

Fuel savings can pay for green energy shift

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Street lamps powered by wind and solar energy line the side of a road leading from Athi-river town in Machakos county, approximately 25 kilometres from the Kenyan capital Nairobi, on August 19, 2015

Making the global switch from climate-altering fossil fuels to renewables by 2050 would require an extra \$1 trillion (880 billion euros) per year, but the bill will be covered by lower energy costs, a Greenpeace report said Monday.

On top of some 600 billion euros per year already earmarked by governments and businesses for investment in renewables, the extra funding would be needed to build enough green [energy](#) generators to replace coal-, oil- and gas-fired power stations, it said.

The investment would be more than offset by annual savings of nearly \$1.1 trillion in fuel costs, said the report entitled "Energy (R)evolution", compiled by experts from Greenpeace and the German Aerospace Centre.

Wind turbines, for example, run on a "free" energy source—the wind, while a power station has to be constantly refuelled with expensive coal or gas.

"Because renewables don't require fuel, the savings... (until 2050) are \$1.07 trillion per year, so more than meet the costs of the required investment," said a Greenpeace statement.

The world's nations are seeking to curb rampant emissions of climate-altering [greenhouse gas emissions](#) in a bid to slow global warming, but the cost of the transformation is often held up as a major obstacle, especially for poor and developing countries.

"The solar and wind industries have come of age, and are cost-competitive with coal," said the report's lead author Sven Teske of Greenpeace, and warned the fossil fuel industry was "moving rapidly into irrelevance".

"Every dollar invested in new fossil fuel projects is high risk capital which might end up as stranded investment."

The report highlighted that as many as 9.7 million people could have jobs in the solar power industry by 2030—more than 10 times as many

as today and equivalent to the current number of jobs in the coal sector.

Wind industry jobs could increase tenfold to nearly eight million.

'Economically favourable'

The researchers based their forecasts on UN estimations for economic development and population growth, and assumed the world's energy system would be completely "decarbonised" over the next 35 years.

They also considered rising energy demand in fast-growing Africa and Asia, offset by lower demand in rich nations resulting in a peak of global demand by about 2020.

And the study assumed that renewable energy costs come down as the technology and availability improves.

In the short term, electricity could become slightly more expensive—by about \$0.02 per kilowatt hour, said the authors.

But "as prices rise for conventional fuels, these costs will become economically favourable across all world regions by 2030, and by 2050 the fuel cost savings will be 1.7 US cents/kWh," said the report.

Last week, environmental advocates including wildlife documentary filmmaker David Attenborough and climate economist Nicholas Stern, called for investment in research and development to make renewable energy cheaper than coal within 10 years.

And a recent study in the journal *Science Advances* warned that if mankind burns all the fossil fuel left on Earth, releasing some 10,000 billion tonnes of carbon dioxide into the atmosphere, virtually all of Antarctica's ice would melt, sea levels would rise by tens of metres to

flood entire cities, and temperatures would skyrocket to unbearable levels.

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