Learning from Surat Smart City – A Rooftop Case Study

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Rooftop Solar situation is divided into Four scenarios (out of 48 Smart Cities)

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
<th>Scenario 4</th>
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<tbody>
<tr>
<td>The city does not have any renewable sources of energy, and there is no commitment to promote this for the foreseeable future.</td>
<td>The city is preparing plans for ensuring that it gets more energy from renewable sources, and is in the process of making commitments in this regard.</td>
<td>Some energy consumed within the city is produced through renewable sources. There are long term targets for higher renewable energy capacities, and the city is making plans to achieve these.</td>
<td>At-least 10% of the energy used in the city is generated through renewable sources. The city is undertaking long-term strategic projects to tap renewable sources of energy in its region/beyond to increase the percentage of renewable energy sources.</td>
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(Surat)

| 6 Cities | 21 Cities | 21 Cities | 2 Cities |
Roadmap of Rooftop Solar in Surat Smart City

Target: 10% of the energy requirements must be through Solar under ABD*

Central Scheme
- Promoting Solar rooftop

Implementation
- Subsidy
- Financing
- Installation

Facilitator
- Coordination
- Publicity & Awareness
- Mass campaign
- Creating Ecosystem

Vision for Solar Rooftop
“Create a replicable model which will act like a light house to other aspiring cities”

MNRE Solar City
MoUD Smart City

Target: Increasing RE supply in the city
Target: 10% of ABD energy requirement from Solar

GEDA
SECI
Banks
DISCOMs
Developers

*Area-based Development
Launch of Solar Rooftop: 22nd September, 2016 in Surat

Website: http://suratsolar.suratmunicipal.gov.in/
## Action Plan for Rooftop in Surat Smart City

### Planning
- Roadmap for promotion of rooftop solar
- MoU between the SMC and SECI for implementation of rooftop scheme
- Stakeholders consultations
  - DISCOMs
  - State Nodal Agencies
  - Chief Electrical Inspector
  - Project Developers
  - Banks

### Implementation
- Development online/single window portal i.e., website and mobile application
  - Information dissemination
  - Consolidation of solar rooftop installation interest/applications
- Preparation of city specific guidebook and pamphlet in regional language
- Appointment of 200 ‘Solar Friends’ by Mayor
- Workshops for creating awareness
  - Residential consumers
  - Non-Residential consumers
- Mass Publicity
  - National/regional newspapers
  - Social media (Facebook, Twitter)
  - FM radio, public hoardings etc.

### Outcome
- Installation of 3.6 MWp rooftop solar power plants in Govt. buildings under Surat Municipal Corporation
- 1675+ applications (1462+213), 5.5+ MWp (2.5+3) both in Res. & Non-Res. Consumers, 50+ installations completed, till date

Video messages to adopt rooftop solar from 22 Brand Ambassadors (MP, MLA & Others) in 22 Indian Languages
Outreach to the Citizens of Surat Smart City
Glimpse of Rooftop Solar PV Power Plants in Surat Smart City
Future Plan of SMC for promoting Clean Energy

- Converting 250+ schools as Model schools under “Green Campus Scheme” of MNRE.
- Pilot demonstration of ‘E-Mobility’ while establishing Solar-based EV Charging Stations.
- Centralized Generation Monitoring of all Solar PV power plants, and utilities to track consumption pattern of Surat Municipal Corporation.
- Development of Eco-Park(s)/Renewable Energy Knowledge Centre in Surat Smart City.
- Developing Surat Smart City as “Model Solar City”

RES: 75.8 GWh/Annum (34%), RES + EE: 95.4 GWh/Annum (43.4%)
TERI in Rooftop Solar Development across India

Segment: Solar Rooftop

- Rooftop Solar Power Potential Estimation
- Policy and Regulatory Consultancy
- 3rd Party Inspection
- Solar based Charging Station for EVs
- Web Platform for Local Bodies & Nodal Agencies
- Integration of RE Studies
- Technology Implementation support for Smart Cities
- Lenders Engineers
Thank You!

It’s crucial time to ACT

Contact Us,

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http://smartcities.gov.in/
Maps of Selected Smart Cities in India

Source:
https://www.google.com/maps/d/edit?hl=en&authuser=0&mid=1APxnhuuFR41G2jtJIAPhfbvJBhc&ll=8.7775 11840182498%2C0&z=2
Rooftop Solar Power Potential in 33 Smart Cities
State-wise Residential Tariff Structure

INR

Residential Tariff

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