

The Problems of Fossil Fuels

What are Fossil Fuels?

Fossil fuels are formed in the earth's crust from the decomposition of plants and animals that died millions of years ago. They are carbon-rich deposits that also contain hydrogen. These deposits have been subjected to high pressure and temperature that changes their form. Coal, oil and natural gas are examples of fossil fuels. Coal is found in sedimentary rocks where the remains of dead plants and animal matter have piled up in layers. Crude oil is a mixture of hydrocarbons that exist in a liquid phase in underground reservoirs. Some oil is extracted from shale. Crude oil is refined to produce fuel for vehicles, for generators and for heating. Natural gas consists mainly of methane but is a mixture of different gases; it is found above deposits of oil and coal.

Fossil fuels are a non-renewable resources that are burned as fuel. The burning releases carbon dioxide and other gases into the atmosphere. In recent years fossil fuels supply around 80% of the world's energy. The released gases rise into the earth's atmosphere and cause the so-called Greenhouse gas situation. They trap heat in the atmosphere.

Why is the issue of fossil fuels so important?

The Intergovernmental Panel on Climate Change (IPCC) has found that emissions from fossil fuels are the dominant cause of global warming. In 2018, 89% of global CO₂ emissions came from fossil fuels and industry. Coal is the dirtiest of them all. It is estimated that coal is responsible for over 0.3°C of the 1.0°C increase in global temperature. Burning oil also releases large amounts of gases – approximately a third of the world's total carbon emissions. In addition, oil spills are responsible for devastating impacts on our ocean's ecosystem. Natural gas is deemed the 'cleanest' of the fossil fuels, but it still accounts for a fifth of the world's total carbon emissions.

The IPCC has warned that fossil fuel emissions must be halved within 11 years if global warming is to be kept below the 1.5°C rise above pre-industrial levels.

How are we doing at reducing the burning of fossil fuels?

At the Paris Agreement in 2015 the world's governments committed to reduce carbon emissions. However, a recent UN Environment Programme showed that, globally, we are on track to produce more than double the amount of coal, oil and gas that we would be allowed to burn by 2030, if we are to limit global warming to 1.5°C. The world needs to transition to cleaner renewable energy at a faster rate. So, more needs to be done. At COP 26 last year there was some limited success, with a 'Global coal to clean power transition statement'. Forty-five countries and the European Union agreed to completely transition away from coal and increase green energy production. The signatories, however, only included 5 of the top 20 coal producers and the top three polluters (China, USA and India) were absent. There was also a commitment to try to end overseas fossil fuel projects. 25 countries including the USA, Canada, Denmark and the UK committed to stop financing unabated fossil fuel projects in other countries by the end of 2022. This should stop wealthier nations from claiming that they are cutting their carbon footprints whilst, in reality, exporting their emissions by funding fossil fuel projects in poorer countries. Also, at COP26 24 governments agreed that all new car and van sales sold in their countries will release zero emissions by 2040. Notably, the largest car producing countries, namely Japan, China, USA, India, Germany and also Russia did not support this. We will have to wait to see whether the current negotiations which are due to be reported at the next COP meeting, in Egypt in November this year, will bear fruit in terms of reducing carbon emissions. We need to apply pressure to our own government's response.

What is the role of fossil fuel companies in the future of the planet?

Fossil fuel companies remain huge polluters, producing and selling fossil fuel products. At the same time, scientists say we need a mass switch to renewable energy and efficiency. In 2019, BP spent millions on an advertising campaign about its low-carbon energy and cleaner natural gas. While its advertising focused on clean energy, in reality, more than 96% of BP's annual expenditure is still on oil and gas. And it is not just BP – it's an industry-wide problem. There are ongoing campaigns to limit oil companies' misleading advertising about their 'Green policies'. This is a ploy that 'ClimateEarth' call 'Greenwashing'.

At the beginning of the pandemic, oil companies' profits fell dramatically and they had to sell shares to raise funds. In addition, their investment in green technology took a dive. However, in the last six months their profits have bounced back dramatically with most oil companies are now showing billions of dollars increase in profits. But instead of investing in newer green technologies they have increased their shareholders dividends and bought back shares.

Sam Fankhauser, professor of climate economics and policy in the Smith School at the University of Oxford, says increasing dividends and buying back shares detracts from green investment in the near term. "In the short term it does, because it's money that you could have invested and didn't," said Fankhauser, who added that "the companies will give you the medium-to-long-term answer, which says if we don't keep our shareholders happy, we will not be able to raise money, which we will have to do for even more investment." But what about the huge profits that are currently being made by oil companies – why is that not being invested in green technology? I suspect they are more interested in short term gains than in the longer-term view of renewable energy. It seems that oil companies look to short-term profits and keeping their shareholders happy by increasing dividends. rather than developing renewable energy and green technologies. Apparently, investment in green technology is greater in the UK and Europe than it is in the USA. However, the American giant Exxonmobil does make a point about the investments it has made in Carbon capture technology.

What can we do about the situation?

Operation Noah is a Christian charity working with churches to inspire action on the climate crisis. They have a campaign called 'Bright Now' which works with UK churches to divest from fossil fuel and invest in climate solutions. They are not the only organisation to advise the Christian community to divest.

Oil companies, as we have seen, are dependent on their shareholders for their purchase of shares. National Church denominations, regional denominations, local churches and all of us as individuals have a responsibility to divest from investment in fossil fuel companies. Those church categories also need to resolve to move away from using fossil fuels and begin to use renewable energy solutions, wherever possible. Many churches have done this. A few local examples where a full commitment to divest has been made are the Birmingham Methodist Circuit, the West Midlands United Reformed Synod, the Archdiocese of Birmingham, the Passionists of England and Wales, the Birmingham Student Christian Movement, St Chads, Sutton Coldfield, Southwest Worcestershire Methodist Circuit, Hereford, and Leicester Quaker Meetings (this is not an exhaustive list). In addition, there are other pressures being applied: for instance, on 25th February this year 6 Bishops and 130+ clergy wrote an open letter calling on the Church of England to divest from ExxonMobil. Many large church pension funds have traditionally invested in fossil fuel companies, and they are being encouraged to divest as well.

As individuals, we also have a responsibility to look at how our own money is invested. If we have pensions, then we need to ask our financial advisors to move investments out of fossil fuel companies and into greener technologies. The high street banks are not without fault either. Do we all know the extent of our own bank's investment strategies? It is our Christian duty to

be aware of how our own money is being used. If our own church or denomination still has investments in fossil fuels, then we need to put pressure on them to call for change. It is only if large numbers of individuals call for change that change will occur. Our own investments may seem small, by comparison with large institutions' investments ... BUT:

Lots of small changes add up to a significant pressure.

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