Lowering Australia's emissions profile

- Australia's economy is more emission intensive than most developed countries because of the strong reliance on coal as an energy source. In Australia, continued population and economic growth is projected to lead to increased demand for energy services. Continued reliance on fossil fuels to meet the demand for energy is projected to lead to considerable increases in greenhouse gas emissions in the medium to long term in Australia.
- The enhanced development and uptake of energy efficient and low emission technologies and energy sources is key to weakening the relationship between economic growth, energy consumption and greenhouse gas emissions, and thus enabling simultaneous emission reductions with continued growth in living standards.
- The uptake of more energy efficient and lower emission technologies across the economy has the potential to significantly reduce Australia's emissions relative to what would otherwise occur under current policy settings. With uptake of more energy efficient and lower emission technologies, Australia's emissions are projected to decline to a level about 23 per cent below 2004 levels in 2050, which is about 51 per cent lower than the projected levels under a business as usual case.
- However, numerous market barriers exist that prevent the socially optimal level of investment in low emission technologies. These include barriers to technology development such as the public good nature of research and development and short term time preferences. There are also barriers to the uptake of technologies that have been developed and are commercially viable. Examples of these barriers are technology lock-in, distortion of energy prices, imperfect information and lack of purchasing power.
- A range of measures have been introduced by the Australian Government to improve energy efficiency and reduce greenhouse gas emissions. These policies include an emissions trading scheme from around 2010, a clean energy target and a range of reporting requirements.
- A full range of policy responses will be required to shift the economy to a low emissions pathway. Carbon pricing will internalise environmental costs associated with greenhouse gas emissions, encourage energy efficiency by increasing the cost of energy from emission intensive sources, increase the relative returns of using low emission and energy efficient technologies and can increase investment in clean technology research and development (R&D). Carbon pricing, however, will need to be combined with other measures to overcome other market barriers and induce clean technology development and uptake across all sectors of the economy.
- Examples of other policy options include providing R&D funding for clean technology, government regulation such as performance and technology standards and international collaboration on technology development and uptake. Adaptation strategies will also be required to minimise the impacts of climate change on the economy.