



White Paper
Climate Change



“The eyes of all future generations are upon you.” ~ Greta Thunberg

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Overview

Activists and green policy makers have become the icons of our age, helping to raise the debate around our climate and ensuring the issue continues to be discussed at the highest level of government. The devastating bushfires that swept Australia have become an example of the increasingly regular problems we face due to climate change.

According to leading scientists, we're at a crossroads. In 2019, more than 11,000 scientists from around the world collectively signed a scientific paper declaring a 'climate emergency'. According to the ABC these scientists described it as a 'catastrophic threat to humanity' and backed protesters from across the world who are demanding action.

NASA voiced its concern, citing a reduction in greenhouse gases and a lifestyle adaptation plan as key to successfully facing the very real climate challenges ahead of us. "It's up to us what happens next," NASA said in a statement.



Greenhouse gases

Greenhouse gas emissions are cited as the primary cause of climate change. They are a by-product of the emissions produced by cars, power plants and other human activity. As the gases are released they act like a barrier, trapping the sun's warmth as it enters the atmosphere subsequently raising the earth's temperature. This increase has a drastic impact on the natural balance of things and modernity is being tested as a result.

Although this is considered a natural process, increases in temperature are happening at a faster rate due to human activity.

The three major greenhouse gases are:

1 - Carbon Dioxide (CO₂): The most known of the greenhouse gases, carbon dioxide emissions are created by the burning of fossil fuels like oil, natural gas, and coal, as well as solid waste and wood products. Although plants are capable of absorbing some greenhouse gases, levels have risen at such a rate, plants can't absorb enough to reduce them.

2 - Methane (CH₄): Produced by livestock and other agricultural practices, methane emissions are also created during the processing of coal, natural gas, and oil.

3 - Nitrous Oxide (N₂O): Produced during the burning of fossil fuels and solid waste commonly with the agricultural and industrial sectors.

Human activity plays a huge part in the increase of emissions.

A booming population, an increasing need for food products to sustain it and a need for more power to fuel amenities and services, coupled with a lack in sustainable infrastructure means the world is still far too reliant on processes that are having a catastrophic impact on our planet. These effects are being felt far and wide. Alongside extreme weather patterns, irreversible damage to delicate ecosystems and depleting rainforests, means the planet's future hangs in the balance.

Our planet faces some serious challenges; namely, how to live in a world plagued by turbulent weather, more frequent natural disasters, temperature increases and subsequent rising sea levels.

We recognise that we must make changes in order to reduce our carbon footprint and minimise our impact on the natural world, if we're to have the future we hope for.

Alongside government policy and institutional and structural changes, related to the amount of fossil fuels we use and the amount of carbon we emit, there are many things that businesses and individuals can do to reduce the amount of carbon emissions they produce. These include switching to greener energy providers, using less water, recycling and producing less household waste.

Climate change is a complex subject matter, tough to get your head around and often loaded with complex terms and political jargon. Here we've outlined the major arguments and concerns pertaining to climate change and offer some practical guidance as to what you can do to reduce your own impact at home and at work.

What do we mean by climate change?

According to the Climate Council, climate change comprises of variations in weather patterns including temperature, rainfall and wind over a period of time. In many instances this occurs naturally, however scientists are telling us that the current changes are happening at an increased rate because of our actions and as temperatures get hotter, we're causing potentially irreparable damage to our planet.





What is causing climate change?

Human activity is triggering an excessive amount of greenhouse gases to enter our planet's atmosphere, increasing global temperatures. Scientists are particularly concerned about carbon dioxide (CO₂) and methane. According to the Climate Council, CO₂ levels in the atmosphere have increased by more than 45 per cent since the Industrial Revolution and are the highest levels in 800,000 years.

The type of activities that are causing high emissions of these greenhouse gases are:-



Deforestation

The clearing of land for agriculture removes trees and plants which naturally absorb CO₂, meaning more is left in the atmosphere.



Fossil Fuels

When burnt, fossil fuels such as oil, coal and natural gas fuse carbon with oxygen molecules together to form

carbon dioxide. Cars, trains and planes rely on the burning of fossil fuels for propulsion.

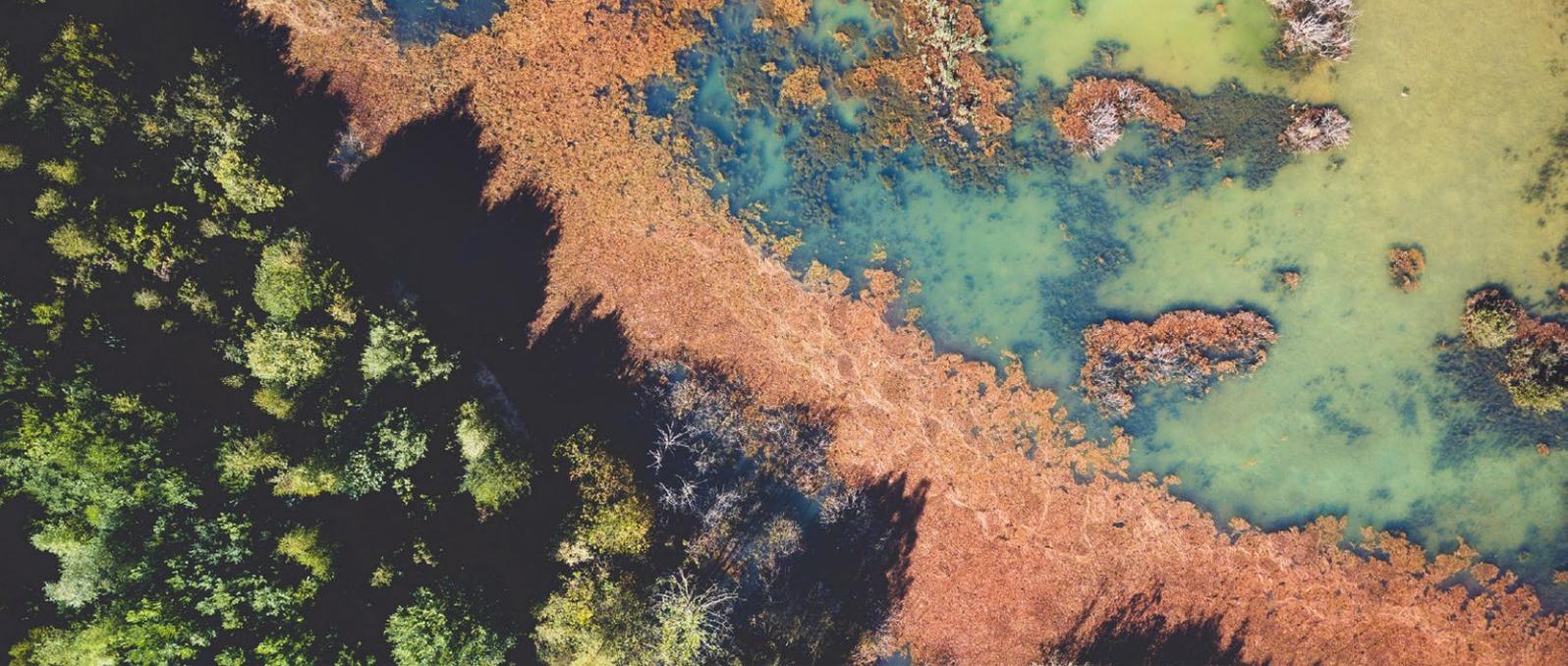


Power generation

The energy we use at home and in the office contributes to an increase in greenhouse gases. According to the Climate Council, electricity is responsible for 32 percent of greenhouse emissions because 84 percent of our electricity comes from burning fossil fuels, 62.3 percent of which comes from the burning of coal.

What if nothing changes?

According to the most recent report from the International Panel on Climate Change (IPCC), global temperatures will likely rise to 1.5 degrees Celsius above pre-industrial levels between 2030 and 2052 if warming continues at the current rate. However, some projections cite a level increase as high as 2 degrees Celsius, which as outlined in the following page, could create an extremely inhospitable environment to live in.



Two degrees of difference

A 2°C temperature increase would lead to:-



37% of the world's population would be exposed to severe heat waves at least once in five years. Risks to human health, including heat-related morbidity and mortality in urban areas increase with higher temperatures.



18% of insects losing half their habitable area. Insects serve as the base of the food web, eaten by everything from birds to small mammals to fish. If they decline, everything else will as well. About three-fourths of all flowering plants are pollinated by insects, as well as the crops that produce more than one-third of the world's food supply.



16% of plants will lose half their habitable area. Other factors that lead to losses of species, such as forest fires and the spread of pests and diseases increase with higher temperatures.



99% of coral reefs will be lost through coral bleaching. Loss of fishery productivity at low latitudes, acidification, and dead zones are projected to be more pronounced with warming higher than 1.5°C.



At least one ice-free-summer in the Arctic every 10 years. This could lead to more heat being absorbed, impacts to ocean circulation, and have consequences for winter weather in the Northern hemisphere.

Sources

<https://www.climatecouncil.org.au> | <https://www.wri.org> | <https://www.nationalgeographic.com>

How is climate change affecting Australia?

- Australia is experiencing the effect of climate change in the following ways:
- Devastating bushfire seasons starting earlier and lasting longer.
- Frequent and severe weather patterns such as heatwaves, drought and flooding.
- Rising sea levels causing coastal flooding and the intrusion of saltwater into freshwater areas.
- Marine heatwaves that are causing damage to areas such as the Great Barrier Reef.
- Impact on wildlife, due to stress caused by the heat and drought or flooding in some areas.

What can your business do to reduce its carbon footprint?

Whether you're a small business or a big corporation, educating and engaging staff about the effects of climate change, and implementing strategies to reduce

emissions is not just good business but can greatly impact the environment.



Move towards zero waste

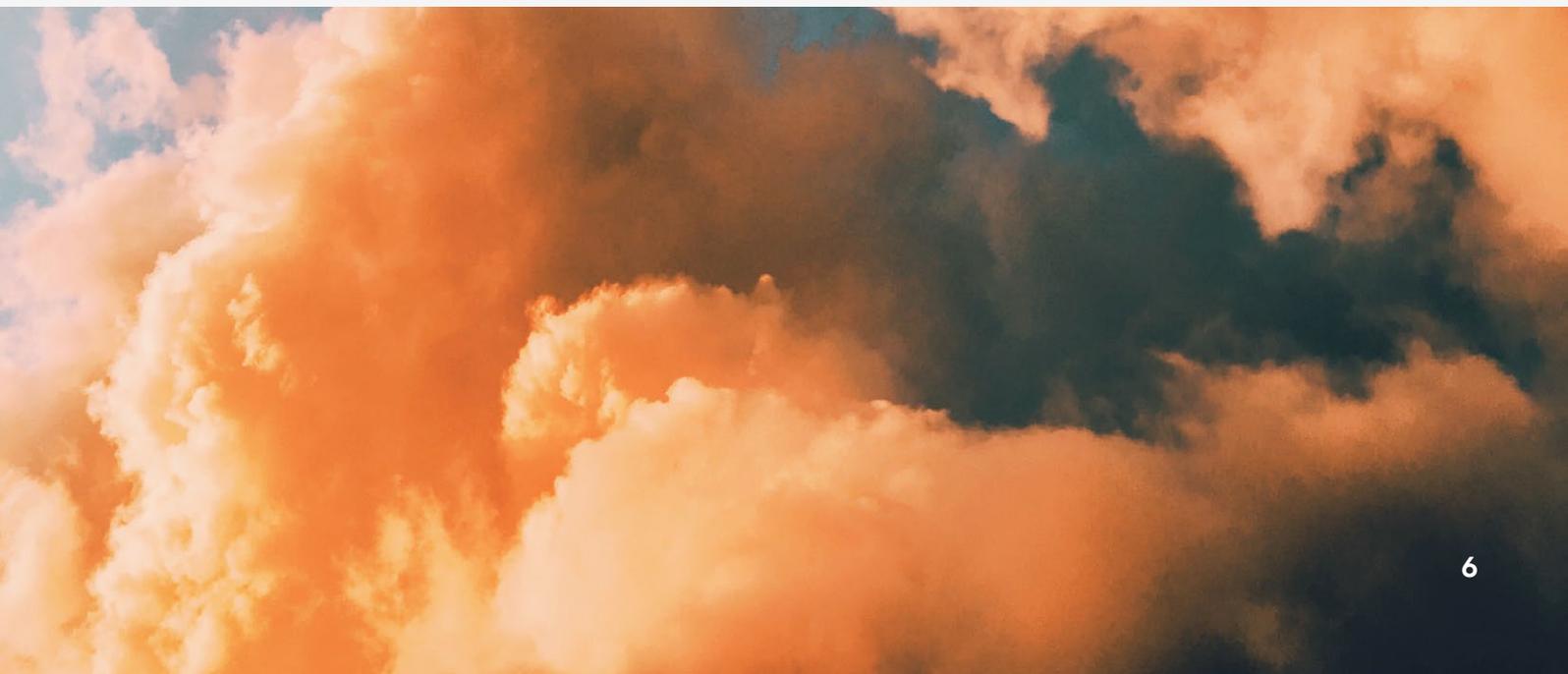
Begin with an assessment of your business's current waste generation, management and disposal.

Where is waste being generated? How often? Where does the waste go? When implementing waste-reduction focus on reducing, reusing and recycling, in that order.



Use renewable energy sources

Building an eco-friendly, environmentally conscious and sustainable business is not just on trend but good business in the current market. Installing solar energy will drastically reduce your greenhouse gas emissions and reliance on fossil fuels, two of the major contributors to climate change. This will not only impact the environment, but give your business a competitive edge when climate policies go into effect. If you're interested in switching to solar for your commercial business get in touch with Energy Wired. We can assist you with guidance on products, pricing and installation.





Cut business travel emissions

Modern transportation like cars, trains and planes are one of the largest sources of greenhouse gas emissions. By reducing your businesses travel emissions by making conference calls or having teams in allocated areas you can decrease your businesses' impact on the environment and at the same time decrease your spend.

Encourage employees to cycle to work by providing free parking or other such incentives, and consider allowing work from home days which require zero commuter emissions.

What can you personally do to reduce your carbon footprint?

Action must be taken if the effects of climate change are to be reduced and individuals have the power to help make a difference.



Plant Trees

This is a simple and often overlooked way of reducing the carbon dioxide in the atmosphere otherwise known as carbon

offset. An offset works by engaging in an activity that does the opposite to producing carbon, rather you do something to absorb carbon.



Think before you travel

Reduce your personal emissions by using your car less or switching to an electric car. Bicycles create zero emissions and are an affordable mode of transportation especially if you live in the city. Reduce your amount of air travel and when you do travel offset the carbon by planting a tree.



Use renewable energy such as solar power

Solar continues to grow as a competitive clean energy source that is reliable and affordable. Solar energy is one way to stop the use of fossil fuels and lower the emission of greenhouse gases. Aside from saving the planet by cutting energy coming from carbon polluting fossil fuels, solar power saves you, the consumer money. When you're producing your own energy, you're buying less from big energy retailers. And in many cases, you can even sell the energy you don't use back to the grid. It literally puts the power back in your hands.



Avoid single use plastics products

Buy a keep cup for your morning coffee, use metal straws and avoid purchasing anything made from, or wrapped in, single use plastics. If there's no demand for it, changes will be made.



Reuse, reduce and recycle.

Keep an item out of landfill by looking after it, repairing it or upcycling it. Avoid fast fashion, and ask questions about where and how your clothes are made and what materials they are made from. Reduce purchases wherever possible ensuring you're mindful of your consumption. Properly recycle any plastic, paper, glass or metal and if you're not sure how research recycling laws in your area.



Turn it off

Make energy savings in your home by switching off appliances when you're not using them. Don't leave appliances on standby, switch lights off if you're not in the room and switch to a green energy provider.

Conclusion

Climate change is set to continue and accelerate, it's inevitable. The significant impact on the health of our oceans, forests, freshwater, and our towns and cities is unavoidable. While we must reduce greenhouse gas emissions to avoid the worst impacts of climate change, it's also vital that we prepare rather than react.

Adapting to climate change requires thinking about how a changing climate will affect where and how we grow our food and build our homes, buildings, bridges and roads. It also requires considering the costs of preparing for climate change rather than simply reacting to it. Preparation will vary depending on where you reside, so looking at changes on a local and regional level is paramount.

Successful planning relies on input and cooperation from federal, state, and local government; scientists and climate experts; businesses; local community members and conscious and mindful individuals. The best thing you can do is educate yourself and lead by example.

Why Energy Wired Solar?

Top 5% in quality - all our installations are independently assessed. The Clean Energy Regulator ranks us in the top 5% for quality installs. This means we can deliver a safe, reliable, and durable system for you.

Offering Longer Warranties - As partners of REC and SMA, we can offer you longer warranties than other installers, securing your investment.

Partners with Kiva - For every solar system sold, we donate and lend to Kiva, so businesses and farmers in developing countries can have access to solar too.

Buy now, pay later - we partner with Brighte after pay solutions so you can get your investment working for you now, and pay later interest free.

Specialised Industry Experts - We've been around for 10 years. We're deeply specialised and know the industry. We can discuss a range of different customised options for you, from the top tier to the basic models. We'll analyse your energy usage and recommend the best solutions and technology to meet your needs.

Customer focused - Our Google reviews rank us as one of the highest solar businesses in Victoria.

For more information, please visit our website - energywired.com.au

