Table S1. Solid fossil fuel-combustion emission conversion factors for carbon dioxide equivalents (CO_2-e) for carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) (Commonwealth of Australia 2014).

FUEL	**CO_2**	**CH_4**	**N_2O**
black coal	88.2	0.03	0.2
brown coal	92.7	0.01	0.4
gas	51.2	0.1	0.03
oil	68.9	0.06	0.2
liquid petroleum gas	59.6	0.1	0.2

Fig. S1. Average age structure of immigrants to Australia from 2004 to 2013.

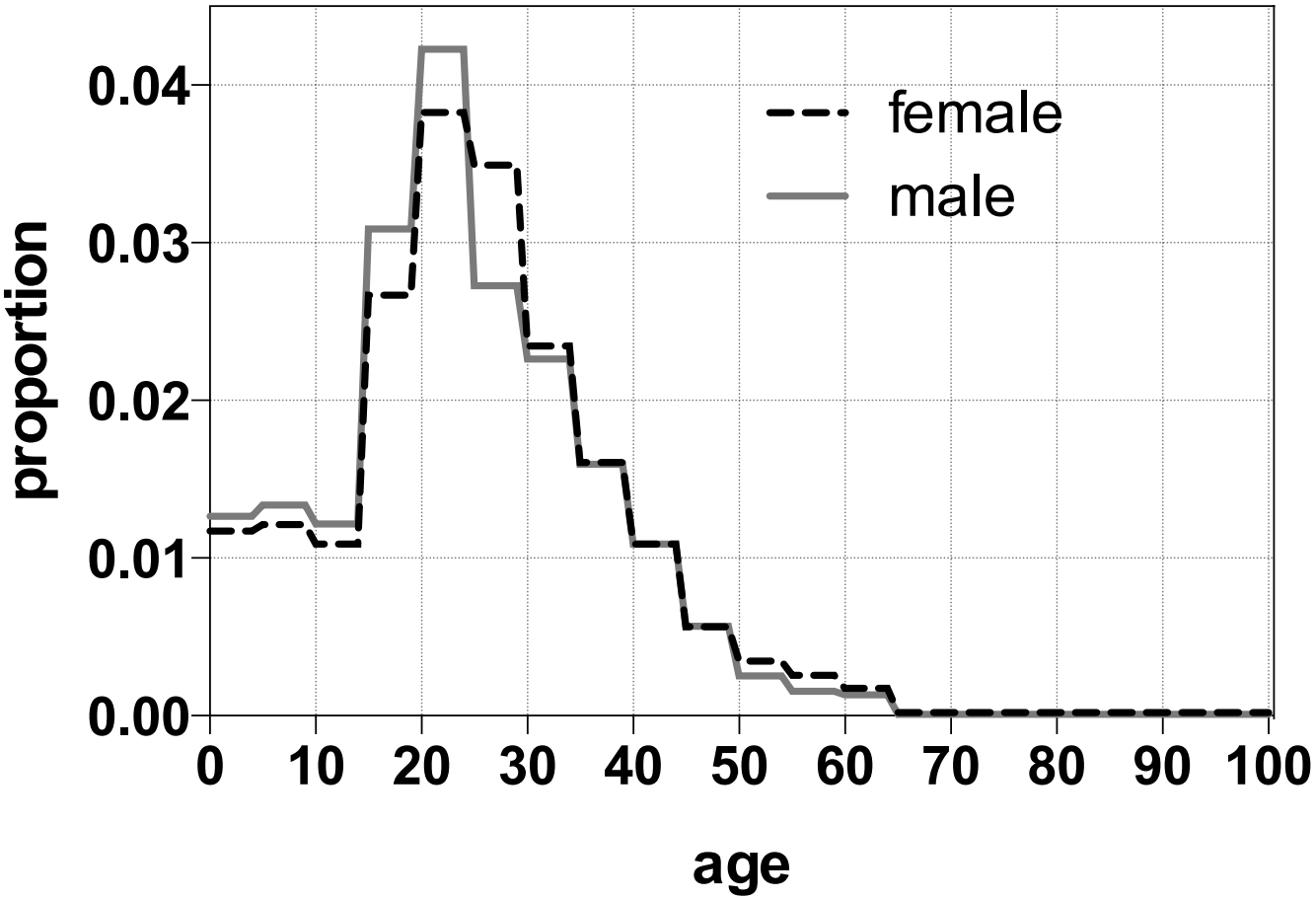

Fig. S2. Australia's population trajectory from 1971 to 2014, and scenario-based projections of its future population from 2015 to 2100. Scenario **7**: business-as-usual population growth (increasing survival and age at first reproduction – see Methods) and net overseas migration ($I_{04\text{-}13}$ = average of 215,000 year^{-1} from 2004 to 2013); Scenario **8**: as Scenario 7 except with constant (1% of total population size) immigration ($I_{1\%}$); Scenario **9**: as Scenario 7 except with a linear increase in immigration rate to twice the average by 2100 ($I_{(04\text{-}13)\times 2}$); Scenario **10**: zero net overseas (I_0); Scenario **11**: fixed annual net immigration of 20,000 (I_{20k}); Scenario **12**: fixed annual net immigration at 100,000 (I_{100k}). Also shown as reference points are the projected final populations at constant a constant growth rate observed between 1971 and 2014 (1.36%, $r_{71\text{-}14}$) and between 2006 and 2014 (1.73%, $r_{06\text{-}14}$).