Need of renewable energy sources

Need of renewable energy sources

Renewable energy is good for the planet and for people, but what is it exactly? From solar to wind, find out more about the world"s fastest-growing energy sources and how we can use them to benefit people and communities, the climate and the environment, and the economy.

These resources - such as sunlight, wind, rain, tides, waves, biomass, and thermal energy stored in the earth"s crust - are available, in one form or another, across the globe. These energy sources are not only renewable and inexhaustible, they also emit fewer greenhouse gases and can minimise environmental impacts. Renewable energy can also be harnessed to produce other energy carriers, such as hydrogen.

Fossil fuels – oil, coal, and gas – cannot replenish as fast as we are burning them, while their extraction and production emits planet-heating greenhouse gases and pollution that threatens human health.

Renewables have become more developed and affordable over time and have been growing faster than all other energy forms since 2011. Renewable energy had another record-breaking year in 2023, with installed power capacity growing by 36% to reach 473 gigawatts (GW). Renewables now account for almost 13% of our total energy use (see figure, "Total Final Energy Consumption by Source") and 30% of our electricity comes from renewable sources. The growing use of electricity in agriculture, buildings, industry and transport has also enabled greater integration of renewables.

Despite consensus that a move from fossil fuels to renewable energy is needed, renewables still face significant barriers and unfair competition with heavily subsidised fossil fuels. As a result, the world still relies predominantly on fossil fuels to obtain energy. Meanwhile, the pollution caused by fossil fuels has reached record levels.

All energy sources have an impact on our environment, and renewable energy is no exception. While each renewable energy source has its own specificities and trade-offs, the advantages over the devastating impacts of fossil fuels are undeniable: lower use of water and land, less air and water pollution, reduced wildlife and habitat loss, and far fewer greenhouse gas emissions.

Fossil fuel-based road transport, industrial activity, and power generation (as well as the open burning of waste in many cities) are the greatest sources of air pollution and greenhouse gases globally. In many developing countries, the use of charcoal and wood for heating and cooking also contributes to poor indoor air quality. According to studies by the World Health Organisation, the presence of particles and other air pollutants in urban skies are responsible for huge health impacts, millions of premature deaths, and staggering economic costs.

Renewable energy sources produce significantly lower emissions throughout their entire lifecycle compared to

fossil fuels. Importantly, during their operation, they have minimal to no impact on both air quality and greenhouse gases. Replacing the current fossil fuel-based energy system with a renewables-based system is the most urgent and efficient way to tackle harmful emissions and air pollution.

In many parts of the world, renewable energy technologies (particularly wind and solar) are already more cost-effective than fossil fuels. The levelised cost of electricity (LCOE) for renewable technologies continue to decline rapidly as seen in the above figure.

Unpredictable energy markets and geopolitical uncertainty have moved energy security and infrastructure resilience to the forefront of many national energy strategies. Geopolitical strife and upheavals often come with increasing energy prices and reduced access to resources, threatening the security of energy supply. Since renewable energy is produced locally and reduces the need for energy imports, it is less affected by geopolitical crisis, price spikes, or sudden disruptions in the supply chain, thereby enhancing national and regional energy security.

Deployment of renewables creates employment opportunities and contributes to growth in gross domestic product, largely through the expansion of renewable energy manufacturing and deployment. Renewable energy had created more than 12.7 million jobs globally as of 2021 (see figure, "Global Renewable Energy Employment"). The employment potential from renewables far exceeds expected job losses in the fossil fuel industry, while an estimated 70% of jobs in the oil and gas industry overlap with the skills needed for the energy transition.

Renewables can also play a key role in reducing gender inequality, for instance by creating jobs and entrepreneurial opportunities for women. On a global scale, the renewable industry has a higher share of female employed, with 32% of the workforce being women, compared to 22% in the oil and gas industry.

Contact us for free full report

Web: https://sumthingtasty.co.za/contact-us/
Email: energystorage2000@gmail.com
WhatsApp: 8613816583346