

How the coal industry fuels climate change

Background - 1 July, 2016

Coal, the most polluting way to generate electricity, is a serious threat to our climate. Burning coal is the biggest single source of carbon dioxide emissions from human activity. Coal mining also releases the potent greenhouse gas methane. Yet coal has been the main global energy source since 2003.

We need to break free from dirty, polluting coal. The good news is we've already begun to change. Coal is in a steep and irreversible decline, and clean, safe, [renewable energy](#) has unstoppable momentum. But we must move faster still to prevent a [climate crisis](#).

The problem: coal stokes climate warming

Coal is mainly made up of carbon, making it a carbon-intensive energy source. Burning coal produces nearly double the [greenhouse gas emissions](#) as burning gas, for the same amount of energy. So although coal generated less than 30 percent of the world's energy supply in 2013, it produced 46 percent of global carbon dioxide emissions.

A typical 500 MW coal power plant releases global warming emissions roughly equal to 600,000 cars. Yet unlike cars, coal plants are designed to operate for 40 years or more — a long lifespan of polluting energy.

[Coal mining](#) often produces the potent greenhouse gas methane. Methane is 84 times as powerful as carbon dioxide at disrupting the climate over a given 20-year period.

Coal's dirty plans — the challenge we must meet

Total new coal generation capacity commissioned from 2010 to 2014 averaged 200 MW a day globally — further fuelling climate change. If plans for new coal-fired power plants around the world go ahead, carbon dioxide emissions from coal would balloon to 60 percent of the global total by 2030.

Worldwide proven coal reserves would allow us to burn it for 110 more years. Yet if even a small fraction of this dirty, polluting fuel is mined and burned, we have no chance to stay within [1.5 degrees Celsius of temperature rise](#). (Beyond this level of warming, many impacts of climate change become severe in some regions.)

Australia, China, India, Poland and South Africa are among countries using coal for more than two-thirds of their electricity and heat. South Africa sources 92 percent of its power from coal, and plans to add a further 16,400 MW by 2030.

Coal is a dying industry

The tide has turned on coal. The 2015 Paris Agreement sent a clear signal that the era of fossil fuels — in particular coal — is coming to an end. Around the world, evidence grows of the coal industry's steep and irreversible decline.

- China: once accounting for half of all coal demand, in 2014 China's coal consumption levelled off, then fell rapidly. A war on pollution, renewable energy growth, and economic rebalancing are behind China's energy shift.

- Vietnam: although development plans in Southeast Asia formerly relied heavily on coal, Vietnam's 2016 decision to shelve plans for 70 large coal power plants suggests the shift to cleaner energy is gaining momentum.
- USA: coal production has fallen to the lowest level in three decades. Dozens of coal mining companies have filed for bankruptcy, including Peabody Energy, the world's biggest private coal miner.
- European Union: coal consumption has been falling since mid-2012, and the UK is committed to phasing out coal by 2025.
- India: although its coal production has been increasing rapidly, India's coal has ended up in stockpiles. Water shortages have led some plants to close. India has the world's four most polluted cities, and growing awareness of pollution has brought coal power's harmful effects to a head.

We must break completely free from coal

The coal industry would have us think we need this dirty fuel to meet growing energy demand. This is simply untrue.

Greenpeace's respected [Energy \[R\]evolution analyses](#) show we can meet our energy needs through energy efficiency and a shift to 100 percent [renewable energy](#).

We've already begun to change. The shift to safe and secure energy from the [sun](#), [wind](#) and other clean sources now has unstoppable momentum.

We can't wait any longer to break free from coal. We know that to prevent catastrophic climate change, we must make the leap to 100 percent renewable energy as soon as possible.

What Greenpeace is doing to fight coal

Greenpeace is campaigning around the world to close down coal power plants and prevent construction of new ones.

The ways we help communities break free from coal include:

- highlighting coal's health impacts
- supporting farmers driven from their land to make way for construction of power plants
- campaigning to [stop the flow of investment](#) to coal and other fossil fuel projects.

Greenpeace also campaigns for [clean renewable energy](#) and other [climate change solutions](#). And we expose the myths about false solutions, including expensive and unworkable [carbon capture and storage](#).