Development, climate and renewable energy

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India is on the threshold of achieving sustained economic growth and on the way to becoming the third or fourth largest economy by 2030. To mitigate poverty and uplift its huge population, economic development at a fast pace (between six and nine per cent) is a matter of urgency.

Prime Minister Narendra Modi is right that we have to follow an unswerving path of achieving higher economic growth and also reduce India’s carbon footprint and greenhouse gas emissions. To achieve these contrasting goals, India has set for itself an ambitions target of renewable energy usage, both in the case of wind and solar energy.

Currently India depends on coal to supply 70 per cent of its energy requirements and has set a target of 1.5 billion metric tons of coal production by 2022. India is hugely energy deficient. Its vast expanse of villages feature energy for agricultural and domestic needs. As the demand continues to increase, dependence on fossil fuels will continue to affect the environment. At the same time, India needs to reduce the emissions intensity of its GDP by 33 per cent, secure 40 per cent of its energy requirements through renewables by 2030, and also create an additional carbon sink of 2.5 billion tonnes of CO2 equivalent through reforestation.

These are very ambitious targets which are almost impossible to achieve. At present our renewable energy production is 37 GW which is 9 per cent of the total energy consumption. Another 185 GW is required to supplement this. It requires huge amounts of investment. Power Minister Piyush Goyal estimates that some $200 billion is required to achieve the 185 GW target. It is not something we can achieve in a few years. Unlike the developed world, where the technology is already available, India has a long way to go. The government needs to look at it as a long-term goal and implement policies to achieve this.

The challenge to solar energy is that storage infrastructure is also required to be created for uninterrupted and stable power supply. This will add to the cost and will be challenging for various vendors. The same is true for wind energy. But the promise of future technologies like batteries and energy storage solutions is promising.

The challenge to wind energy is that India has untapped potential in the wind sector. The government has set a target of 60 GW of wind energy by 2022. The country has already achieved 30 GW of wind energy capacity, and the remaining 30 GW can be achieved in the next decade.

Improving the efficiency of solar panels and reducing the cost of their production is critical to making solar energy competitive with other sources of energy. India has the potential to become a major player in the global solar energy market, but it needs to invest in research and development to improve the technology and make it more accessible.

In conclusion, India needs to focus on renewable energy to achieve sustainable economic growth. The government needs to set ambitious targets and work towards achieving them. The potential of India’s renewable energy sector is enormous, and with the right policies in place, it can help drive India’s economy forward.
90 billion dollars are needed. The demand for energy is increasing at an unprecedented pace. The land mass view of our population is small. As more land is required for urbanization, it is difficult to see how we are going to increase the forest cover to achieve the targeted carbon sink. But at the same time we do not have the luxury now of intensive economic development that disre- and implemented, this will bring further economies of scale and bring down the cost. The solar alliance of 121 nations between the Tropic of Cancer and Tropic of Capricorn will give a boost to the solar energy sector. In the near future, one can hope that the renewable energy basket led by solar energy will form a great part of the broader energy spectrum. India would have done a great ser-

Because of the subsidised power being given to various sectors and sections, the SEBs have been incurring huge losses and these are mounting year on year. The solution lies in enhancing tariffs to recover costs, become more efficient and cut distribution losses. Unless the SEBs are reformed and unshackled from the political process, the power sector and the power situation will not per a decided formula. This is one piece of legislation which will greatly benefit the economy.

Though GST is long awaited legislation and will benefit the economy and growth in a very positive manner, its impact on the solar energy cost is going to be negative. The renewable sector is currently beneficiary of several indirect tax exemptions.

The GST bill proposes to energy installed in India is 37 GW which is eight per cent of the total energy consumption, in comparison to three per cent in China. The aim is to have 175 GW by 2022 of which 100 GW will be from solar, 60 GW from wind and the rest from other sources.

While the installed solar capacity is 3 GW, it has been increasing in the last few years. From 2002-14 the capacity addition energy capacity last year was to the tune of the 74 and 34 per cent respectively. China's goal is to develop alternate sources for 20 per cent of total energy consumption by 2030 from the current level of 11 per cent.

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