

# Urban-LEDS project - Rajkot

City Developments and Experiences – Market Place Poster

## Low-carbon development: planning & actions implemented

### 1. Solar PV Power Plant at RMC West Zone office

Capacity: 60kWp  
Year of Establishment: 2011  
Total Project Cost: INR 8.25 million  
**Investment:** Rajkot Municipal Corporation (RMC) 70% & Ministry of New and Renewable Energy (MNRE – Government of India) 30%  
Duration: 10 years



#### Impacts / Results

- Savings: 225 units per day
- Annual savings of INR 400,000 (Approx.)
- Improving Urban Air quality
- Securing Safe & resilient energy supply
- Supporting green Urban economy
- Energy conservation

### 2. Solar PV Power Plant at RMC East Zone office

Capacity: 50kWp  
Year of Establishment: 2012  
Total Project Cost: INR 6.80 million  
**Investment:** Rajkot Municipal Corporation (RMC) 70% & Ministry of New and Renewable Energy (MNRE – Government of India) 30%  
Duration: 10 years



#### Impacts / Results

- Savings: 200 units per day
- Annual savings of INR 350,000 (Approx.)
- Improving Urban Air quality
- Securing Safe & resilient energy supply
- Supporting green Urban economy
- Energy conservation



### 3. Bus Rapid Transit System (BRTS)

Coverage: 63.50 Kms  
Year of Establishment: 2009  
Total Project Cost: INR 4700 million (Phase-I: 1200 million & Phase- II& III: 3500 million)  
**Investment:** Government of India (50%), Rajkot Municipal Corporation (30%) & Government of Gujarat (20%)  
**Status:** Phase-I (Operational).



#### Impacts / Results

- Highly randomized development with localized trips
- Improving Urban Air quality
- Supporting green Urban economy
- Leverages the full scope for public space and accessibility improvement

### 4. MSW Processing Plant

Capacity: 400 MT per day  
Year of Establishment: 2005  
**Financial model:** Public Private Partnership (PPP)  
**Investment:** Hanjer Biotech Energies Private Limited (Capital and O&M cost) and Rajkot Municipal Corporation (12 hectares land provided by RMC)  
**Status:** Operational since 2006



#### Impacts / Results

- Bio-Fertilizer, Fluff (Green Coal), Eco-bricks, Recyclable plastic, metal & other
- Utilizes nearly 85% to 90% of waste and only leaves behind 10% to 15% of total waste as rejects
- Better economic viability
- Minimize the ground water pollution

### 5. Building Bye Laws Regulation

- Year: 2006
- Mandatory provision of Solar Assisted water heating System in all new buildings
  - Rebate in property tax for the users of Solar water heating system

#### Impacts / Results

- Approx. 30,000 Solar water heaters installed till date

### 6. Energy Saver Units (ESU) for Street Lights

Number of Units: 27 (1 unit = approx. for 100 lights)  
Capacity: 24kWH Load  
Year of Establishment: 2011  
Total Cost: INR 3.5 million  
**Investment:** Rajkot Municipal Corporation (RMC)  
Duration: 10 years



#### Impacts / Results

- Energy savings of 30% & above
- Alteration of light has ceased. No dark spots on road
- Intelligent control
- Minimum maintenance cost

## Challenges and solutions: how we addressed these ...

#### Challenges

- Budget constraints
- Lack of Public Transport
- Increasing pressure on land
- Lack of Public support
- Lack of Technical know-how

#### Solutions

- Adoption of PPP model
- Formulation of Parking Policy
- Formulation of Hawkers' Policy
- Revision of General Development Control Regulation
- Introduction of I-E-C (Information, Education & Communication)

## Lessons learned: we recommend to others ....

- PPP model helps to overcome the problems of budget constraints & lack of technical know-how. Also increases the efficiency of operation & services.
- Solar City Programme & Asia Pro Eco-Programme: Partnership with International organizations helps in exploration of new technologies and identification of various financial mechanisms.
- All infrastructure projects must go through Environment impact considerations as the potential risk can usually be mitigated by either a change in the design or additional cost to mitigate the matters.
- People should be educated through various ICT tools to encourage the use of mass transport system, renewable energy etc.