**Benchmark tax liability calculation**

In the PTRM model, net tax allowance is calculated as tax payable minus value of imputation credit, where tax payable is the product of taxable income and corporate tax rate. Taxable income is pre-tax income adjusted for tax loss carryovers, where pre-tax income is revenue allowance for tax assessment net of tax expenses.

* Revenue allowance covers opex, return on capital, regulatory depreciation (i.e., straight-line (S/L) depreciation minus inflation adjustment), ***net tax component***, and other revenue and tax income adjustments.
* Tax expenses cover opex, tax depreciation, interest on debt and tax expense revenue adjustments.

For the PTRM model, tax asset base (TAB) and regulatory asset base (RAB) are separately developed and maintained. S/L depreciation is the annual deprecation calculated in the regulatory asset roll-forward model using RAB opening values, asset lives and straight-line deprecation method. Tax depreciation is annual deprecation calculated in the tax roll-forward model using TAB opening values, tax asset lives and the chosen tax deprecation method.

Note that net tax component is included on both the left and right sides of the equation for its derivation. Mathematically, it is derived through the intermediate tax calculation in the PTRM model as follows:

(1)

where *U* is utilisation of imputation credits (%) and the intermediate tax term is calculated as:

(2)

where *T* is corporate tax rate.

For annual benchmarking purpose, a number of assumptions are made to simplify the calculation of net tax, referred to as ‘benchmark tax liability’ (BTL). These include:

* Tax depreciation = RAB straight-line deprecation – note this is not true in practice. The Building Block Model used for regulatory decision provides a separate tax asset base (TAB) for each network service provider (NSP) where tax depreciation will have a different profile to the RAB depreciation. The TAB is subject to different tax accounting rules, such as different asset lives for tax depreciation, not being indexed for CPI, and including contributed assets. Therefore, the tax deprecation will be affected by NSP-specific tax depreciation profile, and thus can be different from RAB straight-line deprecation.
* Tax loss carry-overs are assumed away from pre-tax income adjustment.
* Revenue adjustments (inc. capital contribution) are assumed away from pre-tax income.
* Tax expense revenue adjustments are also assumed away from pre-tax income.

The simplifications are necessary to reduce the information requirements and computational complexity for calculating the BTL component within the annual user cost of capital (AUC) under annual benchmarking.

Based on the assumptions that assume away revenue, tax expense and tax loss carryover adjustments to pre-tax income, the intermediate tax calculation in equation (2) can be simplified into:

(3)

Further assuming the equality between tax deprecation and straight-line depreciation, equation (3) can be further simplified as:

(4)

Therefore, based on the assumptions, BTL is calculated as follows:

(5)

where:

* Return on capital net of inflation adjustment is calculated as **real return on capital** using opening RAB value times real Vanilla WACC under the revised approach to measuring the AUC; and
* Interest on debt is calculated as the product of opening RAB value, proportion of debt funding (D/V), and **nominal pre-tax cost of debt**.