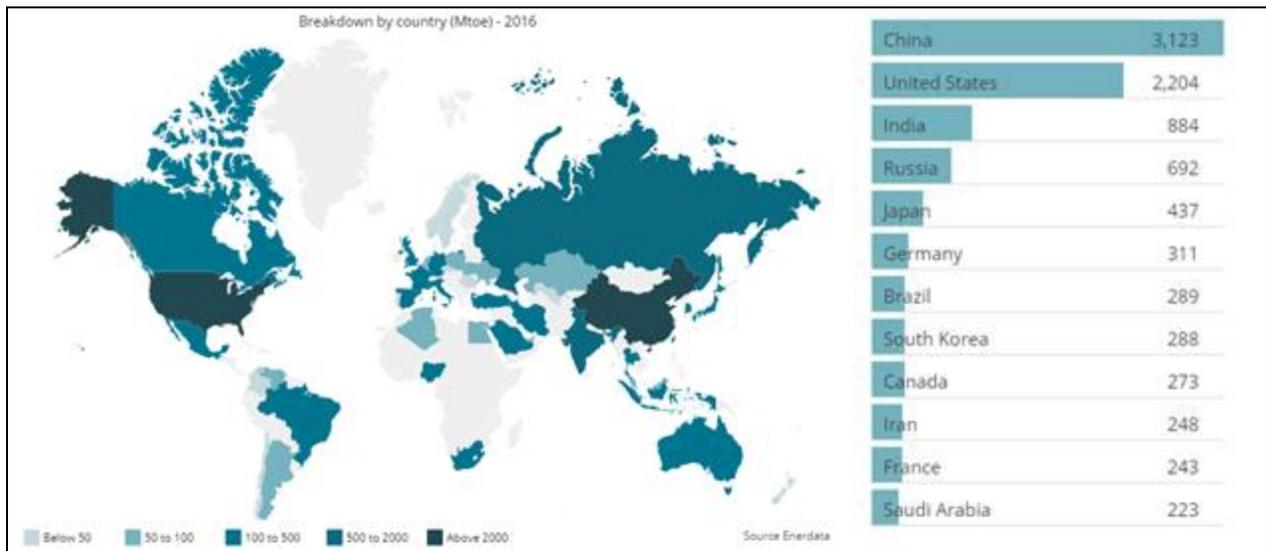


## SOLAR POWERS INDIA'S CLEAN ENERGY REVOLUTION

With 1.3 billion people, India is the world's third largest consumer of electricity. Over 240 million people still have no legal electricity connection. Demand for electricity is growing at the same rate as in France or Germany as millions of people in rural or impoverished areas seek access to power in their homes and workplaces.



What if India planned to meet that need with conventional energy sources like coal?

It isn't. In fact, the country is focused on just the opposite.

With a strong commitment to renewable energy, innovative solutions and energy efficient initiatives to supply its people uninterrupted power by 2030, India is emerging as a front runner in the global fight against climate change.

That's good news, because if the world expects to achieve its Paris Climate Agreement objective of containing global warming to under a 2°C increase, it is imperative for India – the third largest emitter of carbon dioxide -- to be a global leader on renewable energy.

The World Bank is committed to supporting India's solar energy push. The Bank is providing more than \$1 billion to support India's solar plans, starting with a Grid Connected Rooftop Solar project that aims to put solar panels on rooftops across the country, and 100MW of energy has already been financed through this project. This year, on 11 March 2018, a coalition of solar resource-rich countries called "International Solar Alliance (ISA)", was formed to collaborate on addressing the identified gaps in their energy requirements through a common approach. This alliance consists of 121 countries led by India. The ISA has set a target of 1 TW of solar energy by 2030 which would require an estimated investment of \$1 trillion.

With its conscious choice to use significantly more clean energy to fuel its growth, India is contributing to global efforts to save the planet from the effects of climate change. Just a few weeks ago, the country also walked away from plans to install nearly 14 GW of coal-fired power plants, largely because it is as affordable now to generate electricity with solar power as it is to use fossil fuels.

In India and beyond, solar power is starting to displace coal as an energy source. The cost of electricity from solar photovoltaic (PV) is currently a quarter of what it was in 2009 and is set to fall another 66% by 2040.

With nearly 300 days of sunshine every year, India has among the best conditions in the world to capture and use solar energy. Clearly, the market agrees, as is evident from the significant drop in the cost of solar power. In its latest solar auction, the country achieved a record low tariff of INR 2.44/unit (4 cents/unit) for a project in the desert state of Rajasthan.

The Indian government is setting ambitious targets that include 160 gigawatts (GW) of wind and solar by 2022. Not only will this help hundreds of million people light their homes it will also enable children to study at night, provide families with refrigerators to preserve their food or TVs to entertain themselves after a long day of work. It is also an incentive for international firms to invest in India's solar market.

Although India's solar market appears well suited for local players, it's currently open to global players as well. Indeed, global firms that tailor their broad expertise to serve unique local needs

in a frugal way could actually extract significant value. At the same time, local players can bridge capability gaps by striking appropriate alliances, or by recruiting strong teams or individuals. A partnership of foreign technology and local EPC can help both parties climb up the steep learning curve fast, but mechanisms will need to be put in place to ensure that the risks and upsides are shared equally. Both parties involved will need a long-term view of the market, with lessons learned from initial projects built into subsequent ones.

Local or global, the leaders in this market will likely be those that get in the thick of things from the beginning, as the cost of entry rises significantly with grid parity nearing. A well-thought-out plan to make an immediate impact through short-term portfolio building and to build a growing advantage through planning for long-term scalability will be crucial tools for tapping into the multi-billion-dollar potential of India's solar market.

The Bank is also working with India on solar parks, innovative solutions to store solar power and support for mini grids. The institution's backing will increase the availability of private financing, introduce new technologies, and enable the development of common infrastructure to support privately developed solar parks across India.

Source: <http://www.worldbank.org/en/news/immersive-story/2017/06/29/solar-powers-india-s-clean-energy-revolution>

<https://yearbook.enerdata.net/total-energy/world-consumption-statistics.html>