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India's Clean Energy Revolution Needs To Start And End With Rural Consumers



Nishtha Chugh Former Contributor ⓘ

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Jurdar Thingya stands in front of a broken solar panel outside his home in the village of Bhamana,... [+] © 2017 BLOOMBERG FINANCE LP

If the recent global industry reports are any indication, the sun is set to shine brighter on India's renewable energy market in 2019 and beyond. The latest forecast by GOGLA, a global association of the off-grid solar power industry, predicts a threefold [growth](#) for the country, touching USD1.4 billion by 2023. Ranked fourth on the Ernest & Young's Renewable Energy Country Attractiveness Index last year, India was already the single largest market in the first half of 2018 for distributed standalone solar products accounting for nearly 33% of the global sales.

Even as the forecasts of exponential growth in the country's off-grid market promise greater capital mobilization and investor returns, the primary focus must not waiver from building and consolidating local renewable capacity if India wants to achieve the goal of providing lasting energy access to its rural areas.  The country's recent ambitious drive to meet its energy demands has covered a lot of ground, but for millions of rural households still left out in the dark, it hasn't gone far enough. Their only hope lies in the country's unfolding renewable revolution.

A key pledge of prime minister Narendra Modi to electrify every village in the country, India added 23.9 million households across 25 states to the power grid in four years by the end of 2018. Lauding the government program in its latest report last November, the International Energy Agency (IEA) said the drive had helped accelerate the electrification growth already underway in the country. Since 2000, the report noted, nearly half a billion Indians had now gained access to energy, making it one of the best success stories globally.

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still left millions of Indians grappling in the dark despite official declarations of 100% electrification. Under the scheme, a village was deemed electrified if 10% of its homes and public buildings were connected to the grid. This meant that a significant number of households in the 600,000 Indian villages covered under the plan did not get linked to the grid. The government's own estimates put this number to over a million households.

Even so, dissatisfaction amongst those 'fortunate' enough to be linked to the grid is still unsurprisingly high. A newly released [report](#) on India's energy access has found that up to 40% of rural consumers are unhappy with the state-owned utilities due to unreliable supply, thus pushing a significant number to rely on the non-grid solutions like diesel generators, solar home systems, and rechargeable batteries. While the push for universal electrification has doubled the share of grid-electrification in India the reform has critically overlooked the need to provide quality and reliable energy access to rural consumers. 

The report, produced by Smart Power India and Initiative for Sustainable Energy Policy (ISEP), surveyed 50 villages with solar mini-grid installations in Uttar Pradesh and Bihar and noted that the share of rural enterprises relying on mini-grid electricity was almost on par with those which used grid-electricity. Importantly, it found that there was an increased role for redistributed renewable energy solutions, particularly for rural enterprises that needed affordable and reliable access to electricity to thrive.

“Our findings indicate that in absence of affordable and reliable electricity supply from the grid, a significant share of rural enterprises in mini-grid villages relies on non-grid solutions. The high satisfaction levels among mini-grid customers further confirm the continued utility of such solutions, which provide a reliable supply and prompt redress services,” says Shalu Agrawal, one of the co-authors of the report.

“Solar mini-grids and other non-grid solutions can play a crucial role in providing electricity-access in regions facing long durations of power

outages, and for customer segments, such as rural enterprises, which are sensitive to the reliability of power supply,” she adds.

Vijay Bhopal, the managing director of Connected Energy, believes the problem lies with the obsession with the grid. “In developing countries like India, there’s a mindset that believes grid is the best. But it’s not the mindset of thousands of people like me working in rural electrification or energy access more generally. Energy markets in developing countries tend to be centralized. There’s a reluctance to move away once you have invested heavily into one source or technology. At the policy level the main focus is on the grid at the moment in India,” he says.

“But from our experience in Odisha in the last four years we know that the key to affordable and reliable rural electrification lies in building local renewable capacity and using technology like smart PAYG meters in order to reduce barriers to delivering affordable renewable energy to those living off-grid,” he adds.

For Bhopal, who has been working with local renewable energy providers in India and East Africa for many years, cleanliness of the energy source is as critical as its affordability and reliability. “The obsession with grid and abundance of coal has long determined how India has powered itself. Also given the extremely high pollution levels in India and, at the same time, its growing energy needs in future, it’s imperative that the government shifts its focus away from the coal-fired grid to clean energy sources like solar.”

Even though still a coal country, India’s current renewable energy momentum is showing promise. In the last two years, the number of [solar installations](#) across the country has risen sharply. While its goal of adding 175GW of renewable power generation, from wind and solar, by 2022 is an ambitious leap in the right direction, India must make sure its clean energy revolution benefits those who need it the most.

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Nishtha Chugh

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