

# With renewed vigour

**Focussing on renewable resources, India is exploring various energy-efficient alternatives to combat climate change**

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India is a shining example of the transformative potential of renewable energy. The country has set out on an ambitious goal to change its energy paradigm and create a greener and more sustainable future. From the sun-drenched plains of Gujarat and Rajasthan to the breezy shores of Tamil Nadu, several geographical locations are emerging as the sites for production of renewable energy through solar power, wind power, hydropower, biogases *et al.* At the same time, the rising temperatures and climate change as a result of overconsumption and unhinged carbon emission, are making our planet less habitable. The World Environment Day, celebrated on June 5, is the fitting occasion to address the crucial concerns related to ecology and human life across the globe.

## LEADING FROM THE FRONT

India has made great strides in the field of renewable energy, and its accomplishments are nothing short of remarkable. In order to meet its enormous energy needs while lowering its carbon impact, the nation is quickly becoming a global leader in harnessing the energy of the sun, wind, and water. Dipak Parmar, an operations manager at a wind energy company, shares, "I have been working in the renewable energy sector since the last 18 years. At present, the country requires 30 to 80 gigawatts of power and collectively through renewable resources we are generating 9 gigawatts. More turbines are being installed in the wind energy sector to meet the existing demand. Also, the state and central government are also playing a pivotal role to speed-up the shift towards renewable resources by providing subsidies to investor in these industries."

**With a view to meeting its enormous energy needs while lowering its carbon impact, India is emerging as a global leader in harnessing the energy of sun, wind, and water**

## SYSTEMIC CHANGE

Solar power is one of the most promising resources in India's transition to renewable energy. The nation's solar capacity has experienced un-

paralleled growth, with installations rising daily. Shrushti Sharma, an environmental science student, says, "The government's vigorous campaigns have been a game-changer to encourage solar energy through incentives, subsidies, and legislation. Rooftop solar panels are being adopted in residences, workplaces, and manufacturing facilities, enabling people to actively participate in the green revolution while also producing clean energy."

With the Charanka Solar Park, the largest solar park in the world, Gujarat stands out as a solar powerhouse. This enormous solar farm covers thousands of acres and utilises the scorching sunlight to produce incredible amounts of electricity. Such programmes not only lessen India's reliance on fossil fuels but also increase economic growth, open up countless job possibilities, and cut pollution. Dhaval Chavda, a science educator, shares, "It is important to note that along India's coastline, where massive wind turbines gracefully whirl to produce clean, endless

electricity, another success story in renewable energy is being written. To advance their sustainable development objectives, several states have tapped into the power of the wind."

## PROMISING AVENUES

In recent years, the renewable energy industry has emerged as a key driver of job growth, providing millions of Indians with work prospects. The industry, which includes everyone from engineers and technicians to skilled labourers and project developers, has boosted economic growth and helped India move closer to a sustainable and inclusive economy. However, challenges like the complex technological obstacles that are posed by the intermittent nature of renewable energy sources and the requirement for grid integration still exist. Ensuring a seamless transition to a future powered by renewable energy, the nation continues to invest in cutting-edge energy storage technologies and grid management systems.



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