

Renewable energy: India's next employment boom

The sector is expected to generate hundreds of thousands of jobs over the coming years



An Indian security man walks amid solar panels at a solar power project site in Raisan village near Gandhinagar, India. Ajit Solanki / AP Photo

India's renewable energy sector is expected to generate hundreds of thousands of jobs over the coming years, as the country strives to reduce its dependence on fossil fuels.

This could help transform India's rural economy, but it also presents a major challenges, given the skills gap that exists in the country, analysts and renewable energy companies say.

“There is actually a gap where technical skills would be required,” says Sunita Purushottam, the head of consulting at Treeni Sustainability Solutions, based in Pune in western India. “We are relying more and more on renewable energy power, and it's already having a huge impact on job creation.”

India's expansion of wind and solar power over the next five years could generate 330,000 jobs in areas including manufacturing, project design,

construction, business development, and operations and maintenance, according to a report by the World Resources Institute.

“In addition to improving energy security, enhancing energy access, and mitigating climate change, renewable energy may be able to help reduce poverty, by creating good jobs,” it says.

India's government has set itself an ambitious target of generating 40 per cent of its energy from renewable sources by 2030 – with the aim of meeting the country's rapidly growing demands, which are currently largely met by coal and oil. The country's heavy reliance on fossil fuel imports comes at a huge cost to its finances.

New Delhi is striving to generate 175 gigawatts (GW) from renewable energy sources by 2022, with solar power accounting for the majority of this, with a target of 100GW, followed by wind power as the next largest source.

An expanding economy, urbanisation, and a focus on growing manufacturing activities are all contributing to India's energy needs. At the same time, India is the third-largest carbon emitter after the United States and China, and prime minister has pledged to reduce these emissions. The Indian government in Bonn this month reiterated its intention to meet its targets and said that policies were continuously being created to overcome any challenges in the sector.

Official figures reveal that one million Indians enter the work force every month in the country because of the young demographic of the population.

But having the right talent is vital.

Saurabh Marda, the co-founder and managing director of Freyr Energy, a full service solar provider based in Hyderabad, explains that “there is currently a lag between demand and supply” when it comes to human resources in the industry.

This is despite the fact that there are significant efforts being made by the authorities and companies investing to skill Indians in the sector, he says.

“The government has taken up several initiatives in partnership with private sector firms under skill

development program including setting up of renewable energy training centres, green skill academies,” says Mr Marda.

“World over, renewable energy is aiding job creation and countries that are most aggressive in

supporting the solar, wind and biofuel industries are going to see the largest growth in employment.”

Educators also point out the challenges.

“Steps taken by government of India are in right direction but implementation is very poor,” says Gaurav Chauhan, a senior research fellow at the Great Lakes Institute of Management’s energy centre in Gurgaon in north India. “The government should have asked technical boards to include renewable energy and its application in basic engineering studies. There are government institutes like the National Institute of Solar Energy but the amount of people skilled by such centres is not enough. There are some private and public institutes that offer courses in the energy sector, however there is less awareness amongst the studying population to pursue such courses proactively. Overall there is a need of government intervention in terms of creating institutes and courses around renewable energy.”

Jobs in the sector will inevitably have a multiplier effect on the Indian economy, Mr Chauhan adds.

“If we talk about the solar sector, it is very labour intensive,” he says. “The labour work force is not really a problem in India. When it comes to skilled labour, India does have lack of the appropriate mix of skills. “

It is not only skilled workers that are needed in the sector, however. Because of this, renewables have enormous potential to boost the rural economy in particular, which is heavily dependent on agriculture. About two thirds of the Indian population live in rural areas and about 50 per cent of the country is dependent on farming as a source of incomes. More than 220 million Indians live below the poverty line of \$1.90 a day, according to the World Bank.

“The new jobs can make a difference to rural poor people, especially women, who have few formal sector employment opportunities,” the World Resources Institute says in its report.

“Many clean energy jobs in fields such as construction, installation, sales, and operations and maintenance will go to unskilled and semi-skilled workers - those who lack the formal training or educational background needed to secure well-paid, full-time employment. Some of these jobs will also emerge in less developed, rural communities, where few opportunities beyond smallholder farming exist.”

The renewable energy sector is clearly gaining traction in the country with Indian conglomerates such as Tata generating more capacity in the renewables space through Tata Power Renewable Energy. A few weeks ago,

Tata revealed that it had commissioned a 30MW solar plant in the state of Maharashtra in western India, with a total operating capacity in the sector of close to 1500MW, while it has renewable power projects in the pipeline across the country. Even India's Reliance Industries - controlled by the country's richest person Mukesh Ambani - which has largely been focused on oil, has highlighted plans to focus more on renewables.

But there are also significant hurdles which are hampering the expansion of the industry, including struggles acquiring land for such projects, sometimes related to opposition by locals, including farmers.

“I won't say that we are moving towards the target of 100GW [for solar energy] by 2022,” says Bikesh Ogra, the president of renewable energy at Sterling and Wilson, an Indian solar energy engineering, procurement and construction company, with a commissioned capacity of 1600MW, along with 2GW under construction and another 2GW in pipeline. “But surely there has been a lot of impetus for this particular industry and we have seen quite phenomenal growth over the last couple of years, but not commensurate with the actual objective laid down by the Indian government.”

But despite this, growth is set to continue, which will fuel a need for workers.

He explains that to meet the human resources needs, Sterling and Wilson conducts a significant amount of training in-house, with the development of incubation and skill development centres to train its people who are working on site.

“The sector is is definitely a great booster for employment in the country and we're moving towards creating more and more job opportunities,” he says.

Story can be read online [here](#).