

Annex 4 – About the TNUoS Transport Model

The underlying rationale behind Transmission Network Use of System charges is that efficient economic signals are provided to Users when capacities are priced to reflect the incremental costs of supplying them. This is based on the Investment Cost Related Pricing (ICRP) methodology. The DC Loadflow (DCLF) ICRP based transport model ("Transport Model") is the means by which this is calculated by the ESO. The Transport Model works by calculating the marginal cost of adding 1MW of generation at each node under two 'backgrounds' to determine the cost (in MWkm) of transporting that 1MW to where it is required (by smearing the 1MW across all demand nodes) under both 'backgrounds', these are;

1. Peak background – reflects what network is required under peak demand stress (i.e. when demand is at its highest)
2. Year Round – reflects what network is required as per the economic criteria of SQSS

Each circuit (which links nodes together) is then classified as either a 'Peak' or 'Year Round' circuit depending on which background produces the highest MWkm figure. The background with the relevant circuits (e.g. Peak background and Peak circuits, Year Round background and Year Round circuits) are then used to determine relevant (Peak or Year Round) Generation TNUoS tariffs with circuits that are not relevant to the specific background being discounted.

To support the creation of Generation TNUoS tariffs, Generation Zones are created containing nodes with similar characteristics (nodal price and proximity). The background with the most circuits (or more specifically, most MWkm as per CUSC 14.15.42) is used to group nodes together - this is the Year Round background in practice. The Year Round tariffs for that zone will be based on the MWkm within the zone and the MWkm to connect to the neighbouring zone. The Generation Zones serve to act as an averaging mechanism to smooth out all of the nodal prices within the zone. Averaging of nodal prices into zonal prices is done on a generation-capacity-weighted-basis.