

## Press Note

### First Time in India: Aerial Mapping of Bengaluru's Rooftop Solar Potential

The Center for Study of Science, Technology and Policy (CSTEP) has been engaged in a first of its kind project, which started in 2016, to develop a tool that would accurately assess the potential of solar photovoltaics on rooftops in Bengaluru along with the associated business case for all consumer categories. The project involved using aerial Light Detection and Ranging (LiDAR) technology to develop high resolution 3D maps of the city including building heights and neighbouring obstacles such as trees, other buildings, poles, billboards, etc. The aerial data gathering flights started on February 19, 2018 and the last flight took off on March 6, 2018, after 15 days of flying. This exercise was carried out by Geokno India Pvt. Ltd.

The data will now be processed to account for shading aspects after digitising each rooftop. The solar rooftop potential will be calculated based on shadow-free area and the associated economics will be estimated by linking the BESCOM consumer ID linked with a specific rooftop. The tool will be made freely accessible to all consumers in 6-7 months from now. From a planning perspective, the results obtained from the tool will be used to identify the most suitable rooftops in the Bengaluru area to achieve the 1 GW of rooftop solar capacity target, by 2021-22.

Additional Chief Secretary, Energy – Shri Ravi Kumar – said that the project is an innovative way to map solar rooftop potential in densely populated cities. The results of this exercise will lay the foundation for replicating such efforts in other cities in Karnataka and the rest of the country. The time taken to finish this exercise using other means or technology would be far greater considering the levels of accuracy expected from the usage of aerial LiDAR. The raw data collected can also be processed to help in other city planning applications such as tree cover densities, surface water drainage systems, road networks, etc. The Government of Karnataka will explore these options to maximise the utility of this project.

CSTEP is grateful to MacArthur Foundation for generously funding this project. CSTEP also is thankful to the Energy Department, Government of Karnataka and BESCOM for their continued support all through this project.

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