Forbes

How India Is Powering 1.4 Billion People While Deploying Renewables

In this picture taken on January 11, 2024, employees work inside a manufacturing plant of blades for wind turbines owned by India's Adani Group in Mundra. (Photo by Punit PARANJPE / AFP) (Photo by PUNIT PARANJPE/AFP via Getty Images)
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India is rapidly expanding its renewable energy capacity, but it will still rely on coal and oil imports for energy security. Coal, in fact, now provides about three-quarters of the country's electricity, while renewables supply the rest. But those numbers are expected to shift dramatically over the coming decades, as India is on track to become the world's largest electricity consumer.

India, with a population of 1.4 billion, will be a global focal point on climate. Its economy is growing at 7.5% yearly, and its electricity consumption ranks among the highest in the world. We've already seen that if the country can get discounted oil from Russia, it will take it despite the international scorn. And it readily admits that coal will continue to play a role in the country's expansion, though the move to renewables is expected to eclipse fossil fuels by 2050—a timeline some analysts warn may be optimistic.

"I'm trying to tell the whole world that renewable energy will be the future, and it will be very beneficial for our next generation. The world we have is not inherited from our ancestors; it's borrowed from our kids and future generations. Therefore, we need to leave this world in a better condition through renewable energy. That is my message to everyone," says Dr. Faruk Patel, chairman and founder of the KP Group, based in Surat, India, in a conversation with me.

One of the many businesses KP operates is its renewable energy arm, which designs and installs rooftop and ground-mounted solar plants with energy storage for residential, commercial, and industrial customers. For example, it is working with a few diamond factories in Surat that operate entirely on green energy.

To that end, solar is the country's fastest-growing energy sector, rising from 4 gigawatts to 140 gigawatts over the last decade. The goal, though, is to run heavy industry on renewables, including cement, steel, and textiles that make up a big part of the national economy. To get there, it also needs to grow its energy storage capacity—the ability to harness green electrons during the day and release them at night—from 7 gigawatts to 72 gigawatts over 10 years, according to government targets. Green hydrogen will also play a significant role in this transition.