

Six cities of UP alone can generate 11.4 GW of electricity from solar energy using 11% of their build-up area, says CEED report

Solar rooftop can generate 3 lakh jobs in Uttar Pradesh cities

Lucknow, 6 July 2018: The Centre for Environment and Energy Development (CEED) today released its report titled '**Uttar Pradesh: Uncovering Solar Rooftop Potential in Urban Cities**'. The potential of solar rooftop power from six cities of UP by using only 11% of their built-up area is stated to be 11.4 GW¹. The report, while exploring the rooftop solar potential of six major cities- Lucknow, Kanpur, Agra, Meerut, Allahabad and, Gorakhpur, suggests that the installation of solar rooftop up to its potential in these cities can generate 3 lakh jobs in the state². Further, the report also suggested addressing peak power deficit by installing 1674 MW of grid-connected solar rooftop by 2025.

Talking about the findings of the report, CEED's Program Director, Mr. Abhishek Pratap said, "Solar rooftop has a game-changing potential to completely revitalise the development landscape with improved power supply, massive capital infusion and a significant rise in job creation. The 11.4 GW of solar rooftop potential just in these six cities can bring INR 570 billion investment in the solar energy sector in Uttar Pradesh, thus creating a ripple effect in employment generation with a possibility of 3 lakh jobs in next five years along with an expansive upliftment of manufacturing, assembling and service sectors in the solar industry." He further added, "Solar rooftop not only fuels investment and jobs but also brings inclusive development by building sustainable energy infrastructure and maintaining a healthy ecosystem."

The Uttar Pradesh government has set an ambitious target of generating 10,700 MW of solar power by the end of 2022. The target set for solar rooftop systems is 4,300 MW³. CEED's report reveals that about one-third of this target can be achieved by merely exploiting the potential of these six major cities, considering the current grid curtailment factor. It also charts a sustainable and viable roadmap to make the cities of Uttar Pradesh powered by solar energy. As these cities have well established urban residential settlements and overall infrastructure, their potential lies largely in the residential sector, followed by public/semi-public buildings and government buildings. With an overall solar suitable roof area of only

¹ http://ceedindia.org/wp-content/uploads/2018/07/UP_Six_City_Report_V1.7_webcompressed.pdf

² <http://ceew.in/pdf/CEEW%20NRDC%20-%20Greening%20India's%20Workforce%20report%2020Jun17.pdf>

³ http://upinvestorssummit.com/htm/01/img/pdf/Uttar_Pradesh_Solar_Energy_Policy-2017_English_.pdf

98.75 sq. km out of the total cities area of 5,958 sq. km, a total of 11.4 GW of solar power can be generated. Among these cities, Lucknow (3,187 MW) has the maximum potential, followed by Kanpur (3,010 MW) and Agra (1,986 MW), whereas Gorakhpur (833 MW) has the lowest solar rooftop potential. The potential of the other two cities studied in the report- Allahabad, and Meerut- is 1,577 MW and 900 MW respectively.

However, due to the existing grid curtailment factor as per State net-metering guidelines and the power demand, 1,674 MW can be immediately installed in these cities before the year 2025. Out of these six cities, Lucknow can accommodate 725 MW, while Kanpur and Agra can accommodate 250 MW and 144 MW respectively. Allahabad can shelter 140 MW while Meerut and Gorakhpur can house 335 MW and 80 MW of solar rooftop power. Right now, rooftop solar projects can be readily adopted by government buildings, public/semi-public buildings, and industries. With a steady price reduction in the rooftop solar segment, prices as low as INR 55,000 per kW have been observed recently.

Recently, the UP government through its order made solar rooftop mandatory for all government buildings and asked its departments to explore the uses of solar energy for catering their energy requirements. Speaking on this development as well as elaborating other findings of the report, Mr. Anand Prabu Pathanjali, Manager- Clean Energy at CEED said, "For catalysing energy transformation in the state, government buildings offer best options with the bundling of projects which help in reducing the cost. With the solar price going down and reaching grid parity, industrial and commercial consumers should also be encouraged to adopt solar with even more enthusiasm as it helps in reducing their operation expenditure. Moreover, metering guidelines and their implementation need further strengthening for a higher amount of solar power through distributed sources." He emphasised on RESCO and Micro Utility models as better business models for the deployment of the solar rooftop in these cities.

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