

## ***Australian Nuclear Association***

Submission to

*Australia 2020* Summit, 19 and 20 April 2008

on topic: Population, sustainability, climate change and water

Nuclear power must be considered along with other low carbon technologies in planning how Australia is to meet its long term energy needs and carbon emission targets. Nuclear power is a low carbon technology that is used in many countries for generating electricity where it makes a very significant contribution to reducing greenhouse gas emissions.

Nuclear power is a mature technology already in use in 31 countries and cumulatively there is over 12,500 power reactor years of experience. The first nuclear power reactors were connected to the grid over 50 years ago and the oldest currently operating nuclear power plant has been operating for 40 years. Nuclear power is used for electricity generation in most developed countries - about 35% of Europe's electricity is generated by nuclear power and 17 OECD countries have nuclear power plants. In many places, nuclear is the cheapest source of electricity, although some countries use nuclear to provide energy security.

Although nuclear power is not currently used in Australia, electricity generated by nuclear power plants will become economically competitive in Australia under any realistic carbon emissions trading scheme or carbon tax required for Australia to meet the proposed 2050 greenhouse gas target. Nuclear power will become commercially attractive and there will be a strong economic case for building nuclear plant in Australia.

Nuclear power complements renewable power sources such as solar and wind by providing baseload electricity to industry, transport and domestic users when the wind is not blowing or the sun not shining.

Most of Australia's trading partners use nuclear power and many plan to build new additional nuclear plants. Australia will be at a major disadvantage, both competitively and in meeting greenhouse targets, if nuclear power continues to be arbitrarily excluded as an option for meeting Australia's long term power needs. The nuclear power option must be included in planning and a policy and regulatory framework established to allow commercial nuclear plant to be built in Australia.

Nuclear power is a valid low carbon option that can make a major contribution to Australia's long term energy needs and help meet the 2050 greenhouse emission targets.