

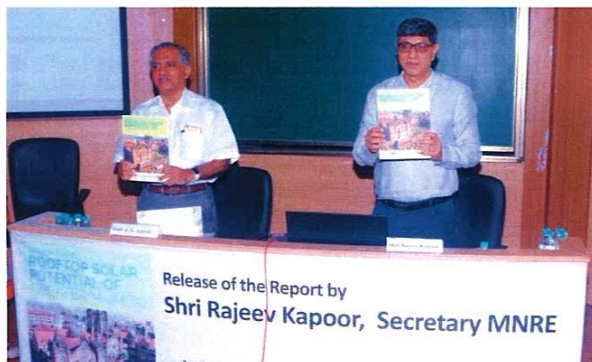


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National Centre for Photovoltaic Research and Education
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A Project of the Ministry of New and Renewable Energy at IIT Bombay

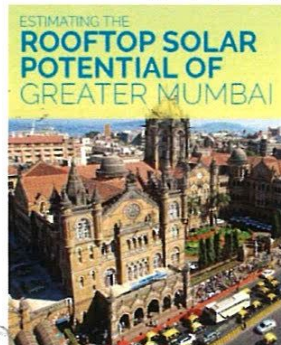
Shri Rajeev Kapoor, Secretary MNRE, visits NCPRE to release report on 'Rooftop Solar Potential of Greater Mumbai'

Shri Rajeev Kapoor, Secretary MNRE, visited IIT Bombay on April 10, 2017 to release a report on 'Rooftop Solar Potential of Greater Mumbai'. He also visited the NCPRE laboratories that day, and interacted with NCPRE faculty and students.



Shri Rajeev Kapoor (R) and Prof. A. K. Suresh, Acting Director IIT Bombay release the report

The report on rooftop solar potential was the culmination of a year-long exercise by NCPRE to come up with an efficient way to assess the potential for installing rooftop solar in any urban area in India, with Greater Mumbai use as a case study. The methodology developed in this study uses a three-step approach: (1) In the first step, we estimate, category-wise, the potential rooftop area available in Mumbai using freely available satellite imagery (Google Maps, Google Earth,



Wikimapia and WoNoBo) along with the Existing Land Use (ELU) Maps provided by the Municipal Corporation of Greater Mumbai (MCGM). In the second step, we refine these results by making site visits to carefully selected sample sites (one each in residential, commercial, industrial, etc.) It was

found that satellite data varied from actual ground data by a maximum of 12%, while the average variation was only 5%. This shows that open source tools are adequate in estimating rooftop potential without the need for expensive

satellite imagery or complicated algorithms. In the third step, the estimate is further refined using 3D modelling and shading analysis of building clusters to come up with discounting factors which account for inter-building shading. The methodology developed can be used for any town or city in India, and details are available from NCPRE. This work was done by NCPRE in collaboration with partners: Centre for Urban Science and Engineering at IIT Bombay, Observer Research Foundation, Bridge to India, and IEEE Bombay Section.

NCPRE has also worked on another interesting rooftop deployment project, this time in collaboration with Kerala State Electricity Board (KSEB). The report is entitled 'Energy Survey at Cantonment Distribution Section, Thiruvananthapuram' and addresses KSEB's innovative "Sun Shift" programme. Both the above reports are available for free download from:

<http://www.ncpre.iitb.ac.in/#pv-reports>

While at IIT Bombay, Shri Rajeev Kapoor also visited several NCPRE labs, including the Silicon fabrication laboratory, the Power Electronics Laboratory, the Module Laboratory, and the Storage Laboratory. He expressed keen interest in the activities, and met with and interacted with many NCPRE students and faculty.



Shri Rajeev Kapoor being shown some of the PV inverters developed in the NCPRE Power Electronics Laboratory.