Stop and Switch

Suicidal Subsidies

and

The Climate Solution

Climate Emergency Institute

The medical and human rights approach to global climate change

www.climateemergencyinstitute.com

Introduction: the big missing climate solution

Today, we are fixed on a world energy economic scenario that will lead to a global temperature in-crease of at least 2°C before 2050 and 6°C by 2100.

The UN negotiations are deadlocked, and by all accounts will remain so for years. We really are looking at the end of the world, but the issue of govern-ment subsidies to GHG-polluting industries is not on the negotiation agenda.

This article documents the full enormity of world fossil fuel subsidies and the consequences.

Without correcting the GHG-polluting subsidies, planetary catastrophe can only be expected, and there is no more time to waste in order to avoid it.

Stopping direct fossil fuel subsidies alone is not enough to prevent plane-tary catastrophe.

> *Energy subsidies are expensive, dam-age the climate, and disproportion-ately benefit the well- off. Their re-duction can encourage energy effi-ciency, increase the attractiveness of renewable energy, and allow more re-sources to flow to poor people and to investments in cleaner power. (* Cli-mate Change World Bank Group. An Evaluation of World Bank Win-Win Energy Policy Reforms 2009).

Stopping all fossil fuel subsidies (including indirect) and switching direct subsidies (‘Stop and switch’) to clean zero carbon everlasting energy is a ‘no brainer,’ is supported by the economics, and is the only way to a zero carbon world instead of the end of the world.

The lack of pressure in stopping all GHG-polluting subsidies and switching subsidies to the non polluting industries is astounding. There are powerful forces blocking subsidy reform, and as a consequence, only a most powerful voice from us all can make this happen.

It is obviously the duty and in the best interests of us all to make this obvious demand to our governments.

SWITCH THE SUBSIDIES

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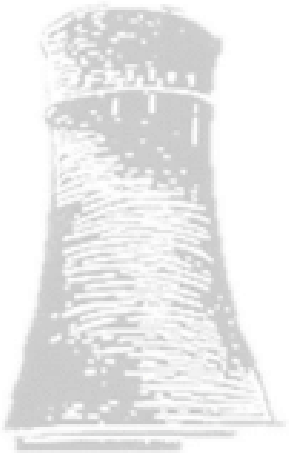
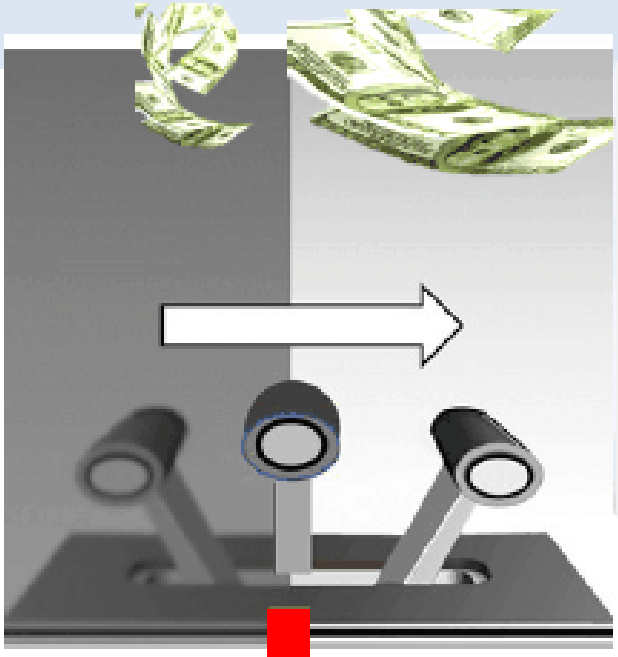
SHIFT THE MARKET





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SWITCH ENERGIES

SAVE THE FUTURE

NOW

Outrageous fossil fuel subsidies: International Energy Agency (IEA)

2008: Fossil fuels get $557 Billion: 12 times the support to renewables

Fossil fuel subsidies between 2006 and 2010: $1,439 Billion

Projected fossil fuel subsidies: $600 Billion/year by 2015 (IEA data)

SWITCH

Fossil Fuel Subsidies

2006 $220 Billion
2007 $350 Billion
2008 $557 Billion
2009 $312 Billion
4-year total $1,439 Billion

Clean Energy Subsidies

Governments in 2008 gave $43-$46 billion of support to renewable energy.... The fossil fuel subsidies were twelve times this support.

2008 subsidies $45 Billion

(The IEA attributes the 2009 drop to the world economic recession.) IEA data

What are subsidies?

A 'negative subsidy' with respect to climate change is any government policy that is a financial incentive to continue to produce or use more fossil fuels, or that results in negative externalities.

'Externalities' is an economic term meaning the costs (social or enironmental) are not accounted for. Economists regard these externalities as indirect sudsidies.

A 'positive subsidy' is a financial incentive to switch from fossil fuel to clean zero carbon energy.

The justification for subsidies is to assist in the early development of an industry that produces an important public good or beneficial externalities.

An argument used for environmentally damaging subsidies is that they help the poor. In the case of energy subsidies, studies have found this is not the case. In any case, global climate change hits the poor in all regions earliest and hardest.

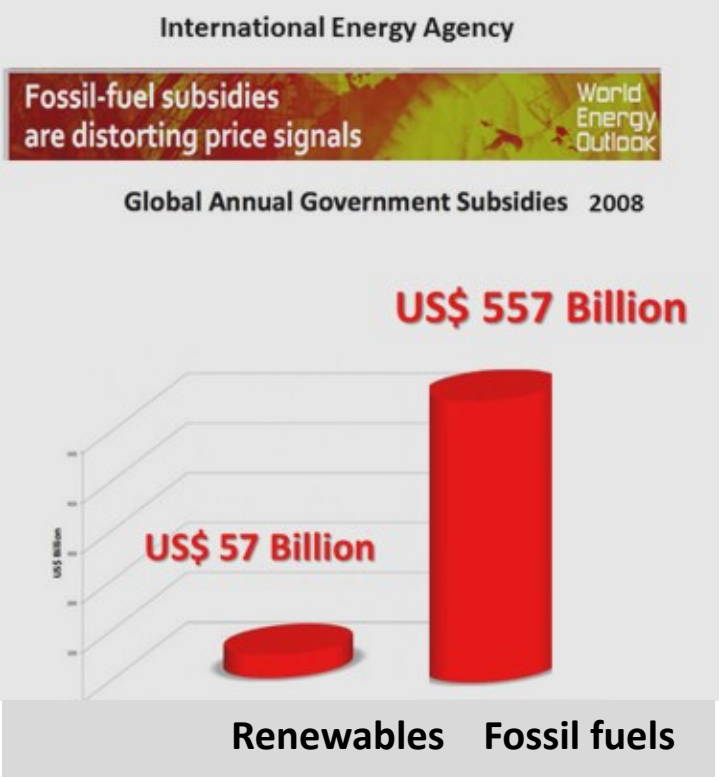
Rising fossil fuel subsidies: IEA, IMF

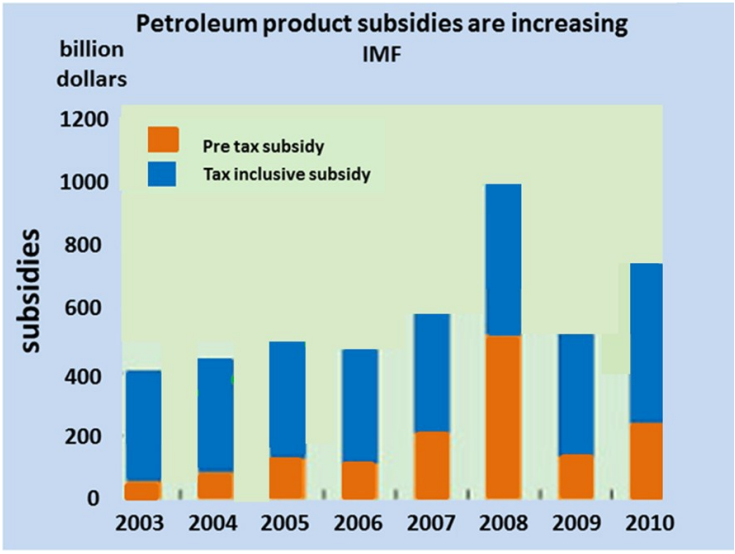
The International Energy Agency has been recommending for many years that the fossil fuel subsidies be reformed.

Instead, they have increased, reaching a record US$ 557 Billion in 2008.

These subsidies are not justified by market economics and they distort market price signals.

What this means is that the government subsidies give the message to the global market economy to continue investing heavily in polluting greenhouse gas emitting fossil fuel energy projects.





More fossil fuels — worst fossil fuels

Now that we are past peak conventional oil, the IEA predicts that energy will be provided by the very worst energy possible in terms of greenhouse gas emissions: like more coal, more tar sands, and now shale oil.

Fossil fuel subsidies are many times larger than the IEA reports

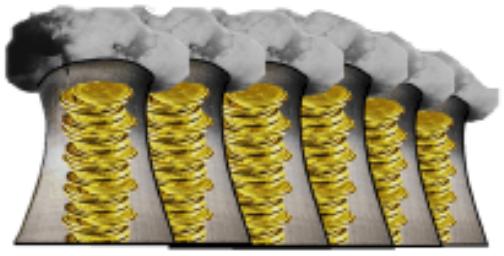
The OECD says the direct fossil subsidies should be phased out, but this will only cut global emissions 10% (H. Mountford, OECD Deputy Director, June 2011). The direct subsidies are a small proportion of all the economic benefits afforded to fossil fuel industries as subsidies.

The full amount of hand outs to the fossil fuel industry is $ trillions

FOSSIL FUEL SUBSIDIES = $ TRILLIONS / YEAR

World Energy Subsidies

FOSSIL FUELS



RENEWABLES

- Direct — **$350 Billion / Year**
- Indirect
  - Tax Breaks — **$425 Billion**
  - Externalities — **$3 Trillion**

Total $3.75 Trillion

Total $45 Billion

climate change mitigation — *switching from fossil fuels to other sources that emit ... no noxious greenhouse gases.*

UNEP

Adding in tax and externalities that are fossil fuel subsidies

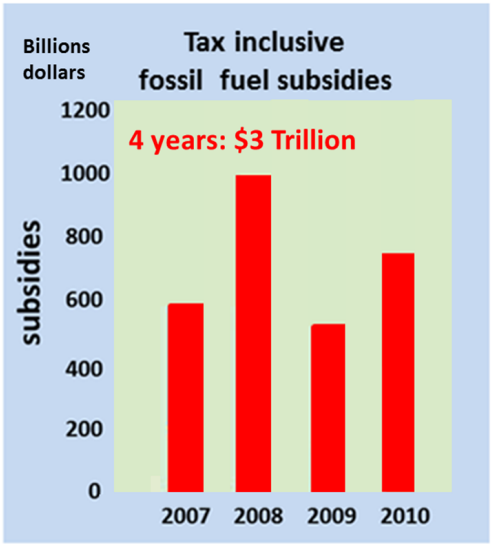
World Fossil Fuel Energy Subsidies are $trillions a year

Tax inclusive oil subsidies amount to over half a $trillion a year.

With externalized costs which are classified as economic indirect subsidies, the amount of fossil fuel subsidies is $trillions a year.

Tax inclusive subsidies IMF

A 2010 IMF report on energy subsidies, *Petroleum Product Subsidies: Costly Inequitable and Rising*, showed that the subsidies to the oil industry are much larger than even the Interna-tional Energy Agency's estimates - by including tax.



Externalities: indirect subsidies

This looks like the fossil fuel industries will soon be getting a trillion dollars a year in subsidies. Actually they are already getting much more.

US externalized costs for coal are $1/2 trillion per year (Full Cost Accounting for the Life Cycle of Coal, P. Epstein 2011). Most of the fossil fuel externalities are from coal. By scaling up US to global GDP (conservatively) this translates to $2 trillion worldwide a year.

That makes $3 trillion a year for all fossil fuels !!

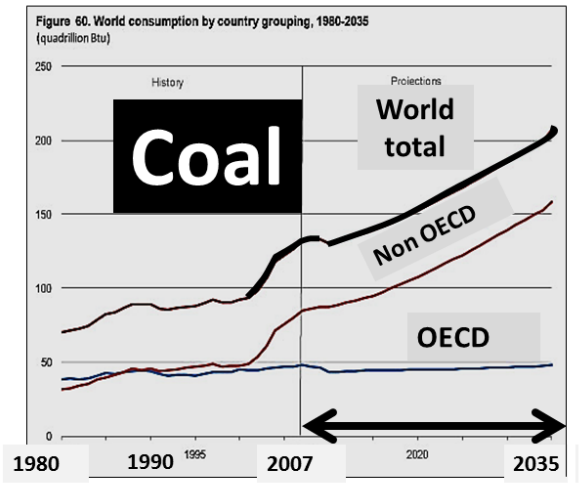
These calculations do not include all the massive committed externalized climate change costs to future generations, so trillions of dollars for sure.

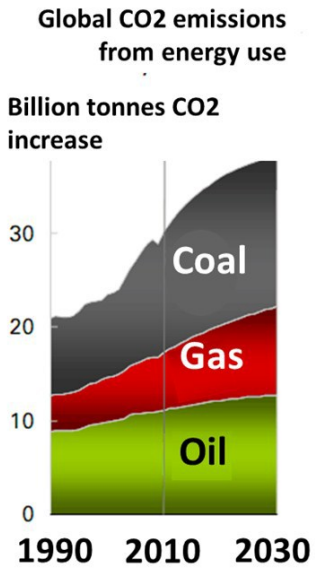
Coal: large externalized costs, large Indirect subsidies, large emissions

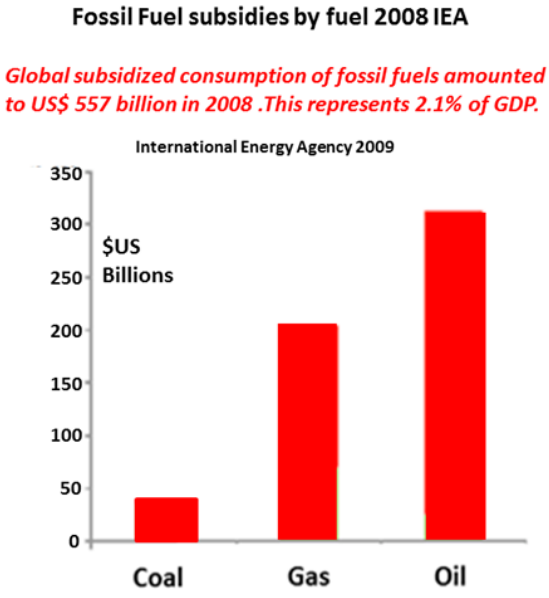
Coal, as the IEA puts it, is projected to remain 'the backbone' of the world energy system, still providing over 20% of world energy from all sources by 2030.

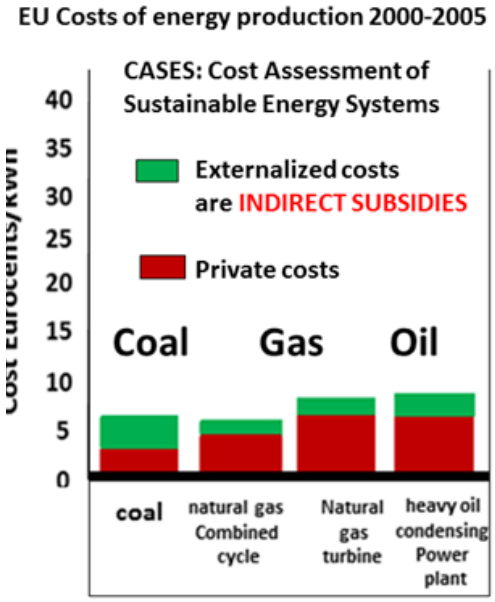
There was a large increase in world coal energy production from 2000, and the US International Energy Assessment projects a 56% increase from 2007 to 2035.

That makes coal increasingly the largest source of CO2 emissions from energy production.









Direct subsidies to coal are much less than other fossil fuels, but it still is cheapest, and forecast to remain so.

That's because the externalized hidden costs of coal are huge indirect subsidies (as recognized by economists). The health and environmental damage that burning coal causes have been well known for decades. Including only these social costs more than doubles the cost of coal, making it uneconomic against wind and geothermal. To prevent global climate catastrophe, therefore, these indirect subsidies are certainly the most important, because burning more and more coalwill certainly cause planetary catastrophe.

Quick look at the climate science: a few essential facts

Stopping and switching subsidies fast is an indispensable imperative by the climate change science.

Here are two things to remember.

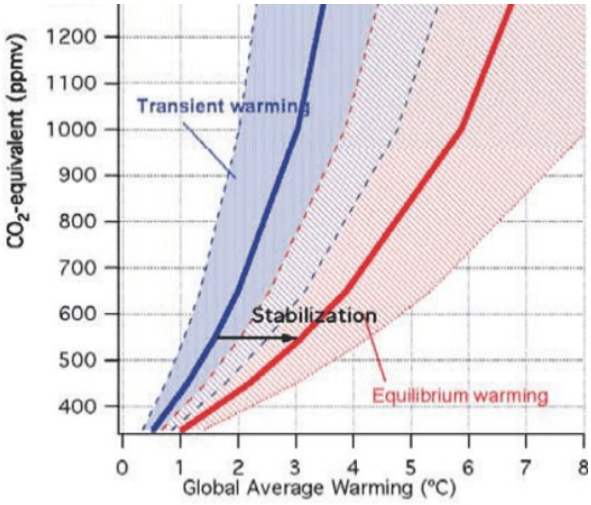
Today's global temperature increase is absolutely committed to double and to last over 1000 years.

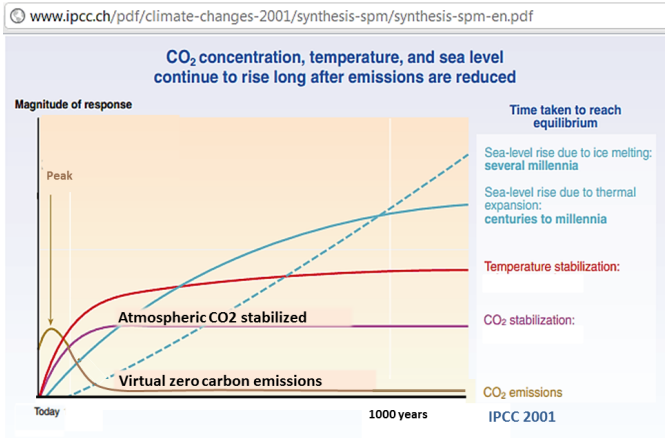
Only stopping all industrial carbon emissions (zero carbon) can stop the global temperature, climate change and ocean acidification continuing to increase.

Zero carbon means all fossil fuel energy must be replaced by clean zero carbon energy- and it can be ,many times over.

Because of time-lags inherent in the Earth's climate, warming that occurs in response to a given increase in the concentration of carbon dioxide ("transient climate change") reflects only about half the eventual total warming ("equilibrium climate change") that would occur for stabilization at the same concentration .

National Research Council,
GHG Stabilization Targets, 2010.



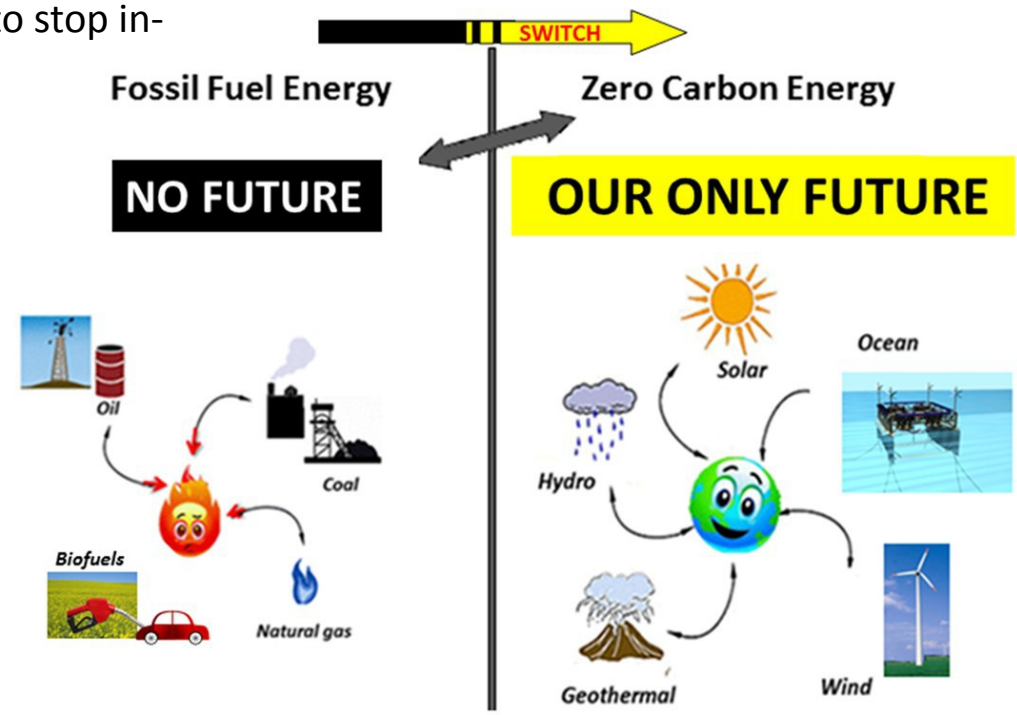


IPCC 2001 climate change model results, cutting carbon emissions to virtually zero

Climate changes that occur because of carbon dioxide increases are expected to persist for thousands of years, even if emissions were to be halted at any point in time. … models show … long-term stabilization requires nearly 100% reduction. (NRC 2010)

Zero carbon = zero subsidies to fossil fuels

Only zero carbon emissions can allow the global temperature, climate change and ocean acidification to stop increasing. A low-carbon economy will not save us. The reason is the highly persistent and cumulative nature of carbon dioxide emissions in the atmosphere (20% last 1,000 years).



Any CO2 emissions will lead to a continued rise in atmospheric carbon dioxide concentration. The makes the overriding policy stopping all use of fossil fuels, totally replacing them by zero carbon energy.

For this to happen, obviously all fossil fuel subsidies have to stop, especially the huge, hidden indirect subsidies.

In fact, only in the case of essentially complete elimination of emissions can the atmospheric concentration of CO2 ultimately be stabilized at a constant level. IPCC 20007 WG1 Question 10.3.

Projections are, that removing only the direct government fossil fuel subsidies will only slow the continued rate of increase of global fossil fuel consumption.

The energy market must switch so the direct subsidies have to be switched to renewables. Any delay in starting the momentous task of rebuilding the world for clean zero carbon everlasting energy makes it more unlikely that we will be able to do so in time to prevent planetary catastrophe.

Energy prices: only stopping and switching all subsidies can stop catastrophe

Planetary catastrophe is certain without zero carbon emissions.

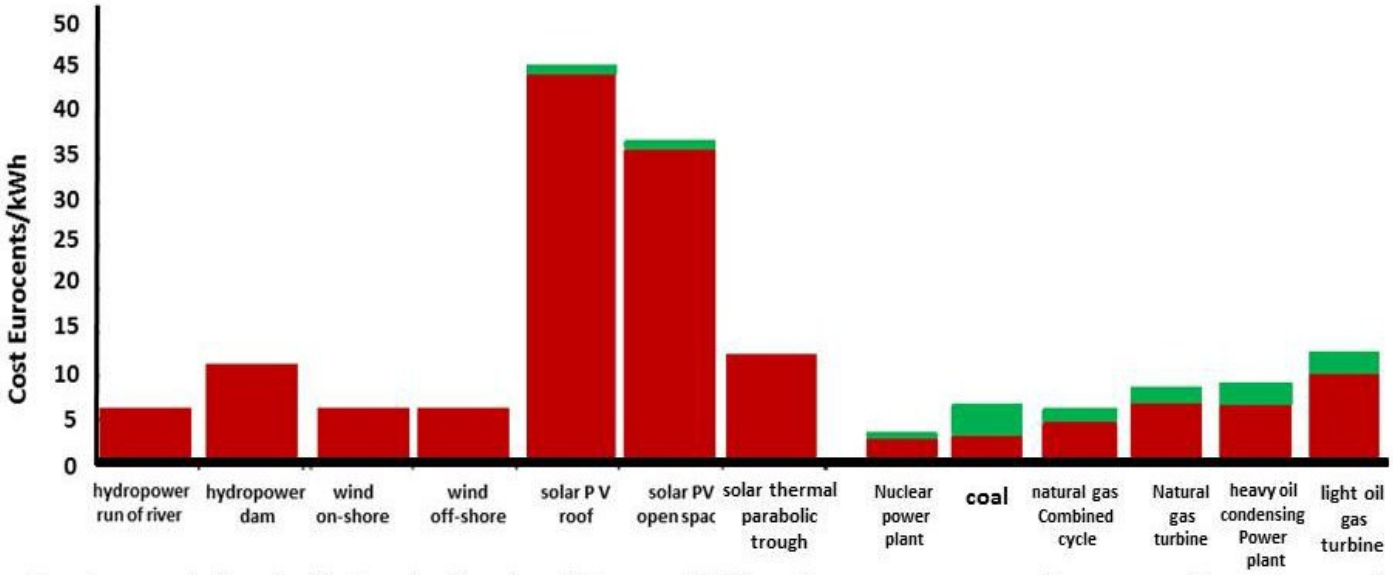
That is why only a total stop and switching works.

That means charging corporations to cost of their pollution that is a huge indirect subsidy.

By switching direct subsidies to clean zero carbon energy production, clean energy will replace fossil fuels by market preference.

The externalized costs making up the indirect fossil fuel subsidies must be stopped in order for coal to be rapidly replaced by clean energy.

For the cost of solar voltaic (which is falling) to become cost competitive, the hundreds of billions of dollars in direct fossil fuel subsidies must be switched to clean energy. That will allow rapid development of new state-of-the-art solar voltaic technologies, bringing down today's relatively high market costs (compared to coal) by a large amount.



Development of a set of full cost estimates of the use of different energy sources and its comparative assessment in EU countries.

www.feem-project.net/cases/.../D_06_1%20part2%2008_09.pdf

Reports for years have said stop fossil fuel subsidies

Over the past few years studies on fossil fuel subsidies and climate change have been published on energy subsidies and the hidden costs of fossil fuels. These are the International Energy Agency (IEA), OECD, UNEP, the IMF, the World Bank, the National Academies of Science, and the Academy of Sciences for the Developing World.

There are also reports going back many years. They all agree that fossil fuel subsidies are damaging with respect to environment, climate, societies and economies. They agree that extremely large indirect subsidies have not been counted in yet. There is no full tally of all the subsidies together. None of them actually recommend stopping all fossil fuel subsidies and switching subsidies.

There is a long record that stopping fossil fuel subsidies is a major climate change mitigation measure. By not demanding subsidies be switched to clean zero carbon everlasting energy we are inviting the end of civilization from the collapse of agriculture and energy resources (we are past peak oil). The upside of the enormous subsidies is that ‘stop and switch’ is an enormously powerful measure to switch the market away from fossil fuel energy and into zero carbon clean energies and prevent global climate catastrophe.

By accepting these enormous subsidies to the fossil industries we are accepting and the certain suffering and death of billions from terrible losses of water, food, and health and global climate catastrophe .

It has to happen completely starting now - not by 'phasing in' 'subsidy reforms' which has been recommended over the past twenty years and it has to be now because or our emergency situation.

There is no justification for continuing fossil fuel subsidies for one more year. If anything the polluting corporations should be paying back for the enormous damages knowingly incurred.