

# Jargon buster!

## Making sense of the climate change lingo



**Anthropogenic:** Of human origin, or attributable to human activity. Anthropogenic greenhouse gas emissions are emissions attributable to human activity, as distinct from natural causes.

**ACCC:** Australian Competition and Consumer Commission. The ACCC is a statutory authority charged with promoting competition and fair trade in the market place to benefit consumers, businesses and the community and with regulating national infrastructure services. The ACCC released the Green Marketing Guide outlining business obligations in making environmental claims. *Carbon* neutral and low carbon claims must be able to be backed up.

More information at: <http://www.accc.gov.au/content/index.phtml/itemid/807902>

**Carbon dioxide:** A colourless, odourless, gas that is a normal part of the air. Carbon dioxide is also a product of fossil fuel combustion. It is a greenhouse gas that traps terrestrial (i.e. infrared) radiation while transmitting visible light and contributes to global warming. The terms 'carbon', 'carbon dioxide' and 'carbon dioxide equivalent' are often used interchangeably with the term 'greenhouse gases'. However, strictly speaking, the terms have different meanings.

**Carbon Dioxide Equivalent (CO<sub>2</sub>-e):** CO<sub>2</sub>-e is a measure used to account for, and add up, the different types of greenhouse gas emissions on a common basis. This is done using the 'global warming potential' (GWP) of each gas (see more about GWP in the definition below). The carbon dioxide equivalent for a gas is derived by multiplying the tonnes of the gas by the associated GWP.

**Carbon footprint:** The total greenhouse gas emissions attributable, directly and indirectly, to an individual, organisation, event or product (UK Carbon Trust 2008). A carbon footprint is generally calculated using annual emissions but may also be calculated on the basis of lifecycle emissions (see the definition below). As with all carbon accounting concepts, a carbon footprint will refer to a defined 'emissions boundary' within which emissions are counted and will only be valued within this boundary. Differences in the definitions of emission boundaries can lead to difficulties with comparisons of carbon footprints.

**Carbon neutral:** An activity, event, household, business or organisation that is responsible for no net emissions of greenhouse gases and can therefore be declared carbon neutral in that specific area. Carbon neutrality can be achieved by reducing emissions as far as possible (e.g. energy efficiency, purchasing renewable energy) and then purchasing offsets for any residual emissions in order to achieve zero net emissions (Monash University).

**Carbon Offsets.** Carbon offsets are actions that can reduce the emissions liability of projects by reducing emissions elsewhere. Offsets must be generated from a sector which is not covered by the CPRS (see below). The Australian Government released a National Carbon Offset Standard Discussion Paper in December 2008.

More information is at:

<http://www.climatechange.gov.au/resources/pubs/national-carbon-offset-standard-paper.pdf>



**Climate change:** Climate change is caused by increases in greenhouse gases in the Earth's atmosphere, which causes increases in the Earth's average temperature and changes in weather patterns. Greenhouse gases soak up heat from the sun and instead of the heat leaving the Earth's atmosphere, some of it is trapped in the atmosphere, making the Earth warmer. More information on climate change is at:

<http://www.climatechange.gov.au/science/publications/fs-climatechange.html>

**Carbon Pollution Reduction Scheme (CPRS):** The CPRS is Australia's proposed emissions trading scheme, scheduled to begin in July 2011, subject to the passage of enabling legislation. The CPRS will place a cap of the quantity of greenhouse gas emissions allowed to be released by liable parties. The cap is expected to decline over time in line with Australia's international obligations. The scheme is proposed to have broad coverage, with 75 per cent of Australia's emissions expected to be included.

More information at: <http://www.climatechange.gov.au/emissionstrading/index.html>

**Energy Efficiency Opportunities (EEO) program:** This Australian Government program requires large energy-consuming businesses (using more than 0.5 PJ of energy a year) to improve their energy efficiency by identifying, evaluating and publicly reporting on cost effective energy saving opportunities.

More information at: <http://www.ret.gov.au/energy/efficiency/eoo/pages/default.aspx>

**Emissions Trading Scheme (ETS):** An emissions trading scheme is a mechanism which creates a tradeable property right for a defined amount of emissions. Only a certain amount of emissions are permitted by law. To legally emit greenhouse gasses, companies or entities need to have emissions permits equal to the amount of emissions. If people want to emit more gases, they have to have more permits. Therefore, a demand for permits is created; they become valuable and acquire a 'carbon price'. Permits are tradeable, allowing them to be purchased by parties with the highest willingness to pay.

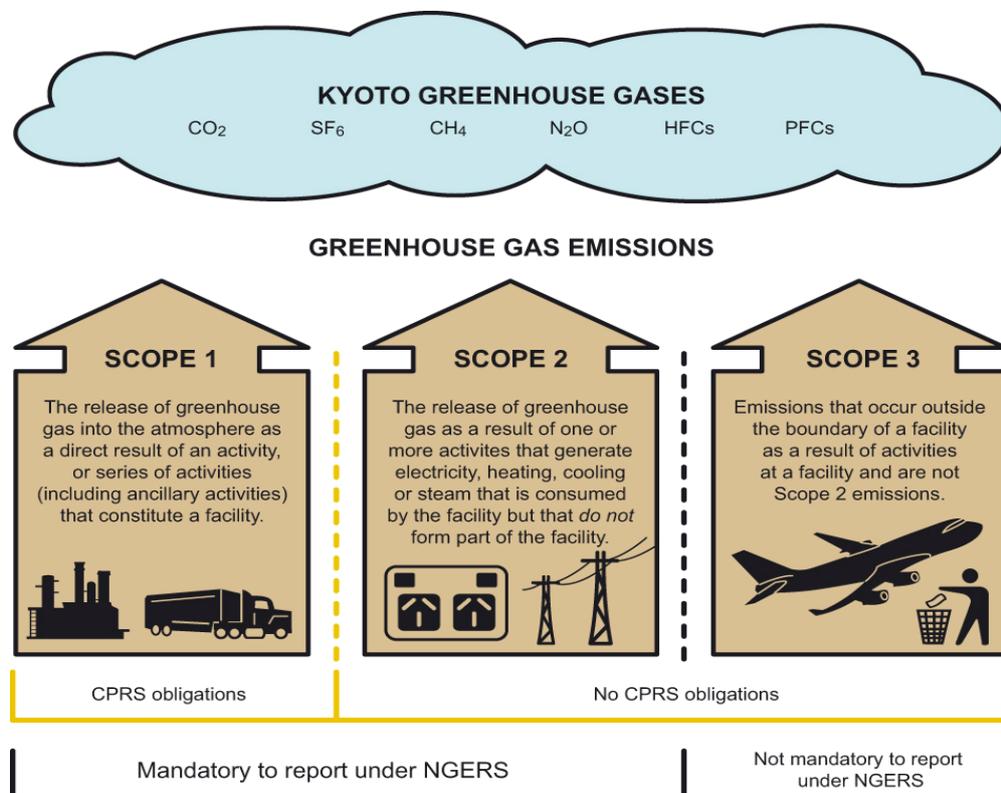
ETS schemes around the world differ significantly in their design and may not be strictly comparable. Australia's ETS is known as the Carbon Pollution Reduction Scheme (CPRS) (see above).

**Greenhouse Gas (GHG) Protocol:** The GHG Protocol is the most widely-used international accounting tool to understand, quantify, and manage greenhouse gas emissions at a project or corporate level. More information on the tool is available at: <http://www.ghgprotocol.org/>



## Greenhouse Gas Protocol Scope 1, 2 & 3:

The Greenhouse Gas Protocol categorises emissions into three groups:



**Global Warming Potential (GWP):** GWP is a measure of how much a given mass of a particular greenhouse gas is estimated to contribute to global warming. It is a relative scale which compares the gas in question to that of the same mass of carbon dioxide, which has a GWP of one. GWP is based on scientific observations of the degree of 'radiative forcing', or the heat trapping effect, of the different greenhouse gases. For example, the most potent greenhouse gas, sulphur hexafluoride (SF<sub>6</sub>), has a GWP of 23,900. That is, SF<sub>6</sub> is 23,900 times more powerful as a greenhouse gas, weight for weight, than CO<sub>2</sub>. (IPCC)

**Greenhouse gas:** Greenhouse gas is the term used for gases in the atmosphere which absorb solar radiation such as water vapour, carbon dioxide, methane and nitrous oxide. The United Nations Framework Convention on Climate Change and related instruments (such as the Kyoto Protocol) cover six classes of gas: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). Water vapour is not considered 'anthropogenic', or to be generated by humans.

**Greenhouse gas emissions:** Some greenhouse gases occur naturally and are released into the atmosphere through natural processes. Other greenhouse gases are created and emitted solely through human activities. See also 'greenhouse gas' above.



**GreenPower:** GreenPower is a government accreditation program for 'new' renewable energy; that is, renewable energy that was not already being generated prior to the commencement of the scheme. To sell accredited GreenPower, energy providers must buy accredited renewable energy from renewable energy sources, like wind power, solar, mini-hydro and biomass. The GreenPower program organises publicly available independent auditing of energy retailers' sales and purchases, making sure retailers are investing in renewable energy.

More information at: <http://www.greenpower.gov.au/home.aspx>

**Life cycle analysis (LCA):** Life cycle analysis or assessment is an internationally recognised approach to evaluating the potential environmental impacts of products and services, including greenhouse gas emissions. A life cycle analysis generally looks at environmental impacts from raw materials extraction and processing through to end-of-life.

**Kyoto Protocol:** The Kyoto Protocol is a legally-binding treaty instrument under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC). The Kyoto Protocol was signed by Australia in 1997 but not ratified (given legal effect) until 2008. Amongst other things, it sets legally binding emission reduction obligations (generally known as 'targets') on certain countries, including Australia, for the period 2008 to 2012.

**National Electricity Market (NEM):** The National Electricity Market interconnects five regional electricity markets including Queensland, New South Wales, Victoria, South Australia and Tasmania. The NEM facilitates exchange between electricity producers and consumers through a system where output from all generators is aggregated to meet consumer demand.

**National Greenhouse Gas Inventory (NGGI):** The National Greenhouse Gas Inventory provides estimates of Australia's greenhouse gas emissions based on the latest available data and the accounting rules that apply for the Kyoto Protocol.

**National Greenhouse and Energy Reporting (NGER) Act:** The NGER Act requires Australian organisations that meet relevant greenhouse gas emissions or energy thresholds to report their greenhouse gas emissions and energy consumption and production. This is for the purpose of a) public disclosure and b) to ensure that consistent and comparable data is available for decision making, notably to determine liability under the Carbon Pollution Reduction Scheme. The first reporting period commenced on 1 July 2008.

More information is at: <http://www.climatechange.gov.au/reporting/index.html>

**Natural greenhouse effect:** Warming that occurs when solar radiation is trapped by the atmosphere. It is caused by atmospheric gases that allow sunshine to pass through into the Earth's atmosphere, and then absorb heat that is radiated back from the warmed surface of the Earth.

**Renewable Energy Certificates (RECs):** Renewable Energy Certificates are tradable certificates for each generated megawatt-hour of eligible renewable electricity. RECs are designed to be traded and eventually surrendered to demonstrate compliance with the Australian Government's renewable energy target.



**Renewable Energy Target (RET):** The Australian Government has set a target to of 20 per cent of Australia's electricity supply being sourced from renewable energy supplies by 2020. It is administered by the Office of the Renewable Energy Regulator. Also known as National Renewable Energy Target (NRET) and formerly known as MRET (Mandatory Renewable Energy Target).

More information at: <http://www.climatechange.gov.au/renewabletarget/index.html>

**United Nations Framework Convention on Climate Change (UNFCCC):** The UNFCCC is an international treaty instrument agreed in 1992, and signed and ratified by Australia. It sets out the general international framework for action on climate change. While it contains some legally-binding obligations, it does not set legally binding emission limitation or reduction obligations ('targets'). These have been set by a subsidiary instrument under the UNFCCC, the Kyoto Protocol. The UNFCCC established the 'ultimate objective' of 'stabilising greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'.

More information at:

[http://unfccc.int/essential\\_background/convention/background/items/1353.php](http://unfccc.int/essential_background/convention/background/items/1353.php)

### **Acknowledgements:**

pitt&sherry, 2009, [www.pittsh.com.au](http://www.pittsh.com.au)

Sustainable Infrastructure Australia (SIA), 2009, [www.siaaustralia.com](http://www.siaaustralia.com)

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