GREENWASHING FOSSIL FUELS

with carbon capture, hydrogen and biomass

To have a chance of limiting global heating to 1.5 degrees, there must be **no new oil and gas fields or other new fossil fuel infrastructure.** But fossil fuel industries have other ideas, aggressively promoting themselves as 'green', to ensure that extraction (and their mega-profits) continue.

Instead of focusing on proven solutions to cut emissions – renewables and energy efficiency – **massive public subsidy** is being diverted to develop carbon capture and storage (CCS), and related technologies: 'blue' hydrogen, and burning biomass.

Here in the UK, £20 billion funding has just been announced for CCS. Two pilot industrial clusters are already being driven forward, on the East Coast (Humber/Teesside) and Hynet (Liverpool Bay/North Wales). Carbon capture may prove necessary in a few industries, but industrial and energy policy is being dangerously distorted by the fossil fuel industry's interest in prolonging the use of oil and gas.

Groups around the country are organising: against licensing of new oil and gas field, against the planned new Cumbria coal mine, against biomass burning at Drax and trials of hydrogen home heating. All these struggles are connected. We must expose greenwash and misinformation, and pose the real alternatives for a safe and socially just future.

'JOBSWASH' OR REAL SOLUTIONS?

Fossil fuel and biomass companies have mobilised vast resources to promote their operations to policymakers, investors, local communities and trade unions. Much of this promotion involves highly misleading claims about the numbers of jobs to be created by the BECCS plan and the wider 'low carbon' clusters based on carbon capture.

In reality these jobs drop off dramatically once the relatively brief construction phase is over. In addition, it is risky to rely on jobs linked to technologies which may well fail or never materialise.

But also ignored are the good, sustainable and vitally needed jobs which are foregone when funding is diverted into this pathway, and away from real climate solutions such as home insulation and genuine renewables.

Campaign against Climate Change is working to expose the greenwash and counterpose the industry jobs claims with the alternative: a workforce to truly tackle the climate emergency.

The **Campaign against Climate Change** campaigns for the urgent action we need to avoid catastrophic climate breakdown, and for a just transformation of our economy which puts people and planet before profit. Find out more at **campaigncc.org**

Our **trade union group** is supported by many national unions and local branches, campaigning on climate breakdown as a crisis of social justice and inequality and for effective solutions as set out in *Climate Jobs: Building a workforce for the climate emergency.* Find out more at **cacctu.org.uk**

@campaigncc @cacctu info@campaigncc.org

Links to further information on the issues in this leaflet can be found at cacctu.org.uk/greenwash

WAYS TO GREENWASH FOSSIL FUELS WITH CARBON CAPTURE AND STORAGE:

1) Claim that this is a tried and tested technology. The vast majority (around 70%) of carbon capture worldwide has been for natural gas processing, not at fossil fuelled power plants. The few power CCS projects have performed poorly, and been beset with technological problems and outages which means their capture rate falls far below what's on the nameplate.

2) Claim 95% of emissions can be captured. These kinds of capture rates - even if they were enough - have never yet been demonstrated at scale and under real-world conditions. The only currently operating power CCS plant (Boundary Dam in Canada) has seen an average capture rate of around 50% up to 2021. Even in its 'best year', it only achieved around 65% reduction in the carbon intensity of its power output.

3) Claim to produce 'low carbon' gas and oil by capturing emissions associated with extraction and processing - but don't mention the deadly emissions caused by actually burning the fuels! The majority of captured CO2 is currently used to increase oil production, by pumping it into near-depleted oil fields to make it easier to extract the oil.

4) Ignore unknown consequences of large-scale geological storage of CO2. These could include ocean acidification and harm to marine ecologies, and CO2 leaking back into the atmosphere. Recent research has highlighted that the geological complications of long-term CO2 storage have likely been underestimated.

5) Ignore risks of CO2 transportation and storage. CO2 is an asphyxiant at high concentrations, and leaks from pipelines or on carrier ships could spell disaster.

6) Ignore greenhouse gases not captured by the process, for example leaks of natural gas (methane) and nitrous oxide. Methane has 86 times the global warming potential of CO2 over the crucial 20 year timescale.

7) Argue that we need fossil fuels for 'energy security', so CCS is necessary. But an energy system based on wind, water, sun and geothermal energy is possible – the barriers are political, not technological.

BE WARY OF THE HYDROGEN HYPE!

About 96% of current hydrogen production is from fossil fuels without carbon capture, mostly for use in oil refining, fertiliser and chemicals manufacture, and emitting 830 million tonnes of CO2 a year.

"Green" hydrogen can be produced by splitting water using renewably produced electricity. However, using it just to replace current hydrogen production would require more than all the wind and solar installed globally. On top of this there are limited uses where hydrogen may be more appropriate than direct electrification despite being much less energy efficient.

Decarbonising our energy system will mean reducing hydrogen use where we can, as well as decarbonising what is still needed. Yet this limited resource is being touted as a 'green solution' even where far more energy efficient alternatives exist. For example, green hydrogen for home heating would require 5 to 6 times as much electricity as electric heat pumps.

In practice, these proposals amount to a bid to lock in markets for fossil fuels. A significant proportion of so-called 'low carbon' hydrogen is planned to come from 'blue hydrogen' – produced from fossil gas with carbon capture and storage. Once again, it maintains the fossil fuel industry, based on the promise that carbon capture and storage will deliver.

But far from being 'low carbon', blue hydrogen can be almost as bad for the climate as fossil hydrogen *without* CCS – and even worse than just burning natural gas. This is partly due to increased methane and other greenhouse gases because of the extra energy required for the carbon capture, and partly due to the inefficiency of the carbon capture.

BIOENERGY WITH CARBON CAPTURE AND STORAGE

The idea behind BECCS is that because trees sequester carbon as they grow, we can burn wood for electricity generation and still count the emissions at the smokestack as zero, because new tree growth will re-capture the carbon emitted. It is claimed that any carbon captured from the smokestack and buried can be counted as 'negative emissions'.

This reasoning is completely false – trees take decades to centuries to re-capture the carbon emitted when they are burned, and the ecological richness of natural forest can never be fully restored. Fast growing trees grown as crops store far less carbon than a natural forest. Replacing natural forest with monoculture plantations always results in a net increase in emissions.

Since carbon capture can never bring emissions close to zero, 'net zero' also requires the promise of 'negative emissions technologies'. Drax power company is pushing for guarantees of public subsidy to add carbon capture to some of its wood burners. The plan is then to gain additional revenue by selling the "negative emissions" to other dirty industries as offsets, thereby helping to further delay genuine decarbonisation.