Jonathan James, Innov Ener Res 2020, 9:6

Editorial Note for Innovative Energy & Research

Short communication Open Access

Renewable energy and its Environmental impact

Dr. Jonathan James

Renewable energy resources and significant opportunities for energy efficiency exist over wide geographical areas, in contrast to other energy sources, which are concentrated during a limited number of nations. Rapid deployment of renewable energy and energy efficiency, and technological diversification of energy sources, would end in significant energy security and economic benefits. it might also reduce environmental pollution like pollution caused by burning of fossil fuels and improve public health, reduce premature mortalities thanks to pollution and save associated health costs that quantity to many hundred billion dollars annually only within the us. Renewable energy sources, that derive their energy from the sun, either directly or indirectly, like hydro and wind, are expected to be capable of supplying humanity energy for nearly another 1 billion years, at which point the anticipated increase in heat from the Sun is predicted to form the surface of the world too hot for liquid water to exist.

As of 2019, however, consistent with the International Renewable Energy Agency, renewables overall share within the energy mix (including power, heat and transport) must grow sixfold faster, so as to stay the increase in average global temperatures "well below" 2.0 °C (3.6 °F) during this century, compared to pre-industrial levels.

As of 2011, small solar PV systems provide electricity to a couple of million households, and micro-hydro configured into mini-grids serves more. Over 44 million households use biogas made in household-scale digesters for lighting and/or cooking, and quite 166 million households believe a replacement generation of more-efficient biomass cookstoves. [needs update] United Nations' eighth Secretary-General Ban Ki-moon has said that renewable energy has the power to lift the poorest nations to new levels of prosperity. At the national level, a minimum of 30 nations round the world have already got renewable energy contributing quite 20% of energy supply. National renewable energy markets are projected to still grow strongly within the coming decade and beyond, and a few 120 countries have various policy targets for longer-term shares of renewable energy, including a 20% target of all electricity generated for the ecu Union by 2020.

Renewable energy often displaces conventional fuels in four areas: electricity generation, hot water/space heating, transportation, and rural (off-grid) energy services

Power generation

By 2040, renewable energy is projected to equal coal and gas electricity generation. Several jurisdictions, including Denmark, Germany, the state of South Australia and a few US states have achieved high integration of variable renewables. for instance , in 2015 wind generation met 42% of electricity demand in Denmark, 23.2% in Portugal and 15.5% in Uruguay.

Heating

Solar water heating makes a crucial contribution to renewable heat in many countries, most notably in China, which now has 70% of the worldwide total (180 GWth). Most of those systems are installed on multi-family apartment buildings and meet some of the recent water needs of an estimated 50–60 million households in China. Worldwide, total installed solar water heating systems meet some of the water heating needs of over 70 million households. the utilization of biomass for heating continues to grow also . In Sweden, national use of biomass energy has surpassed that of oil. Direct geothermal for heating is additionally growing rapidly. the most recent addition to Heating is from Geothermal Heat Pumps which give both heating and cooling, and also flatten the electrical demand curve and are thus an increasing national priority.

Transportation

A bus fueled by biodiesel: Bioethanol is an alcohol made by fermentation, mostly from carbohydrates produced in sugar or starch crops like corn, sugarcane, or sorgo . Cellulosic biomass, derived from non-food sources like trees and grasses is additionally being developed as a feedstock for ethanol production. Ethanol are often used as a fuel for vehicles in its pure form, but it's usually used as a gasoline additive to extend octane and improve vehicle emissions. Bioethanol is widely utilized in the USA and in Brazil. Biodiesel is produced from oils or fats using transesterification and is that the commonest biofuel in Europe.

The term "solar vehicle" usually implies that solar power is employed to power all or a part of a vehicle's propulsion. solar energy could also be also wont to provide power for communications or controls or other auxiliary functions. Solar vehicles aren't sold as practical day-to-day transportation devices at the present, but are primarily demonstration vehicles and engineering exercises, often sponsored by government agencies. High-profile examples include Planet Solar and Solar Impulse.