

addressing energy and climate change challenges in APEC

- » The weight of global economic activity has shifted to the APEC region in recent years, driven particularly by strong growth in the major developing economies of the region.
- » Continued economic expansion is projected to lead to strong growth in energy consumption in the region, with a heavy reliance on fossil fuels and consequent growth in greenhouse gas emissions.
- » Large scale use of cleaner, more advanced and energy efficient technologies has the potential in the medium to long term to considerably reduce the overall demand for energy, significantly decarbonise economic activity and reduce the growth in emissions in the region.
- » Increasing terrestrial sinks in forestry could also help achieve further reductions in emissions in the APEC region.
- » A portfolio of policy measures and technologies is needed in APEC economies to reduce greenhouse gas emissions and, at the same time, achieve their economic and development goals. The choice of measures will be determined by the individual circumstances of each APEC economy.

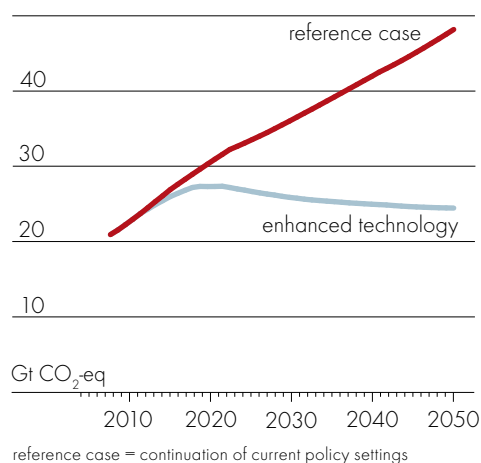
under current policy settings...

- » It is projected that the APEC economies as a whole will grow on average by 3.0 per cent a year between 2004 and 2050. As a result, energy consumption in the region is projected to increase by around 140 per cent and greenhouse gas emissions from APEC economies are projected to increase by 130 per cent over the same period.
- » Fossil fuels currently provide the bulk of energy demanded by APEC economies and are projected to continue to do so over the period to 2050.
 - If current policy settings are continued, it is projected that energy supply in the APEC region in 2050 will be sourced from: coal 29 per cent, oil 31 per cent, gas 25 per cent, nuclear 9 per cent, hydroelectricity 2 per cent and biomass and other renewables 4 per cent.

technology: key to reducing energy use and emissions in the future

- » The introduction of cleaner and more advanced energy efficient and lower emission technologies will allow APEC economies to reduce growth in energy consumption, greenhouse gas emissions and maintain economic growth and development and pursue a range of other policy objectives, including improving energy security.
- » Primary energy consumption under an 'enhanced technology' development and deployment scenario is projected to be about 32 per cent lower in APEC economies at 2050 than would otherwise be the case. Under this scenario, consumption of fossil fuels would fall considerably, as would greenhouse gas emissions.
 - With an 'enhanced technology' scenario, sources of energy supply for the APEC region in 2050 are projected to be: coal 16 per cent, oil 29 per cent, gas 18 per cent, nuclear 14 per cent, hydroelectricity 3 per cent, biomass 15 per cent and other renewables 5 per cent.
 - Use of advanced technologies is projected to reduce APEC greenhouse gas emissions by 49 per cent relative to the reference case at 2050.

APEC greenhouse gas emissions



increasing terrestrial sinks could further reduce emissions

- » APEC economies account for around 54 per cent of the world's managed and natural forest area. Further reductions in greenhouse gas emissions in the APEC region could be achieved by fostering sustainable forest management and lowering the rate of deforestation to increase terrestrial sinks in forestry areas.
- » If APEC were able to halve current deforestation rates in tropical Asian member economies over the period 2009-50, this would lead to an estimated 70 per cent fall in forestry related emissions in these economies at 2050 compared with what would otherwise be the case.

a full range of measures will be required

- » Active involvement of the governments of APEC economies and the use of a wide range of policy measures and technologies will be required for APEC economies to limit their greenhouse gas emissions and to achieve their economic and development goals.
- » Policy approaches to climate change will vary depending on the circumstances and capacities of individual economies.

APEC economies: Australia, Brunei Darussalam, Canada, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, United States, People's Republic of China, Hong Kong, China, Chinese Taipei, Mexico, Papua New Guinea, Chile, Peru, Russian Federation, Viet Nam.

Report: Ford, M., Gurney, A., Heyhoe, E. and Gunasekera, D. 2007, *Energy Security, Clean Technology Development and Climate Change: Addressing the Future Challenges in APEC*, ABARE Research Report 07.14, Canberra, September.