

## Conversion of Australian Bureau of Statistics (ABS) Population Projections to Enrolment Projections

The Australian Bureau of Statistics (ABS) have calculated projections of the population of Australian residents aged 18 years and over for each Census Collection District (CD) starting with a base at 30 June 2009 annually through to 30 June 2016. To allow baseline comparison with latest electoral roll counts, interpolation was used to derive 13 January 2011 population. The 21 January 2015 population projections were also calculated by interpolating between 30 June figures.

For most CDs it was assumed that the proportional relationship between electoral enrolments and resident population aged 18+ will continue. Accordingly, the population projections were converted to enrolment projections as follows:

$$\begin{aligned} P_{2011} &= \text{ABS projection of residents aged 18+ at 13 January 2011} \\ P_{2015} &= \text{ABS projection of residents aged 18+ at 21 January 2015} \\ E_{2011} &= \text{Enrolled persons at 13 January 2011} \\ E_{2015} &= \text{Projected enrolled persons at 21 January 2015} \\ \\ E_{2015} &= (E_{2011} / P_{2011}) * P_{2015} \end{aligned}$$

For example, a Census Collection District's figures may be:

$$\begin{aligned} P_{2011} &= 479 \\ P_{2015} &= 493 \\ E_{2011} &= 363 \\ \\ E_{2015} &= (363 / 479) * 493 \\ &= 374 \end{aligned}$$

Some CDs with very high growth have low enrolment : population ratios due to lags in occupancy and/or change in enrolment address. These ratios were adjusted upwards as the lags work out over time, adjusting to the degree necessary to maintain the overall State enrolment ratio.

Where a CD crosses existing electoral boundaries, the projected enrolment has been allocated to electoral divisions in the same proportion as current enrolments.

In a minority of CDs where enrolments were greater than the baseline population projection, it was assumed that electoral enrolments will grow by the same amount as the population of Australian residents aged 18+, ie:

$$E_{2015} = E_{2011} + (P_{2015} - P_{2011})$$

For example, a Census Collection District's figures may be:

$$\begin{aligned} P_{2011} &= 1,125 \\ P_{2015} &= 1,390 \\ E_{2011} &= 1,192 \\ \\ E_{2015} &= 1,192 + (1,390 - 1,125) \\ &= 1,457 \end{aligned}$$

Thereafter the Redistribution Committee may amend the enrolment projections for certain CDs based on specific local knowledge of the area.

At each Census some CDs are redrawn, particularly in areas experiencing significant population growth or decline since the previous Census. 2001-2005 CD ERP originally based on 2001 Census data was revised to account for latest population information and new CD boundaries from the 2006 Census. Difficulties in undertaking such revisions and in recasting electoral enrolments on to 2006 CD boundaries may cause occasional anomalous CD enrolment projections.