BUILDING PERFORMANCE

November 2024

# Climate Change Work Programme Top Terms

The top terms you need to know to understand the impact of the building sector on climate change

## GENERAL

**Paris Agreement**
An international treaty on climate change, whose long-term goal is to limit global warming to well below 2°C, preferably to 1.5°C compared to pre-industrial levels.

**Near zero 2050**
One of the goals of the Climate Change Response (Zero Carbon) Amendment Act 2019 to reduce New Zealand's net emissions of all greenhouse gases (except biogenic methane) to zero by 2050.

Climate Change Response (Zero Carbon) Amendment Act 2019
Legislation that provides a framework by which New Zealand can develop rules that:

- contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels,
- allow New Zealand to prepare for, and adapt to, the effects of climate change.

**Emissions reduction plan (ERP)**
Aotearoa New Zealand's plan that sets out the policies and strategies to meet the Government's emissions budget.

**National Adaptation Plan (NAP)**
The New Zealand Government's strategy and action plan to respond to climate change. The current plan covers a six-year period, through to 2028.

**Adaptation**
How the building and construction sector responds to the impacts of a changing climate.

**Biogenic methane**
A greenhouse gas emitted when plant material decomposes, for example wood products in landfills.

**Climate resilience**
The ability for buildings to withstand the impacts of a changing climate and extreme weather events.

**Eco design advisor**
A service which provides practical advice on a range of options for improving the comfort, health and performance of a building while reducing its environmental impact.

**Greenhouse gas (GHG)**
The atmospheric gases responsible for causing global warming and climate change. The gases covered by the Climate Change Response Act 2002 are carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride ($SF_6$).

**Heating or cooling demand**
The annual amount of heating or cooling energy (measured in kWh) modelled or calculated to be required in order to maintain a building at a defined temperature range and comfort level.

**Heating or cooling load**
The instantaneous amount of power (measured in watts) modelled or calculated to be required to maintain a building at a defined temperature and comfort level.

**Waste minimisation**
A waste management approach that focuses on reducing the amount of building waste generated during the design, construction, alteration, or demolition of a building.

## CARBON

**Carbon**
A chemical element, often used as a shorthand for carbon dioxide.

**Carbon dioxide ($CO_2$)**
The main greenhouse gas that is emitted by the building and construction sector.

**Carbon dioxide equivalent ($CO_2$-e)**
A measure of the global warming potential (GWP) of different greenhouse gases, relative to the amount of $CO_2$ that would result in the same amount of warming.

**Carbon footprint**
The carbon emissions caused directly and indirectly by an individual or organisation.

**Carbon sequestration**
The natural process of capturing and storing carbon dioxide.

**Carbon sink**
A store of carbon when the carbon dioxide that is captured and stored is more than is emitted.

**Carbon Neutral Government Programme (CNGP)**
A programme set up to accelerate the reduction of emissions from the public sector.

**Decarbonise**
The reduction of greenhouse gas emissions in the building and construction sector is responsible for.

**Low Carbon building**
Low-carbon buildings are buildings designed and constructed to have very low operational emissions and embodied carbon over their lifecycle.

## EMISSIONS

**Carbon emissions of a building**
All the greenhouse gasses (CO 2-e) emitted by the manufacture of building materials and the construction, ongoing use, and demolition of a building. Comprises whole-of-life embodied carbon emissions and operational emissions.

**Emissions cap**
The quantity of proposed emissions that are allowed to be released as a result of building work as calculated using an accepted methodology.

**Embodied carbon (whole – of life embodied carbon)**
The carbon emissions associated with the production of materials and the maintenance, construction, and demolition processes throughout the life cycle of a building. Measured in kg CO2-E.

**Whole – of life embodied carbon assessment: technical methodology**
Sets out the proposed methodology for assessing and quantifying the embodied carbon of new buildings.

**Direct emissions**
Emissions that occur at the point of use during construction or in the use of a building, such as combustion of fossil fuels.

**Indirect emissions**
Emissions that are related to construction processes or the use of a building but occur elsewhere, such as electricity from the national grid and the manufacture of materials.

**Near zero emissions building**
An energy efficient building that has operational and embodied emissions close to zero over a specified period of time.

**Net zero emissions building**
An energy efficient building that has zero operational and embodied emissions over a specified period of time due to some of its emissions being offset.

**Operational emissions**
Emissions both directly and indirectly attributable to the use of a building.

**Operational efficiency**
A measure of how much energy and water is modelled or calculated to be needed to operate a building to maintain a defined indoor environmental quality (temperature, air quality, etc).

**Operational efficiency assessment: technical methodology**
Sets out the methodology for assessing and quantifying the operational efficiency of new buildings, including assessing operational emissions and indoor environmental quality.