



Energy – A Key Driver of Socio-Economic Growth

Sumant Sinha

As the Indian economy continues to grow at a rapid pace, one of the foremost challenges for the Government has been to ensure that supply of energy is sufficient to meet the steadily rising demand. As in other developing economies, access to affordable, stable and sustainable energy supply, is essential for maintaining a high growth trajectory. Energy access also enables the fruits of economic growth to trickle down to the bottom of the pyramid – transforming lives of the disadvantaged sections of society. For these reasons, the criticality of

the energy sector, especially for a developing economy like India cannot be over-emphasised.

India is the sixth largest economy in the world and is poised to become the second largest economy by 2030. It is also the third largest consumer of energy in the world, with demand rising by five percent annually. With energy demand set to double by 2040, India needs a robust and healthy energy sector. Consequently, the Government has rightly accorded top priority to the energy sector, recognizing the transformational impact that energy access can have on the country's socio-economic

fabric. There is empirical evidence which links energy consumption to rise in the Human Development Index, showcasing energy's role in influencing the many factors, which encompass human well-being. UN Sustainable Development Goal 7 pertaining to Access to Clean and Affordable Energy, has undeniable positive spill-overs in the achievement of other SDGs, including those pertaining to gender equality, poverty elimination, clean water and sanitation, and most importantly, environmental sustainability.

More than one-quarter of our population or about 311 million

The author is Founder, Chairman & Managing Director, ReNew Power.

people, the vast majority of whom live in rural areas, still lack an electricity connection. Less than half of all households in the poorest income group have electricity and even those with a connection have to deal with sporadic supply. Another key issue is the per unit cost of power, that determines whether it is affordable for households that need it most. In 2017, the NDA Government launched the Saubhagya scheme targeting universal electrification and till date it has covered more than 99% of rural households, thus ushering a new era of progress. Similarly, on the distribution side, a major deterrent has been the poor financial and operational health of state discoms affecting their performance. The Government has announced the UDAY scheme to spark a financial revival of discoms, which would in turn help revitalize the entire sector. While focusing on energy security, equally important is to ensure that a bulk of it is generated sustainably, to help India honour its global commitments related to cutting down on carbon emissions. Since 2014 the Government has focused on creating a favourable policy environment for boosting the renewable energy sector, with an eye on developing renewables as a cleaner, better source of energy. This has paid rich dividends with India steadily increasing its renewables

Decentralized, clean energy solutions can greatly enhance the efficiency of primary health services delivery to the marginalized, low income sections of the population residing in remote corners of the country. As the healthcare ecosystem in India gets increasingly digitized, energy access will accelerate the growth of tech enabled services like telemedicine and mobile health applications, and bring quality healthcare to the doorstep of the common man.

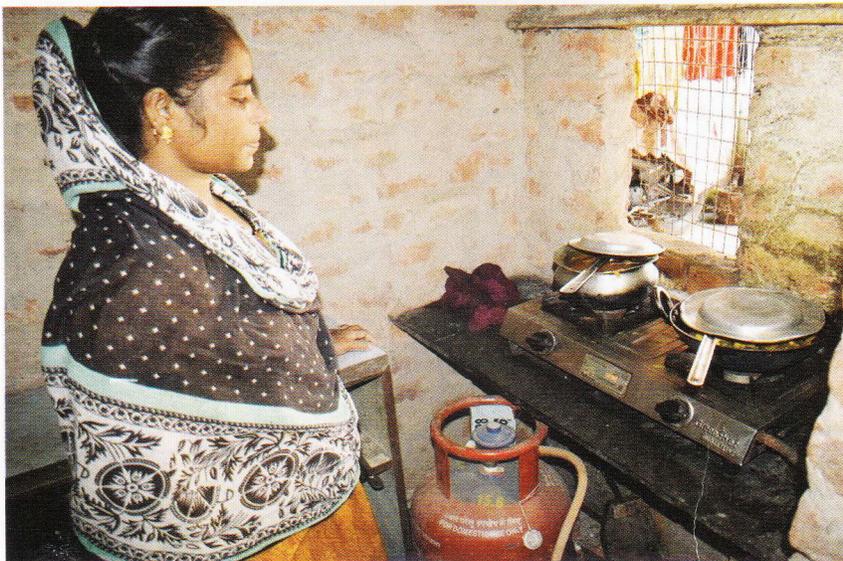
capacity while looking to achieve the target of 175 GW by 2022.

Energy access is essential for commerce and industry—to thrive and create income-generating opportunities and satisfy the huge number of job seekers. In the manufacturing sector, it enables capital investments in machinery and advanced technology, which exponentially increases operational capacity and output. Even on a micro-level, firms with energy access have higher labour productivity due to reasons of efficiency, comfort and resource optimization. Improved energy access will inject necessary

momentum into the Government's flagship schemes like Make In India, which was launched to boost domestic manufacturing. In India, where a large part of the population is engaged in agriculture, energy access can also help realize the Government's goal of augmenting farmer income through better irrigation, mechanized ploughing and harvesting and by ensuring a wider market for their output.

Our energy economy is also closely linked with a critical development indicator – women empowerment. As in other parts of the world, women in India also have to bear the brunt of energy poverty. Energy access has the potential to positively influence women's health, education, finance, and access to information, especially in backward regions. Our Government deserves credit for introducing the landmark Ujjwala Yojana under which 7 crore households benefitted with access to clean cooking gas, replacing firewood or coal – both major sources of indoor pollution. This was a game changer for women ensuring them a smoke free healthy lifestyle, reduced drudgery and more time to pursue alternate livelihood opportunities. A steady growth in renewable energy has opened up a lot of avenues for women entrepreneurship especially in rural India. Off-grid solutions and decentralized RE systems have enabled women to get trained in installing, operating and maintaining these units, providing them with much needed income, which translates into enhanced self-esteem and social standing. Steady access to energy also allows women to run their business more profitably and for longer durations, resulting in enhanced incomes. Energy access can catalyse a more gender equal society, where women are well-integrated into the economic mainstream, thus resulting in holistic and inclusive growth.

Not too long ago, the number of girls enrolled in village schools was





quite dismal and drop out ratio was also fairly high among them. Those who did go to school had to hurry back home before it got dark for security reasons. Today, solar energy powered schools in rural India have given young girls the opportunity to pursue quality modern education (ICT enabled), turn digitally literate and brighten their career prospects. Further, children can now return home in the safety of solar powered street lights and continue to study at their homes which are now electrified. There is empirical evidence that electrified schools do better in recruiting and retaining qualified teachers, while also recording higher student attendance, better test scores and graduation rates.

Energy also has a key role to play in ensuring universal access to clean water and sanitation. Energy is essential for water extraction, water treatment and water distribution. The amount of energy used in the water sector is projected to double by 2040. With water demand set to rise with increasing population, there will be a growing need to treat the wastewater for industrial, agricultural and domestic purposes. The treatment of this water through energy, and then using energy to transport the water illustrates the critical water-energy nexus.

In the health sector as well, energy access is of paramount

importance. Most hospitals require energy for lighting, water, temperature control, ventilation and a host of clinical processes. Sporadic access to energy can lead to vaccine spoilage, interruptions in the use of medical and diagnostic devices and lack of lighting and communications can be extremely detrimental in the provision of emergency services. Decentralized, clean energy solutions can greatly enhance the efficiency of primary health services delivery to the marginalized, low income sections of the population residing in remote corners of the country. As the healthcare ecosystem in India gets increasingly digitized, energy access will accelerate the growth of tech enabled services like telemedicine and mobile health applications, and bring quality healthcare to the doorstep of the common man.

One cannot simply talk about energy propelling socio-economic

Our energy economy is also closely linked with a critical development indicator – women empowerment.

As in other parts of the world, women in India also have to bear the brunt of energy poverty. Energy access has the potential to positively influence women's health, education, finance, and access to information, especially in backward regions.

growth in India without referring to the upsurge in renewable energy capacity, on the back of a conducive policy environment. A strong renewable energy sector has set in motion an energy transition that is set to change the paradigm of energy access. A more diverse energy supply with rising share of renewables contributes to a cleaner, healthier planet for the future, by helping reduce dependence on fossil fuels that emit harmful greenhouse gases. However, more than just safeguarding the environment, it induces perceptible improvements in socio-economic parameters like education, health, employment opportunities, and gender equality, among others, thus playing a pivotal role in poverty alleviation and improving quality of life.

No country has traversed its development journey without providing access to energy in line with people's needs and requirements. Sustainable energy available in the right amount, at the right time, at the right place, and affordable for the entire society, can yield major socio-economic benefits, as enlisted above. With the government's razor sharp focus on universal energy access, we hope to see India maintaining its high growth trajectory, in a manner that is sustainable and inclusive, with all sections of society being able to partake in the benefits of economic growth. ■

Email: sumant@renewpower.in