

Chapter 9: The Potential for Increasing the Contribution of Renewable Energies towards Replacing Fossil Fuels is too Small to Justify the Expenditure of Government Research Funds

Abstract:

To ensure future world energy supplies and to reduce carbon emissions an urgency is developing to find replacements for fossil fuels. Renewable energies have serious limitations that prevent a significant increase in their contribution to replace fossil fuels. This paper examines the technical reasons why the renewable energies, i.e., solar, biomass wind, and hydro, currently supply only about 9% of current world energy demand. This percentage dropped from almost 100% three hundred years ago and is still falling. The limitations of renewable energies are such that they are useful in only relatively small niche applications. Hydro is no exception even though it provides electricity when required, is about 75% of total renewable energy, and currently contributes about 7% of world primary energy demand. Research funds must be withdrawn from renewable energies and directed towards areas with potential to replace significant quantities of fossil fuels.

A copy of this paper is available upon request.