LCP Alternative to CMP375

25 November 2022

This alternative proposes adapting CMP375 Original to use forward looking data where possible, in alignment with CUSC[1]. The main areas where this can be achieved are:

- Calculation of the cost of works used in EC/EF calculations
- Weighting works types when calculating weighted average works costs for EC/EFs

The underlying calculations for the methodology will align with CMP375, so will not be outlined in detail in this paper.

Areas of alignment with CMP375 Original

The table below summarises the key methodology components for the alternatives as discussed in workgroup meeting and summarised by the Chair.

For each component, the table shows whether it is aligned with CMP375 Original and points to the relevant sections of this document for more detail.

Component	Aligned with CMP375 Original?	Approach
Works included	Yes	**Include:** new circuits, circuit reinforcements, circuit life extensions **Exclude:** non-circuit reinforcements, substations.
Weighting methodology of works costs	Yes	MW-km weighted average cost
Data – cost of works	**No**	See section – "Calculating works costs"
Data – weighting between works types	**No**	See section – "Calculating basket of works"

Available forward-looking data

Data from National Grid ESO's Network Options Assessment (NOA) provides cost and volume data for planned works at 400kV for OHL and Cable works. There is limited data at other voltage levels.

Data from Transmission Operators' price control business plans provides:

- Volumes of proposed works across all voltage levels
- Estimated costs of proposed works

This approach is based on forward-looking datasets which are known to exist, though enhancing data provided under NOA could improve this approach.

Calculating works costs

This alternative would include works costs outlined in the NOA dataset for 400kV works which are given a 'Proceed' or 'HND Essential' recommendation. It may be appropriate to consider all NOA works which is for NGESO to judge with full visibility of the data. These would be used when calculating the Expansion Constant and 400kV Cable Expansion Factor. The NOA cost data includes elements which should be excluded from the expansion constant, such as civils. This alternative would use 10 years of historic data to estimate a proportion of costs which should be included.

It would continue to use 10 years of historic costs when calculating Expansion Factors. This approach reflects a practical element of forward-looking change in expected costs whilst using historic data to calculate relative costs of works at different voltage levels.

Calculating basket of works

Each Expansion Constant or Expansion Factor is calculated as a weighted average of cost data based on a set of expected works which we refer to here as a 'basket of works'. This alternative would change this 'basket' of expected works to be forward-looking.

The basket would be set based on the future works set out in the Transmission Operators' price control business plans for each voltage level and circuit type. Given the set of works included, this will produce a split between new build and replacement for circuits, weighted by length of circuits. Where there is no data, we will assume that 100% is new build as under the current methodology.

We have chosen to use length of circuit as this data is readily available. If in future there is information on MW-km for these works, then NGESO could consider using these values to shape the basket.

The table below shows an example split by circuit type and voltage level based on SSEN and SPEN's RIIO-T2 business plans. The backing calculation is available in the accompanying spreadsheet.

Circuit type	Voltage	Addition %	Replacement %
OHL	132	6.1%	93.9%
OHL	275	6.2%	93.8%
OHL	400	28.0%	72.0%
Cable	132	16.0%	84.0%
Cable	275	38.1%	61.9%
Cable	400	100.0%	0.0%

[1] CUSC 14.15.59 seeks the signal "to provide for future system expansion", and 14.15.61 indicates "making the tariffs as forward looking at possible".