement asset over the asset's nominal life would lead to excessive charges for reasons:

1. The physical life of sole user assets is longer than the 20 years SSE uses as the nominal asset life of connections. Even the industry standard depreciation period of 40 years is less than the physical life for which a period of 55 years is not unreasonable.
2. Not all sole user assets last the full physical life because some become redundant before the end of life. Unlike the distribution system, there are fewer opportunities for the continuing use where assets are used for distributing to a sole user. This reduces the economic life of the asset so that it is shorter than the physical life. This is reflected in a nominal life of 20 years for these assets.
3. If 60% of assets remain and need to be replaced after 55 years, the average economic life of these assets is 20 years. Recovery of replacement cost should be reduced to reflect the need to replace only 60% instead of 100%. By using the nominal life, the recovery is increased instead of being reduced.

Even using the physical, instead of nominal life over recovers the cost. Over time the cost of assets falls. In the long run, a reduction for technological change has been assessed as 1% p.a. On this basis, after 55 years, the replacement cost would fall to 35% of its initial value.

As an illustration, based on a return of 6.9%, the sinking fund for recovery over 55 years is 0.1% of the new cost. If the reduction of asset values is taken into account, this falls to 0.063%.