**Western Power Distribution (Midlands East) - HIDAM**

**Asset Value Impacts - High Level**

The total asset cost of the HIDAM that was modelled to represent Western Power Distribution (Midlands East) network has increased by 9.32% from £430.4m to £470.5m when compared to the previous 500 MW model that was used.

The greatest value changes range from -£11.5m to £45.3m across the various voltage levels. The maximum changes are at the HV network level with a £11.5m reduction and the 132kV network with a £45.3m increase. The smallest change is at 132kV/HV network level with a reduction of £1.6m.



Asset costs from the HV network level downwards accounted for 52.6% of costs in the present 500MW model and in HIDAM 46.4%.

**Brief Commentary on asset value changes**

* 132kV – Total length of underground cable calculated in HIDAM is significantly higher than that in the present model and consequently costs are increased.
* 132kV/EHV –The total cost has reduced due to re-adjustment of substation apparatus units and costs.
* EHV – The total cost has increased due to re-allocation of some other costs from network levels above in line with HIDAM guidance notes and new methodology and total length of underground cable and overhead line calculated in HIDAM is significantly higher than that in the present model.
* EHV/HV – The total cost has decreased due to re-adjustment of substation apparatus units and costs.
* 132kV/HV – The total cost has decreased due to re-adjustment of substation apparatus units and costs.
* HV – The cost has reduced because the modelled length of HV circuit mix has been adjusted, overhead switchgear units have reduced by 35%. However ground mounted switchgear costs have increased to reflect change in methodology. Also some costs have been moved from the EHV/HV levels to this level.
* HV/LV – The total cost has decreased as total number of pole mounted HV/LV substations is much lower than that in the existing model and the number of ground mounted HV/LV substations is biased towards larger rated transformers in HIDAM. This is due to relying on recent network extensions rather than reference to the existing transformer population profile.
* LV – The total cost has increased as total modelled LV circuit length has increased by a factor of five and some other costs from network level above have been included in line with HIDAM guidance notes and new methodology.

In populating the HIDAM for the DCUSA working group it was not possible in all cases to apply costs retrospectively to all assets and present day values have been used. Also where reference has been made to relying on data for network extensions over the past 5 years in some cases assumptions have had to be made.