

New renewables to power 40 per cent of global electricity demand by 2050

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With adequate financial and political support, renewable energy technologies like wind and photovoltaics could supply 40 percent of the world's electricity by 2050, according to findings from the International Scientific Congress "Climate Change: Global Risks, Challenges & Decisions." However, if such technologies are marginalized, its share is likely to hover below 15 percent.

This research was presented at a press conference by Peter Lund of the Helsinki University of Technology's Advanced Energy Systems in Espoo, Finland, ahead of the scheduled congress session titled, "Renewable Energies: How Far Can They Take Us?"

"Our findings demonstrate that with global political support and financial investment, previous notions that the potential for renewables was in some way limited to a negligible fraction of world demand were wrong," said Lund. "If we prioritize and recognize the value of [renewable energy](#) technologies, their potential to supply us with the energy we need is tremendous."

Previous projections put renewables' share at only 12 percent by 2030. Other research within the same congress session further supports the viability of renewables, examining closely the limitations and potential of wind, biomass and biofuels.

According to Erik Lundtang Petersen of Risoe DTU's [Wind Energy](#) Department in Roskilde, Denmark, in order for the wind sector to

deliver its full potential, it must focus on efficiently delivering, installing and connecting large amounts of wind power to the grid, with strong concern for reliability, availability and accessibility of the turbines.

"We have identified specific areas of priority for the wind sector to effectively deliver the overall objective of cost reductions," said Petersen. "Research areas including turbine technology, wind energy integration and offshore deployment will be crucial to maximizing future growth."

Within biofuels and biomass, research conducted by Jeanette Whitaker of the Centre for Ecology and Hydrology in Lancaster, UK found that second generation biofuels, such as ethanol from woody crops/straw, had substantially lower energy requirements and greenhouse gas emissions than first generation biofuels, such as ethanol made from foodstuffs, for example wheat and sugar beet.

"These findings are important and relevant, as the current biofuel debate has centered on the issue of the competing need for crops to be used for food versus fuel," said Whitaker.

Source: University of Copenhagen

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