

QUARTZ INDIA

SUNSHINE SECTOR

India's summer power outages are getting so bad, states want you to DIY

June 9, 2014

By **Nayantara Narayanan**

REUTERS/AMIT DAVE

By 2019, India's government promises at least one lightbulb in every home, thanks to solar energy.

State governments in India are going door-to-door, or rather roof-to-roof, to solve their acute and recurring power problems. The new central government has pledged to light at least one bulb in every home with solar energy by 2019, making rooftop solar an idea whose time has finally come.

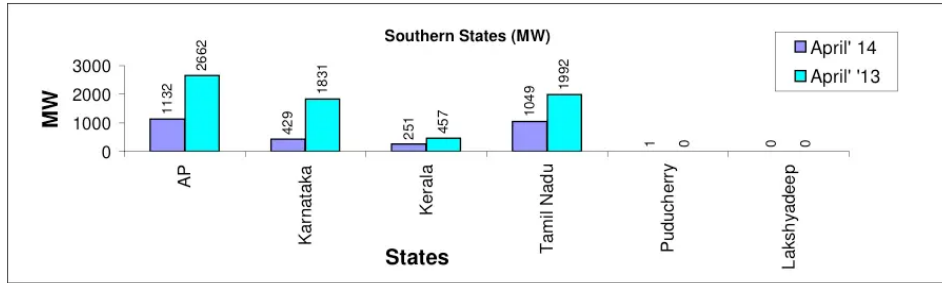
Karnataka, the largest southern state by area, just announced its new solar policy as temperatures reach records during this year's blistering summer. The government plans to buy energy from homes and public buildings that generate power from rooftop solar panels

You have 1 free story remaining this month.



Update your browser for the best experience.

more than 200 megawatts of power supply shortages, the state's capital, had to power cuts every two hours in the blisteringly hot months of April and May.



SOURCE: CENTRAL ELECTRICITY AUTHORITY

Peak Power Supply Shortfall in southern India in April

Of course, power cuts are common during the hot summer months, thanks to an overall energy shortfall of more than 42 billion kilowatt hours, or 42,000 gigawatt hours. The 2012 power outage that left an estimated 600 million people without power may have been the most widespread and internationally reported, but at any given time millions or tens of millions are without electricity in India.

With 300 sunny days a year, Karnataka has 10 gigawatts of solar energy potential. The new policy will add 2,000 megawatts (2 gigawatts) to the state's power kitty, if all goes according to plan, and rooftops alone will contribute 400 megawatts by 2018.

A residential rooftop in India typically ranges between 200 and 1,000 square feet, meaning it can comfortably house a standard one-kilowatt solar photovoltaic system. The Energy and Resources Institute estimates these systems can cost as little as Rs 110,000 (\$1,850).

Households can use the power generated by their solar arrays (the average household needing 200 units of electricity a month will use about 80% of an array's daily output) and the government will buy the surplus.

You have 1 free story remaining this month.



Update your browser for the best experience.

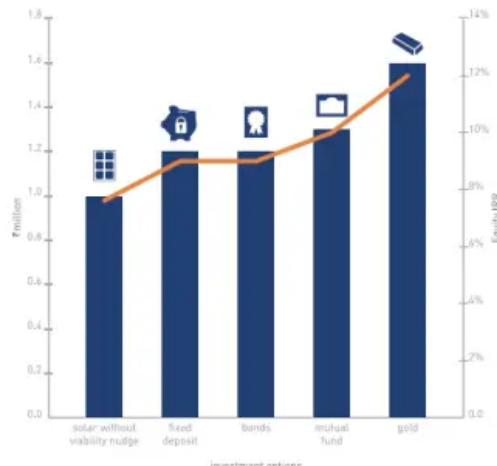
...connected net metering system, in which a solar-powered home can either sell its surplus energy to the grid or buy energy from the grid if it needs it. But the net metering system has its own hurdles, mostly in the form of disgruntled utilities, who have watched their consumer bases shrink.

Net-metering led to a stand off in Arizona last year, after utility companies complained that it did not account for their large grid infrastructure costs. Ultimately grid-connected power consumers who had installed solar power panels had to pay an additional fee.

Before India reaches that point, there is a more fundamental question to be asked—will there be enough homeowners willing to install rooftop solar?

Sure, power prices in India have been steadily rising in recent years, driven by rising coal and diesel costs and poor investment in infrastructure. But a Greenpeace study of rooftop solar potential in Delhi finds that between falling solar panel prices and rising grid tariffs, rooftop solar is an attractive proposition for commercial, industrial, and government customers—but may not be attractive to the average homeowner.

Figure 16: Residential solar investment compared to similar low-risk investment options¹⁰¹



You have 1 free story remaining this month.



[Update your browser](#) for the best experience.

Making matters worse, a proposed tax on solar panel imports, designed to protect India's manufacturers, could make solar programs even more expensive if it is enacted.

To kickstart residential rooftop solar, Karnataka's neighbor Tamil Nadu is offering a combination of subsidies and incentives that allow the purchase of a rooftop solar power system costing Rs 1 lakh (\$1,700) for half the price.

Prime minister Narendra Modi's home state of Gujarat has generated 1.2 million kilowatt hours of solar power from a rooftop solar project in the capital Gandhinagar. Here, property owners are given "green incentives" to aid the project. Solar developers hire terraces to set up their arrays and pay the owners Rs 3 for every unit of energy they generate. The developers sell that energy to the state's power provider via the electrical grid.

Delhi drafted a rooftop solar policy in 2011 that never really took off. Diesel was still cheap back then and the government couldn't crack the economics of solar power. The city is now seeking inspiration in Gandhinagar's rent-a-roof scheme.



Quartz Daily Brief

Subscribe to the Daily Brief, our morning email with news and insights you need to understand our changing world.

You have 1 free story remaining this month.



Update your browser for the best experience.

QUARTZ

News for the next era, not just the next hour

DISCOVER

Membership

Emails

Latest

Popular

Featured

Obsessions

TOPICS

Emerging industries

Economics

Lifestyle

Politics

Science

Tech

Work

MORE

Search

Careers

About us

Contact us

Help center

Send us tips

Download our app

[Site map](#) [Terms & conditions](#) [Privacy policy](#) [Do not sell my info](#) [Ethics and advertising agreements](#)

[Community agreements](#)

Quartz is owned by **Uzabase**, the business intelligence and media company. © 2020 Quartz Media, Inc. All rights reserved.

↑ **Beam me up, Scotty**

You have 1 free story remaining this month.

