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## RENEWABLE ENERGY DEPLOYMENT FOR COMMON UTILITIES OF SOCIAL HOUSING SCHEMES: RAJKOT



### Project Highlights

- 31.5 kWp grid connected solar PV system is installed under SDC funded CapaCITIES project at the Krantiveer Khudiram Bose social housing scheme for common utilities like pumps, lightings and elevators
- The solar PV system is generating ~3,780 units of electricity per month, which has the potential to reduce 37 tCO<sub>2</sub>e GHG emissions per year.
- INR 12,000 is paid by the DISCOM to the members of the township after adjusting with the grid consumption by the social housing common utilities

### Background

Rajkot is part of Swiss Agency for Development and Cooperation's (SDC's) Capacity Building for Low Carbon and Climate Resilient City Development project (CapaCITIES) project, which aims to enhance capacities of Indian partner cities (Rajkot, Coimbatore, Siliguri, and Udaipur) in planning and implementing climate mitigation and adaptation measures along with increasing awareness on low carbon and climate resilient city development. Rajkot Municipal Corporation decided to implement energy efficiency and renewable energy measures as pilot in one of their social housing scheme to see the results and replication potential. 31.5 kWp grid connected solar PV system for common utilities like common lighting, pumps and elevators is commissioned under CapaCITIES project funded by SDC.



### Project Objectives

- I. To increase Renewable Energy (RE) integration among the residential buildings sector by implementing grid-connected solar PV system deployment for all common utilities pilot project in one of the social housing schemes as per Gujarat Solar Policy 2015
- II. To power the common amenities such as elevators, common lighting and pumps in a social housing complex through a solar PV system and showcase to create awareness on the carbon and economic benefits and to encourage its integration in the private residential buildings

### Key Stakeholders

Rajkot Municipal Corporation (RMC); ICLIE South Asia; Residential Welfare Association

### Approach

Project was targeted to create model project of introducing EE and RE measures reducing conventional electricity from residential sector, RMC decided to implement one pilot project on one of the social housing schemes which then can be replicate at city level.

- Feasibility study was conducted by ICLEI South Asia to identify feasible social housing scheme for the pilot project implementation. Key steps were to identify:
  - Conventional electricity consumption for common utilities,
  - types of common appliances,
  - Available shadow free open roof area for deployment of Solar PV and electricity sanctioned load etc.

- “Krantiveer Khudiram Bose Township” was identified as potential project location.
- Project was designed by ICLEI South Asia based on actual electricity consumption from all common amenities of township and discussed with Residential Welfare Association (RWA).
- 31.5 kWp grid connected solar PV system installed on rooftop consisting 462 poly-crystalline Photo Voltaic panels of 315 Wp capacity each.
- Training provided to RWA for maintenance of solar panels by ICLEI South Asia. The solar PV system will be operated and maintained by the contractor who set up the plant for a period of 10 years from installation.

## Financial Structure of the initiative

Financial grant from the European Commission through the Urban-LEDS program was provided for this project

## Achievements



- The solar PV system will generate 3780 units of electricity per month (45,360 kWh per year), which has a potential to reduce 37 tCO<sub>2</sub>eq. GHG emissions per year.
- Since, the township is generating and utilizing solar energy from Solar PV system, approx. INR 12,000 is credited to their accounts by DISCOM every month.



## Success Factors

- Feasible to structure a PPP project to install Solar PV systems for catering to the common amenities load in all upcoming social housing complexes
- RMC has proposed a 100kWp grid connected solar PV system for common utilities at Smart Ghar III affordable housing scheme.
- The residential sector of Rajkot will have a significant proportion of their electricity demand met by grid-connected solar PV systems considering the proposed interventions implementation.

## Future Prospects

RMC plans to construct a total of 9,141 dwelling units by the year 2020. One of the main objectives of this solar PV project at the Krantiveer Khudiram Bose social housing complex is to encourage the adoption of solar PV in social housing.

Source: Case received from the city

For more Information

[http://capacitiesindia.org/wp-content/uploads/2018/08/Quickwin-Projects-Rajkot\\_Solar-PV-Social-Housing.pdf](http://capacitiesindia.org/wp-content/uploads/2018/08/Quickwin-Projects-Rajkot_Solar-PV-Social-Housing.pdf)

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