

Let's clear the air with more renewables

Hindustan Times; Updated on Jan 22, 2015 11:28 PM IST

By RK Pachauri

The Indian economy can thrive only if it is driven by technological innovation at every level, and there is no higher priority than ensuring this in the energy sector. A large number of Indian-Americans can help suitable institutions in India accelerate and expand innovation to bring about a clean energy revolution.

President Barack Obama's visit to India will cover a range of issues. In the wake of the killings in Paris, terrorism would be high on the agenda, but given Obama's emphasis on dealing with climate change during his second term as president, it too would be an important subject to discuss with Prime Minister Narendra Modi. There is interest in a possible agreement between the US and India similar to the one that China and the US announced last November detailing the commitments of both countries in reducing greenhouse gas emissions.

The situation between China and India in this regard is different though. India's per capita emissions are still the lowest in BRICS, and China is not only the largest emitter of greenhouse gases in the world, but its per capita emissions are over four times those of India. India, therefore, asserts its right to substantial space to increase its consumption of energy and, therefore, increase its emissions before it can start implementing reductions. Also, given India's dependence on fossil fuels, particularly coal for power generation, it has limited opportunities to bring about emissions reduction before the country develops.

As it happens, over 300 million people in India still have no access to electricity and even those who do often receive irregular supplies. India has an ambitious programme for harnessing solar energy as part of its National Action Plan on Climate Change. This involves a target of 20,000 MW of solar capacity for power generation by 2022, which the NDA is planning to increase five-fold to 100,000 MW. That would have the dual benefit of being able to connect through decentralised production of solar energy the 300 million people who currently have no access to electricity today.

The US and India have a shared interest in the development and use of clean energy technologies. India has serious problems of air pollution in its cities as indeed in rural homes which are dependent on burning biomass for cooking and kerosene for lighting.

There is, therefore, not only a need for developing clean sources of energy supply, but also technologies for efficient use of energy. The US a decade ago launched a clean energy ministerial meeting of major economies, which was held in India last year, but tangible benefits from this initiative have been largely illusory. For India, it is important that clean technologies for energy production and use are developed and disseminated on a large scale to serve the growth of the Indian economy. Obama's visit provides a unique opportunity for launching a partnership for the development of clean energy technologies and their dissemination. Such an initiative would also include policy frameworks and institutional

strengthening by which adequate incentives and disincentives can be created for developing appropriate technologies and their use.

The US has been very successful in promoting innovation in the energy sector through an organisation established six years ago called Advanced Research Projects Agency-Energy (ARPA-E) — whose first head was an Indian, Arun Majumdar.

In contrast, India established the department of new and renewable energy almost 30 years ago, and this later became a full-fledged ministry. However, its record of promoting innovation has remained far below expectations. One reason for this is the departmental and ministerial structure of decision making for funding R&D. The ARPA-E structure, on the other hand, has been successful in funding high-risk, high reward research and fostering innovation.

The PM's slogan of 'Make in India' needs to be supplemented with 'Innovate in India', a call voiced by minister of state for finance Jayant Sinha. The Indian economy can thrive only if it is driven by technological innovation at every level, and there is no higher priority than ensuring this in the energy sector. A large number of Indian-Americans can help suitable institutions in India accelerate and expand innovation to bring about a clean energy revolution.

Should suitable potential be created for innovation in India's energy sector, substantial venture capital could become available for organisations in this country as well. There is already a distinct case for 'Innovate in India'. In fact GE has established the Jack F Welch Technology Center in India, which employs over 4,000 engineers, to provide R&D support for GE's global operations.

If India and the US announce a partnership, it would help in moving India along a low-emission path of development, and have substantial benefits with respect to higher energy security and cleaner air across the country and offer substantial employment opportunities. A week after Obama's visit, the Delhi Sustainable Development Summit would then discuss concrete plans for clean energy technology development involving research institutions and companies to build on an agreement between both leaders.

(RK Pachauri is director-general, The Energy & Resources Institute. The views expressed by the author are personal.)