

# Fossil Fuel Subsidies and Health



Promoting environmental policy  
that contributes to good health

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## WHY SHOULD WE CARE ABOUT FOSSIL FUEL SUBSIDIES?

**Government subsidies for fossil fuels drive up the use of coal, oil and gas and thereby damage the environment, cause more premature deaths and worsen climate change by increasing atmospheric greenhouse gas concentrations. Worldwide, governments allocate 444 billion US dollars in subsidies to fossil fuel producers. The unpaid burden, or “external costs”, to our health and environment created by fossil fuel subsidies are 10 times this amount.**

## COUNTRIES SUPPORT THE FOSSIL FUEL INDUSTRY WITH BILLIONS EVERY YEAR, HARMING HEALTH AND CLIMATE

Fossil fuels kill. Health-harming air pollution is now responsible for claiming 1 in 9 lives (1). Whereas worldwide the need for a transition to clean and healthy energy forms is becoming widely accepted and desired by populations, governments are still supporting the fossil fuel industry with billions of dollars a year.

### Background Box What are fossil fuel subsidies?

Subsidies are given when governments or government-owned institutions decide to offer a helping hand to a business, an industry or consumers. Subsidies to fossil fuel companies are any government action that lowers the cost of producing coal, oil and gas. Governments help fossil fuel companies in many different ways – via direct payments, tax breaks, loan guarantees, cheap rental of public land or R&D grants – but the result is always the same: subsidies artificially lower the price of dirty energy.

According to the IMF, another form of subsidy, an indirect one, takes place when fossil fuel companies are not taxed efficiently. This means that the price consumers pay for coal, gas or oil does not consider the damage caused by these products, such as climate change or air pollution. Yet, eventually these unpaid costs to the environment and human health come with such damage that it needs to be paid for by tax payers, representing yet another subsidy to the industry.

Money spent on fossil fuel subsidies could be spent elsewhere, such as supporting clean energy sources, such as wind power or for infrastructure (roads, schools and hospitals).

In 2015, a report titled “Empty Promises” published by the Overseas Development Institute (ODI) and Oil Change International (OCI) describes the huge amount of subsidies to the oil, gas and coal industry as a “publicly financed bailout for some of the world’s largest, most carbon-intensive and polluting companies.”(2) According to the authors, G20, made up of the world’s 20 wealthiest countries, awarded the industry with over 444 billion US dollars worth of subsidies for the production of fossil fuels alone. Internationally, this figure increases to at least 775 billion US dollars when more countries and consumer subsidies are included.

***Health impacts of air pollution and climate change increase as the world's most polluting companies are rewarded with public funds.***

**Governments’ support to the industry in terms of direct cash payments or tax exceptions is paid by the tax payer. But costs do not end there. Fossil fuels harm our health and damage the climate, yet the costs related to this harm are not carried by the fossil fuel industry, but by the citizens.**

In the 2015 working paper by the International Monetary Fund (IMF) entitled “How large are global energy subsidies?”(3) these more comprehensive costs were estimated at 5.3 trillion US dollars. This figure includes the costs of externalities, such as air pollution and climate change, which are paid for by the government out of tax revenues. This sum, which is equivalent to 6.5 percent of global Gross Domestic Product (GDP), is the amount that governments award to the fossil fuel industry either in the form of direct spending, tax exemptions or by not including externalities in pricing decisions (see Background Box).

But what’s more important than the sheer amount of money spent on the industry is the negative impact it has on our health and the environment. Air pollution kills more than 6 million people every year and fossil fuels are one of the main contributors to deadly air pollution. Other effects include

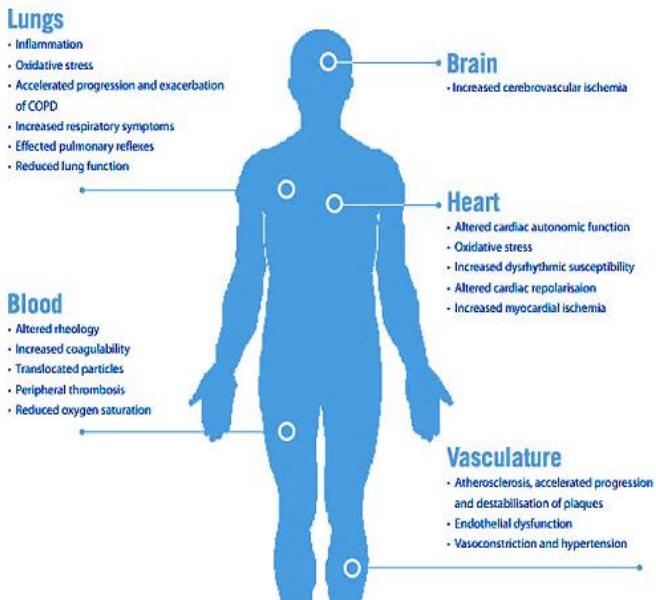
respiratory diseases such as asthma, heart and lung diseases and the consequent strain on national health care budgets.

## HOW EXACTLY DO SUBSIDIES CONTRIBUTE TO MAKING US SICK?

When governments subsidise fossil fuels, they support the use of energy sources that have negative health impacts on people and affect the environment.

If factors such as air pollution or climate change were taken into consideration in the pricing of fossil fuels, it would ultimately result in lower demand, lower supply and a quicker transition to renewable energies. By subsidising fossil fuels, governments are not considering that the “real price” of fossil fuels, including its health bill, is ultimately being paid by society. The damage to the environment translates into unhealthy populations while not giving companies the incentive to invest in renewables.

*Exposure to particulate matter causes a multitude of health impacts.*

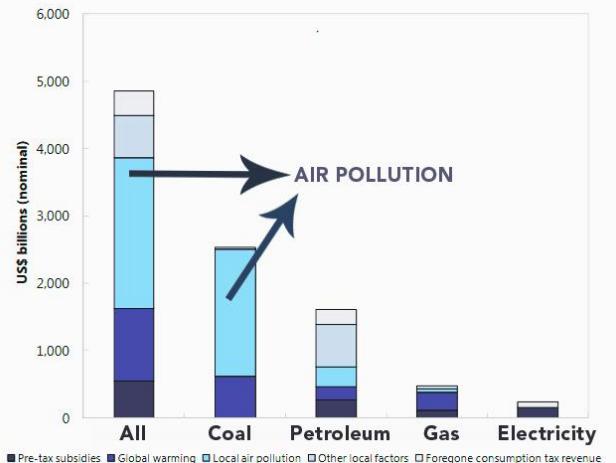


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Unhealthy side effects mostly include local **air pollution** which is also the main externality associated with fossil fuels and especially coal followed by the effect the production has on **the climate** and lastly, other negative **local factors** that may arise from the fossil fuel used.

For most regions worldwide, local environmental damages, especially from air pollution, are responsible for 75 percent of these externalities or unpriced costs. This may be partly due to the fact that the effects of air pollution is more easily measurable than the effect that coal has on the climate, for example.

Figure 1: Main externalities associated with different fossil fuels and their height. Source: IMF, HEAL adapted



## BENEFITS OF ENDING FOSSIL FUEL SUBSIDIES

The benefits are three-fold. Unhealthy fossil fuel energy and the air pollution it creates cause ill-health and premature death in Europe and worldwide, affecting not only the country producing it but crossing borders and harming health in neighbouring countries too (4). According to the IMF, cutting energy subsidies and assuming a counterfactual where energy prices would reflect the true cost of the product, air pollution related deaths in Central Europe would be cut by more than 60 percent. (3)

Ending these subsidies would do even more than producing direct health benefits, such as fewer deaths and chronic conditions. It would also free up money that governments worldwide could spend it on a variety of public services, such as improving health systems or the transition to renewable energies. As a consequence, this would have a further positive effect on the health of citizens through cleaner air and a cleaner environment.

Energy subsidy reform would bring enormous positive impacts with regards to **environmental, health and welfare** aspects of each country, at European level and worldwide.

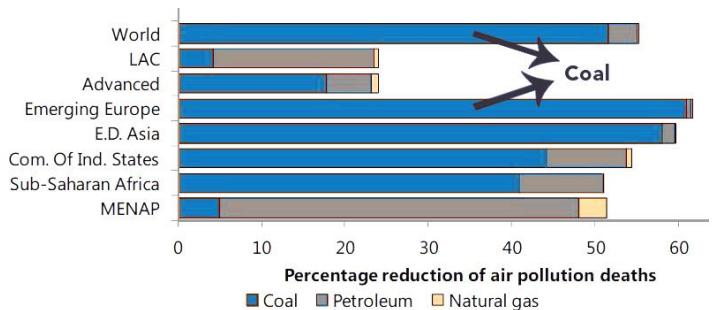


Figure 2: percent reductions in air pollution deaths from removing energy subsidies 2013, IMF.

## PROFILES OF COUNTRIES HEAVILY IMPACTED BY FOSSIL FUEL SUBSIDIES

**Germany, Poland, Turkey and the UK are all not only heavily subsidising the fossil fuel industry but their population suffers greatly from the health consequences of oil, gas and coal.**

### Germany

**Background:** Germany still relies heavily on coal-power generation, which accounts for 42 percent of its energy mix (5). In 2014 it was named the world's tenth largest producer of coal by BP, based on its total annual coal mining quantity (5). Coal power plants in Germany are responsible for over a third of the country's CO<sub>2</sub> emissions and they make up four out of five of the largest emitters in Europe. A HEAL assessment (6) showed that Germany's coal power plants are responsible for the second highest health bill from coal power in Europe, topped only by Poland. Nevertheless, Germany is also a worldwide leader in renewable energies. Energy from renewable sources in the German electricity sector has increased from 6.3 percent in 2000 to about 30 percent in 2014 and the country has set the goal of reaching 80 percent renewable energy by 2050 (5).

**Subsidies:** Despite its engagements in renewable energies with approximately 22 billion US dollars spent on subsidies for renewables in 2013, according to data from the ODI, German health-harming subsidies to fossil fuel production stood at roughly 5.4 billion US dollars in 2014. If we are to include the spending resulting from air pollution and climate change, Germany spends about 1.42 percent of its GDP on supporting the use of fossil fuels (3).

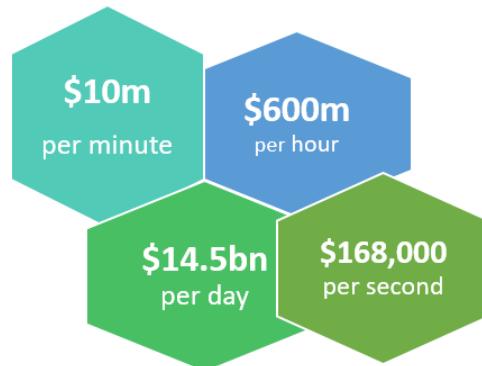
### Poland

**Background:** Poland's power sector is still heavily dependent on fossil fuels, with up to 85 percent of current electricity generated from coal (7). Many of the country's power plants are of low quality, which results in inefficient use and the production of only 30 percent of the potential electrical energy that the coal could be producing. The emissions created through fossil fuel (and mainly coal) generation in Poland, coupled with pollution from transportation, agriculture and domestic heating make Poland a country with one of the worst levels of air pollution in Europe.

The WHO estimated health costs from air pollution in the country to be equal to 20 percent of Poland's GDP (8). Poland is also leading the EU with respect to proposed coal capacity. Current plans are to build a high number of coal plants in the years ahead. This makes it the only EU country to defy the downward trend in coal power generating capacity.

**Subsidies:** Poland, which has a population less than half the size of Germany, subsidised coal power alone with an average 1.5 billion US dollars (6 billion Polish Zloti) a year between 2005-2012 (9). Next to these subsidies, Poland spent more than 9 percent of its GDP supporting and cleaning up after the

fossil fuel industry in 2015, according to IMF calculations. This represents the highest figure for unpriced costs of coal among the four countries included in this briefing. The costs are largely due to Poland's horrific air pollution (3).



True costs of fossil fuel subsidies if externalities are incorporated. Source: IMF, 2015. Copyright: HEAL

### Turkey

**Background:** In Turkey, coal accounted for 28.4% of electricity production in 2015 (10). However, Turkey has been taking critical steps towards coal, mostly to lignite as an indigenous source, to build energy security and reduce foreign dependency. The country has the third highest amount of proposed coal capacity globally, planning to build 80 new plants with a total capacity of 67 GW and only preceded by India and China (2). Turkey emerges as a country with one of the highest rates of premature deaths due to air pollution in Europe. In 2010, 28,924 people are assumed to have died in Turkey from ambient PM and ozone exposure (11).

**Subsidies:** Although most of the proposed plants are still at an early stage of development, Turkey spent 1.5 billion US dollars on subsidies for fossil fuel producers in 2013 and 2014. Coal subsidies in Turkey are available for coal mining to power generation processes, including as VAT and customs duties exemptions, tax reductions, support for national insurance contributions of employers, land allocation.

### United Kingdom:

**Background:** After not having commissioned any new coal plants since 2010, the UK announced in 2015 a plan to phase out coal by 2025 (5). In the UK, fossil fuels are said to cause 1,600 premature deaths, 68,000 additional days of medication, 363,266 lost working days and more than a million incidents of lower respiratory symptoms, which is costing 1.3 to 3.7 billion EUR each year, according to HEAL.

**Subsidies:** Although no new plants have been built and various carbon capture and storage technologies (CCS) have been implemented, the UK has awarded one billion US dollars in national subsidies to major fossil fuel companies in 2013 and 2014 as well as 5.5 billion US dollars in total public finance in the same time period, according to the Overseas

Development Institute (2). If we consider unpriced costs to health and environment, this figure would be ten times higher, mostly due to air pollution (3).

## WHAT IF?

The IMF predicts the following benefits if worldwide subsidies for fossil fuels were cut:

- **2.9 trillion US dollars** increase in worldwide government revenue in 2015, representing 3.6 percent of global GDP.
- More than a 20 percent reduction in global CO2 emissions, which would be a significant contribution to helping to stop a worldwide climate change crisis.
- **1.6 million lives** worldwide would be saved, reducing by half the number of premature deaths caused by air pollution.
- A **2.2 percent increase in GDP**, raising global economic welfare (after accounting for the possibly higher energy prices that consumer would need to pay).

Quoting Christiana Figueres, the former UN climate change chief,

*"The IMF data reveal a simple and stunning truth:  
that fossil fuel subsidy reform alone would  
deliver far more funds than is required for the global  
energy transformation  
we need to keep the world below a 2C temperature."*

Not only would fossil fuel subsidy reform free up money for the transition to renewable energies worldwide, it could also be used to improve health systems and contribute to tackling poverty. Overall, taking fossil fuel subsidies out of the picture can be seen as a public health intervention, helping to get rid of the harmful externalities from energy consumption, such as premature death and chronic disease, and releasing funds for spending on healthier options.

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