

## 100GW BY 2022: BEHIND INDIA'S BIG SOLAR NUMBERS

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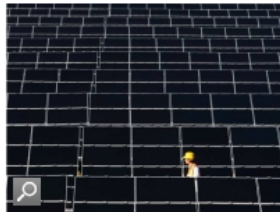
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By **Tom Kenning** - 08 June 2015, 09:00 | In **Editors' Blog**

### 100GW by 2022: Behind India's big solar numbers



Welspun's Neemuch project, India's largest PV power plant. The country is targeting 100GW of PV by 2022. Image: Welspun.

Just over a year into Narendra Modi's tenure as Prime Minister of India, huge growth targets for the solar sector continue to attract publicity, but the sheer scale of ambition may not be enough to convince the doubters. India's budget in February confirmed the Ministry of New and Renewable Energy's (MNRE) target of deploying 100GW of solar energy by 2022, a five-fold increase from the previous government's target of just 20GW. As the Indian government prepares to finalise details of how the target will be met, PV Tech examines some of the huge numbers being proposed and what it will take to realise them.

**Blogger**

Tom Kenning

In the midst of all the big claims and headlines, it is easy to forget that India has suffered from major energy shortfalls for years so there is genuine need for solar capacity to come online. The imminent announcement will also come in the wake of a deadly heat wave, which has killed scores of people in the country, highlighting the need for widespread air-conditioning and managing all the pitfalls of energy spikes from such systems.

There has been a string of memorandums of understanding (MOUs) relating to solar projects, but they fail to give real confidence to investors. Joint secretary of the MNRE Tarun Kapoor told PV Tech that government approval and finalisation of the 100GW plan is pending for mid-June, which should give more certainty.

To understand the sheer scale of India's ambition, it should be noted that current installed capacity in the country stands at just 3.8GW, with around 7.3GW under development, according to the latest [quarterly update from Mercom Capital Group](#). Meanwhile, according to Jasmeet Khurana, senior consulting manager at analyst firm, Bridge to India, if the country reached its 100GW solar target within less than seven years, solar power would account for 10.5% of all energy consumed within the India, which is clearly an enormous proportion within a country holding more than one billion people.

Under the latest announcements, the 100GW would be made up of:

- 40GW of utility-scale solar (between central and state governments)
- 40GW of rooftop solar
- 20GW under the 'entrepreneur' scheme (20,000 projects of 1MW)

The government plans to set up 25 mega-solar parks of around 100MW each (2.5GW). Already 17 of these have been finalised, with just under 13GW capacity, according to Mercom's update.

Meanwhile the central government will auction multiple solar power projects. India's armed forces and national companies including the Indian Railways, one of the world's largest employers, have been earmarked to set up large-scale plants on surplus land. Furthermore, Modi has incentivised building solar over irrigation ditches and canals in rural areas, to decrease water evaporation. This is expected to account for several hundred megawatts according to Bridge to India. Furthermore, the state-run Solar Energy Corporation of India (SECI) plans to develop [2GW of solar projects](#) ranging from 250-500MW.

Khurana said the first section of 40GW utility-scale was the most realistic target, being driven primarily by India's renewable purchase obligation (RPO) and renewable generation obligation (RGO), which mandates thermal power producers to generate a certain amount of power from renewable energy technology. Central government will also allocate 15GW of this target by 2019.

The second part of the 100GW target comprising 40GW of rooftop PV was described in the latest Mercom report as a "lofty goal" considering there are only 100MW of current installations. Furthermore rooftop subsidies are being cut in half to 15%, down from 30%, which the MNRE claimed offsets a recent lowering in price of panel components. However, Khurana said a net-metering policy is due to be brought in by almost all Indian states, which is a policy the central government has been pushing for.

The case for commercial and industrial rooftop deployment is clear after the utility TPDDL revealed plans to generate [400MW of rooftop solar in Delhi by 2022](#), but industry members talking to PV Tech disagreed over the potential for residential rooftops. Ashish Khanna, chief executive and executive director, Tata Power Solar Systems, said policy around residential rooftops has made them financially viable and a major focus for Tata, whereas Reinhard Ling, business manager at IBC Solar Projects Private, IBC Solar's Indian subsidiary, said the market for residential solar is very small in India and he claimed there is a lack of awareness about the difficulty of installing rooftop solar compared to ground mount in India.

The third section of the 100GW target is the yet-to-be-finalised entrepreneur scheme. The MNRE's Kapoor told PV Tech this programme was currently set at 10GW, but had yet to be finalised. But in an earlier announcement power minister Piyush Goyal said the scheme would aim to encourage unemployed youths and farmers to set up 1MW solar installations to aggregate up to 20GW of capacity. The government will provide 50% of the equity to get started, but chosen entrepreneurs will be responsible for forming partnerships and generating the rest of the required equity and debt.