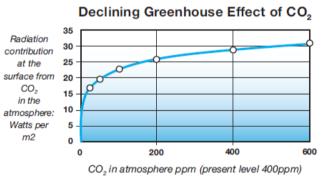
## CLIMATE DIOXIDE AND CLIMATE FACTS

- Carbon dioxide (CO2) is an essential nutrient absorbed by vegetation and marine plant forms together with energy from the Sun. It is a trace gas at 414ppm (0.04%) in the atmosphere and well below past levels.
- When CO2 and solar energy are absorbed the oxygen required for all life except plants is released.
   The carbon together with the stored solar energy is retained and forms carbon fibres which support plant structures including the trunk and branches of trees.
- CARBON DIOXIDE IS THEREFORE ESSENTIAL FOR LIFE ON PLANET EARTH AND IS NOT A POLLUTANT.
- At the commencement of the Carboniferous Period CO2 was 1,500ppm (0.15%). There was however no "catastrophe" or "boiling heat" despite CO2 being near four times the present level. It was in fact a very good time for life on land and in the sea. Abundant vegetation decayed and formed fossil fuels which preserved the carbon and solar energy.
- Fossil fuel stations convert the stored solar energy into electricity. The CO2 is returned to the atmosphere for plants to use again and satellites have detected a greening of the planet. Improved CO2 levels have been observed to increase crop yields for a growing world population. Most emissions are captured by vegetation. Australia's vegetation is estimated to absorb 10 times CO2 emissions. Globally there is only a 2ppm (0.001%) increase in atmospheric CO2 per annum. At this rate it would take 750 years for CO2 to reach the initial level of 1,500ppm when life flourished.
- The MODTRANS model (see below) accepted by science shows incremental increases in CO2 have a declining greenhouse effect and approach saturation. This explains why CO2 at 1,500ppm has minimal greenhouse impact.



Source: Results derived from MODTRANS, an international and IPCC accepted standard for atmospheric calculations

Factors causing climate change and sea level however also include, El Niños and La Niñas, sunspot cycles
including the Little Ice Age, hot desert wind, warm or cold oceans currents, thermal heating below Antarctic
ice, ocean evaporative cooling, volcanos, regional events and planetary alignments determining the Ice Age
cycle when the sea level fell 120 metres. None of these events are caused by CO2.
 The planet is now in an Interglacial Warm Period following the last Ice Age with Earth's temperature and sea

The planet is now in an Interglacial Warm Period following the last Ice Age with Earth's temperature and se level gradually recovering with interruptions from other climate change factors.

## Conclusion

 Past evidence shows most CO2 emissions are absorbed by all plant forms and are essential for life on planet Earth. The remaining increase of 2ppm per annum does not provide a climate threat from continuing with the use of fossil fuels which provide low cost and reliable energy.

The Climate Study Group (433 words)