Renewable Energy Consumption in India

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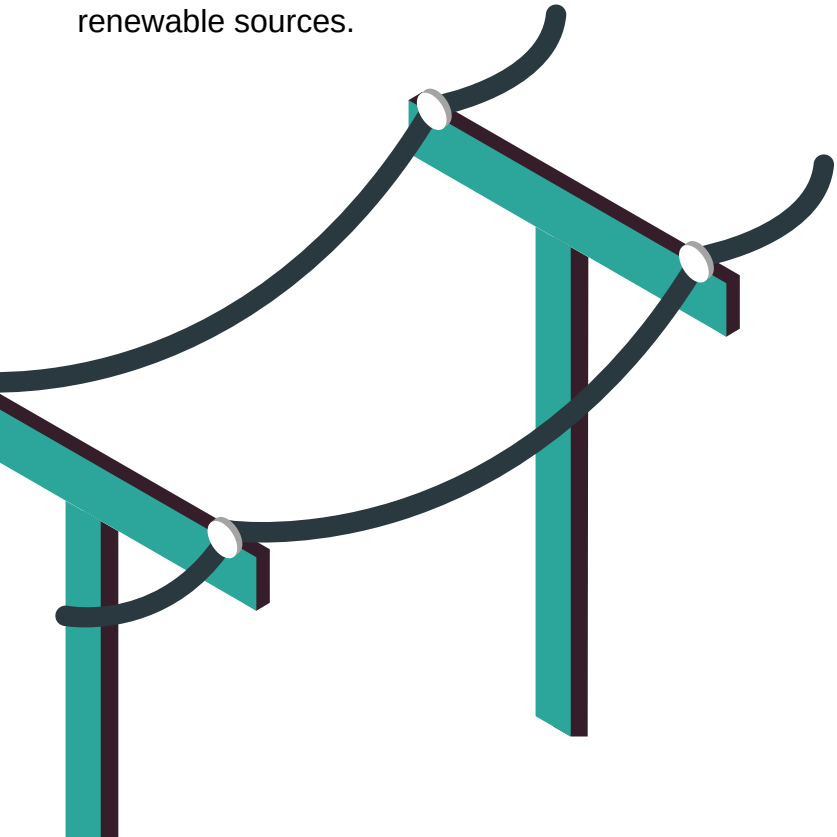
In recent times, there have been rapid developments in the field of technology as well as industries. This has certainly led to a drastic escalation in demand for energy across the world. Our nation too has been part of the phenomenon, which is evident from the fact that India's energy consumption has grown by 5.5 percent per annum since 1980.

In the coming times, the energy requirements of the country are expected to rise owing to technological advancement as well as the high population growth of India. Since the last decades of the twentieth century, the focus has been placed on the depleting energy resources and the environmental hazards of using certain sources. This has led to a major shift towards the use of renewable energy sources as alternatives. It is evident that India is fairly rich in various renewable sources. The energy production from resources like hydro, solar, wind and biomass have emerged as significant contributors to the total energy production capacity. India today stands as the third-largest renewable energy producer in the world, with around 38% of its energy capacity coming from renewable sources.

Source:Kind PNG



The nation is moving forward with a target of producing 175 GW by 2022 and 500 GW by 2030 from renewable energy. A number of renewable energy technologies (RETs) are now well established in the country. India was the first country in the world to set up a ministry of non-conventional energy resources(Ministry of New and Renewable Energy), in the early 1980s. There exist several other ministries and departments to deal with individual renewable energy sectors. At present, India exhibits the 4th largest installed capacity of wind power and the 5th largest installed solar capacity in the world.

As of 2021 the total installed capacity for renewable energy in India is 96.95 GW with the division as follows: Wind power (39.44 GW), Solar power (41.09 GW), Biopower (10.34 GW) and small hydropower (4.79 GW). There has been significant growth in these fields in the last few years. India is also home to some of the world's largest solar parks, along with various wind power projects. The government has constantly promoted the production as well as consumption of renewable energy through various policies and programs in order to facilitate the process.Such an excellent rate of production has undoubtedly influenced the rate of consumption too. Renewable energy serves as the main source of electricity. According to some reports, India has undertaken arguably the fastest rate of electrification the world has witnessed, and these demands have been essentially fulfilled by renewable energy.

Solar and wind resources account for around 29% of annual electricity generation in Karnataka,20% in Rajasthan,18 % in Tamil Nadu and 14% in Gujarat in the financial year 2020-21. Renewable energy has been used to counter the high-priced and non-environment favourable sources such as fossil fuels. India's dependence on other countries for the import of oils causes huge investment of money, which has been aided by the introduction of renewable alternatives. The switchover to CNG from traditional fuels for transportation in the National Capital is a great example of renewable energy consumption. In addition to consumption at a bigger level, it is also important to highlight the usage of renewable sources at the local community level. A large number of households in states like Gujarat, Uttarakhand, Karnataka are equipped with solar rooftops for energy generation. Also, through various government programs, electricity has been provided to villages and towns through solar and hydro resources. Thus, in total, renewable energy has certainly witnessed growing consumption.