

# Climate Change Policy

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AUSTRALIA

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## **Purpose**

Engineers Australia accepts the comprehensive scientific basis regarding climate change, the influence of anthropogenic global warming, and that climate change can have very serious community consequences.

Engineers are uniquely placed to provide both mitigation and adaptation solutions for this serious global problem, as well as address future advances in climate change science.

This Climate Change Policy Statement has been developed to enable organisational governance on the problem, and provide support for members in the discipline and practice of the engineering profession.

## **Context**

Building upon a long history of Engineers Australia policy development, and as the largest technically informed professional body in Australia, Engineers Australia advocates that Engineers must act proactively to address climate change as an ecological, social and economic risk.

The role of engineers is to lead innovation for, and apply contemporary knowledge towards solutions that add value to ecological, social, and economic wellness.

Engineers Australia is committed to natural resources policy reform to adopt full life-cycle analysis, including the pricing of resource use externalities, to ensure responsible resource allocation decisions.

Engineers Australia considers Australia is particularly vulnerable to climate change impacts arising from an average global temperature rise in excess of 2 degrees Celsius, relative to the average pre-industrial temperature. These impacts include:

- Increased loss and damage to natural and built environments resulting from greater a frequency and severity of weather events including: higher wind speeds and durations, lightning strikes, intensified precipitation, increased flood peaks and volumes, increased temperature variations and durations resulting in drought, heat wave, more intense wildfires, and cold snap;
- Increased loss and damage to natural and built environments in coastal and riparian environs from: sea-level rise, storm surge, wave action, inundation, ground water change, and saline intrusion;
- Increased health risks to people, flora and fauna, including from heat, humidity, physical damage and micro-biological change;
- Damage to terrestrial, aquatic and marine ecosystems, particularly coral reef and micro-biological systems;
- Loss of agricultural productivity from changes to rainfall volume and intensity, evaporation, temperature stress, salinity, acidification as well as spatial and temporal seasonal variability; and
- Increased global community instability arising from resource stress.

Engineers should work to eliminate the causal factors contributing to climate change from engineering endeavours, as well as consider contemporary science in adaptation and mitigation initiatives during planning, design, delivery, operation and decommissioning of engineering works and products.

## **Policy**

Engineers Australia policy position is that increasing atmospheric greenhouse gas concentrations, including from the combustion of fossil fuels, are contributing to anthropogenic global warming and adverse changes to Earth's climate systems.

Engineers Australia encourages national greenhouse gas emission reduction targets to be pursued to enable transition to renewable and sustainable energy, water, transport, industry and agriculture systems.

Engineers Australia will work to facilitate statutory, regulatory and policy reform such as progressive Renewable Energy Targets, incentives to promote renewable and sustainable energy technologies, energy efficiency standards, transport emission limits, and incentives/disincentives to reduce dependence on fossil fuel sources. It is recognised this is part of a transitional process.

Engineers Australia reinforces that Engineers are critical to the implementation of long-term strategic policies addressing the inextricable link between energy generation and use, resource consumption, and climate impacts.

Engineers Australia's members acknowledge:

- Engineers have an ethical responsibility for, and play a key role in, limiting atmospheric greenhouse gas concentrations, through transformative change and innovation in engineering education, and practice.
- Engineers are well placed to understand and assess the viability of climate change mitigation and adaptation strategies needed to make the difference and have the practical know-how to implement these strategies.
- Engineers proactively participate together to address the causes and impacts of climate change as a significant ecological, social and economic risk.
- Reduction of the emission of greenhouse gases to the atmosphere associated with engineering activities should be accorded urgent priority in engineering endeavours.
- Engineers should include risk analysis and advice of the likely impacts of climate change in their work.
- Engineers should maintain an awareness of contemporary climate change science and advances thereof, and contribute to the refinement of knowledge and approach, to encourage the best possible engineering outcomes.



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