

ENWL HIDAM Impact Assessment Commentary – January 2014

Comparison against base value of 2015/16 Gross Asset Costs.

HIDAM Impact – Asset Costs

Overall there has been a significant change in the overall distribution of the gross asset costs using the HIDAM model. The HIDAM model has increased the overall ENWL total asset value by 10.4%.

Of the seven gross asset costs areas, four have increased (132kV, EHV, HV and LV) and three have decreased (132kV/EHV, EHV/HV and HV/LV). The highest increase observed was 173% for LV circuits with the largest reduction being 53% for 132kV/EHV.

A number of reasons as to why there are significant changes are highlighted below.

With regard to the increase in 132kV asset costs, the asset costs of x/132kV GSPs were not modelled in the 500MW model; these are now allocated to the 132kV networks in the HIDAM model.

Modelling of the 132kV network in the 500MW model was simplified – an average length of 132kV transformer feeder was determined and then multiplied by the number of 132kV feeders in the 500MW model. This was used to obtain a total 132kV circuit length in the 500MW model. This was an underestimation and did not actually accurately reflect 132kV circuit length. This also applies to the EHV category.

132kV / EHV transformation gross asset cost has reduced in the HIDAM model. Previously in the 500MW model the cost of EHV panels with circuit breakers was included in the transformation asset cost, where as now in the HIDAM model these costs have been reallocated to the EHV category.

The change methodology with regard to circuit modelling and reallocation of EHV costs which were originally in the 132/EHV transformation asset cost section are reflected in the observed increase in the EHV asset costs.

Again the transformation level EHV/HV is reduced in the HIDAM model compared with the 500MW model. Reallocation of the cost of HV circuit breakers to the HV asset value, coupled with there being more EHV/HV transformers than was required in the 500MW model would explain this change.

The HV asset cost has increased with the reallocation described above and additionally a significant change in the way in which the HV network is modelled in the HIDAM model being responsible.

The largest change is within the LV circuits asset cost. The 500MW model had 1km long LV networks modelled within it, which were not representative of a typical LV network within ENW. The change in allocation of plant again, coupled with more representative modelling of the LV network can be attributed to the increase in LV circuit asset costs.

Affecting all areas are the general overall lower cost of plant, with transformers, circuit breakers and RMU's being sourced at a lower cost now than what was being used in the 500MW model.

HIDAM Impact – Diversity Allowances

The Diversity allowances have reduced for one area (EHV) and increased for two others (132kV and HV). The most significant increase is the HV area which has increased by 54%. Diversity allowances in the 500MW model were originally based on recommendations presented in the 'Tariff Formulation Manual', while the HIDAM model makes use of modelled firm capacities of 132kV/HV, EHV/HV and HV/LV. Use of these firm capacities has produced a different set of diversity allowances, as the modelled HV/LV firm capacity reflects the total installed LV substation capacity.

CDCM – Revenue Impact

The effects of updating the Diversity Allowances increases both the unit rates and fixed charges. The effect of updating the Gross asset costs increases the fixed charges but decreases the unit rates.

Across the categories of CDCM tariffs 14 were seen to increase and 9 were seen to decrease. The overall effect is minimal with a net increase of £52.1k in revenue across all the CDCM driven tariffs.

The largest increase in net revenue occurs in the Domestic Unrestricted Category, with an increase in revenue of £4.91m. Small changes to each tariff multiplied by the high volume of customers in this category have resulted in this relatively large value.

The largest decrease in net revenue was observed in the HV HH Metered, with a value of £2.41m observed in this category. All Half Hourly Metered Tariffs demonstrated a reduction in revenues.

CDCM – Tariff Impact

Domestic Tariffs

The HIDAM model has a small impact upon the majority of CDCM customers. The typical bill for a domestic customer will rise by £2.46 an increase of 2.0%. Other domestic tariffs range from a maximum increase of 3.9% to a 3.0% decrease.

Non Domestic Tariffs

The impact upon Non Domestic tariffs is relatively limited with the largest increase being 3.7%, which equates to £2.07 rise. Other non domestic tariffs range from a maximum increase of 2.6% to a 2.8% decrease.

Half Hourly Metered Tariffs

All half hourly metered customers experience a decrease in their overall charge ranging from 3.1% to 7.4%

Un Metered Tariffs

All un-metered tariffs experience a small increase ranging from 0.3% to a maximum of 1.7%.

Generation Tariffs

All generation tariffs experience a reduction ranging from 4.3% to 10.2%

EDCM – Tariff Impact

ENWL have 87 EDCM customers, all of whom experienced a decrease in EDCM tariffs. The decreases in tariffs ranged from 2.7% to 41%

The largest decreases were observed upon HV connected customers that tended to be connected directly to HV bus bars at primary substations. It is assumed that lower cost of plant and the reallocation of various circuit data within the HIDAM model causing this.

The impact observed on generation charges was negligible with a range of 0.3% increases to 1.9% decreases observed across the various generation sites.

It was noted that EDCM demand charges were highly sensitive to any variation in the HIDAM outputs but EDCM generation charges remained largely unaffected.