

Renewable Energy Resource Potentials in Pakistan: The Way Forward

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Pakistan is bestowed with plenty of renewable energy resource potentials that includes wind, water, geothermal etc. It is time to better exploit these resources in an efficient way so that maximum benefit is provided to society for sustainable development. As per statistics, Pakistan's total installed power generation capacity is 43,775 MW, of which 59% of energy comes from thermal (fossil fuels), 25% from hydro, 7% from renewable (wind, solar and biomass), and 9% from nuclear (NEPRA). Wind energy is one of the main source, which can be exploited efficiently. According to Pakistan Meteorological Department, Pakistan's coastal belt at 60km (Gharo-Keti Bandar) and 180 km long, with an exploitable potential of 50,000MW of electricity generation through wind turbines. As per report of the World Bank, Pakistan possesses a solar power potential of 40 GW and has set a goal to achieve 20% of its electricity from renewable sources by 2025. Another potential source of energy is shallow- and deep-seated geothermal energy resources, where large bodies of deep-seated reservoirs are found in Gilgit-Baltistan. According to Pakistan's geothermal profile, the country can potentially generate around 15,000 megawatts of power to meet its power challenges. In conclusion, using the renewable resource potentials, Pakistan can not only overcome energy deficiencies but also play its important role in reducing greenhouse gas emissions.