LTF Single Issue Meeting Fuel Poverty - carbon Net Zero

September 2022

What is cNZ?

cNZ and its connection to Fuel Poverty

Deadlines/guidelines/impact

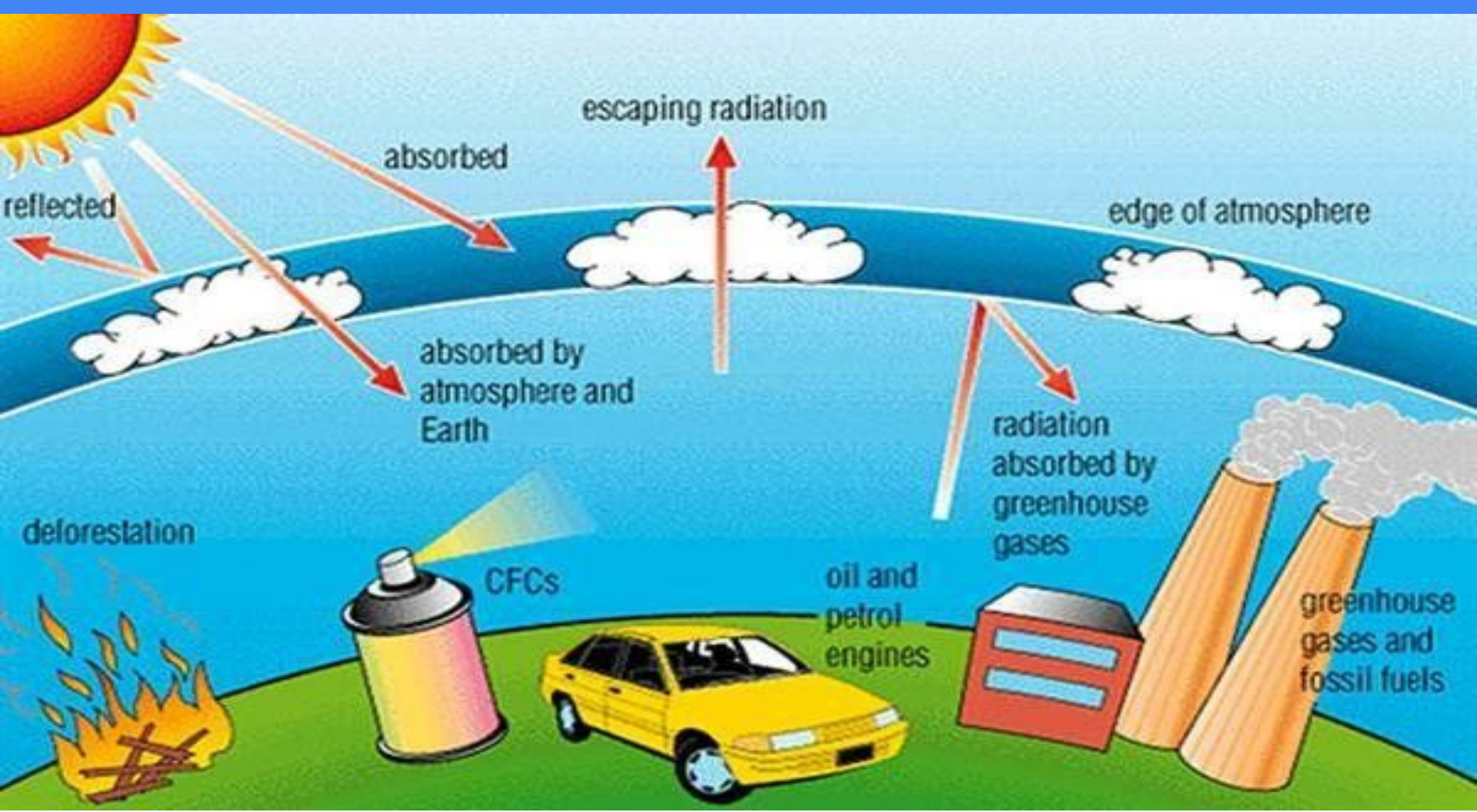
Questions & observations

Greenhouse gases are gases—like **carbon dioxide** (CO2), **methane**, and **nitrous oxide**—that keep the Earth warmer than it would be without them.

https://climate.mit.edu/explainers/greenhouse-gases

The reason they warm the Earth has to do with heat generated by human activity being unable to leave earth's atmosphere as it is reflected back to earth.

the way energy enters and leaves our atmosphere.


escaping radiation
absorbed
reflected
edge of atmosphere
absorbed by atmosphere and Earth
radiation absorbed by greenhouse gases
deforestation
CFCs
oil and petrol engines
greenhouse gases and fossil fuels

The UN says:
Transitioning to a net-zero world is one of the greatest challenges humankind has faced.

It calls for nothing less than a complete transformation of how we produce, consume, and move about.

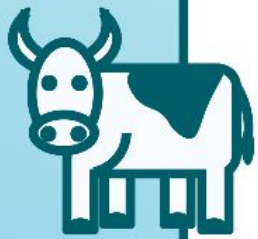
<https://www.un.org/en/climatechange/net-zero-coalition>

Other greenhouse gases

CO_2 is the biggest cause of human-made climate change, but other greenhouse gases are important too. They come from different sources, linger in the atmosphere for different amounts of time, and may be more or less potent at trapping heat. Greenhouse gases are usually counted in "CO_2 equivalents." One CO_2 equivalent is the amount of heat an equal amount of CO_2 would be expected to trap over the next 100 years.

Water vapor: 0 CO_2 equivalents

The most common greenhouse gas is actually water vapor, like in clouds. But because water vapor quickly leaves the atmosphere as rain, we don't have to worry about our "water emissions." On the other hand, warmer air can hold more water vapor without causing a rainstorm. So as the planet warms, we will tend to have more water in the atmosphere at a time—and that *does* heat the planet.



Methane: 25 CO_2 equivalents

The number-two cause of climate change is methane, the main part of natural gas. Methane reflects about 100 times as much heat as CO_2, but its lifetime in the atmosphere is much shorter: about 10 years. Methane is an especially hard greenhouse gas to measure, because most emissions don't come from industrial plants. Instead, they come from livestock, changes in forests and wetlands, and leaks from gas wells and pipes.

Nitrous oxide: 298 CO_2 equivalents

Nitrous oxide is a powerful greenhouse gas that lasts for over 100 years in the atmosphere. It is best known as laughing gas, but that kind of commercial use makes up only a tiny part of our emissions. By far the biggest way we add nitrous oxide to the atmosphere is by growing crops with nitrogen-based fertilizers.

What Is Net Zero?

Measures to lower emissions

For example:
-Invest in green technology

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Measures to remove emissions

For example:
-Forest expansions
-Direct air capture

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Net Zero

Balance between amount of GHG produced and removed from the atmosphere

GREENMATCH

10 Key Solutions Needed to Reduce Greenhouse Gas Emissions

1.  **PHASE OUT** coal plants

2.  **INVEST** in clean energy & efficiency

3.  **RETROFIT** buildings

4.  **DECARBONIZE** cement, steel & plastics

5.  **SHIFT** to electric vehicles

6.  **INCREASE** public transport

7.  **DECARBONIZE** aviation and shipping

8.  **HALT** deforestation & **RESTORE** degraded lands

9.  **REDUCE** food loss and waste

10.  **EAT** more plants & less meat

Source: WRI.

WORLD RESOURCES INSTITUTE

The Mayor of London, Sadiq Khan, has set a target for London to be net zero carbon by 2030.

https://www.london.gov.uk/what-we-do/environment/climate-change/zero-carbon-london/pathways-net-zero-carbon-2030

- Nearly 40 per cent reduction in the total heat demand of our buildings, **requiring over 2 million homes** and a quarter of a million non-domestic buildings to become **properly insulated**
- 2.2 million heat pumps in operation in London by 2030
- 460,000 buildings connected to district heating networks by 2030

LTF guidance and principles for social landlords on net-zero works to social housing tenants homes

https://londontenants.org/publications/?filter_type=document&filter_category=73&query=

The last time that large numbers of social housing tenants had significant works carried out to their homes were those relating to the '**decent homes standard**' from 2000 to 2010 and later.

During that time, tenants had a wide variety of experiences around the amount of information, involvement in decision-making, and the quality and sustainability of works provided.

With the net-zero work, this must be different.

By 2030 humanity must reduce its Carbon output by 45%
By 2050 humanity must reach carbon Net Zero

This will limit climate change to + 1.5°C and help to minimise the impact globally
At present we will miss this target

Mayor aims for cNZ for homes and offices by 2030

Our homes must become more energy efficient in order to achieve cNZ
Retrofitting our homes must be done properly so that changes proposed works

If achieved this will mean FP will reduce in London

We must act now by asking Mayor, local government and Westminster about plans to implement this

END OF PRESENTATION

Paris Agreement

Emissions -45% by 2030

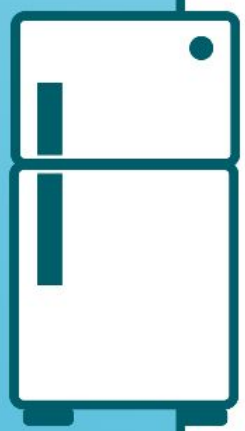
Net Zero by 2050

Why Is Net Zero Emissions So Important to the UK?

The Committee on Climate Change (CCC), a public body that advises the government on climate change, has recommended that the UK must aim to achieve net zero Emissions by 2050.

From <https://www.greenmatch.co.uk/blog/2021/02/renewable-path-to-net-zero-emissions>

two-thirds of the total agricultural and half of surface transport decarbonisation by 2050 needs to happen during the 2020s



CFCs: up to 12,690 CO_2 equivalents

Chlorofluorocarbons, or CFCs, were once used in refrigerators, air conditioners, and aerosols. There are many CFCs, but all have a huge warming effect: one, HFC-23, is counted as 12,690 CO_2 equivalents. Luckily, CFCs were banned in 1987 under the international Montreal Protocol. The ban was not because of climate change, but because CFCs were also destroying the Earth's ozone layer.