

Published: 7 May 2012

Wind power cheaper than PVs for some developing countries

A Swiss study of alternative energy in six developing countries has found that generating wind energy can be at least twice as cheap as solar photovoltaic (PV) energy production.



Credit: CSIRO. Photo by Gregory Heath

The findings, published in [Nature Climate Change](#) could help inform debates on global and national financing initiatives aimed at reducing greenhouse gas emissions in developing countries.

The researchers, from the Swiss Federal Institute of Technology in Zurich, studied the baseline costs of current energy sources in Brazil, Egypt, India, Kenya, Nicaragua and Thailand – including the cost of national fuel subsidies – and then investigated the relative costs of switching to wind or solar electricity.

These countries were chosen due to their variety in size, state of economic development and current variation in energy use.

Broadly speaking, the authors said that in 2010, PV electricity costs were 2.2 to 4.5 times higher than wind power in these countries, and that the cost gap between the two technologies could be expected to continue until at least 2020.

'The implication is that the cost of wind and PV generation with that of existing and future conventional power plants must be compared for each country,' says lead researcher Dr Tobias Schmidt.

However they found significant national differences in the cost of switching from conventional energy to wind power in the six countries studied.

They found that Kenya and Nicaragua would save money by switching to wind because their baseline energy costs are high and their wind costs would be low.

A similar switch from conventional energy would be far higher in Brazil, India and Thailand, and lower in Egypt, due to different national costs relating to wind energy and the varying contribution of high-emission oil or coal plants to total electricity production.

'Fossil fuel subsidies should [therefore] be explicitly included in the calculation, as they raise the incremental cost of renewable energy

technologies,' says Dr Schmidt, adding that transitioning to renewable energy sources would need to be more gradual in countries where the elimination of fuel subsidies might lead to higher fuel prices and voter anger.

The researchers note that there is little available data on the costs of different renewable energy technologies in developing countries, and that such information is needed to allocate funding through such mechanisms as the UN's Green Climate Fund — which is expected to raise US\$100 billion per year by 2020.

'This study nicely demonstrates to policymakers how to make informed decisions about renewable energy opportunities by using detailed, data-driven cost comparisons for generating electricity in individual countries,' says Oliver Waissbein from the Energy and Environment Group of the UN Development Programme.

Source: *SciDev.Net*

From **ECOS** online <http://www.ecosmagazine.com/?paper=EC12277>