

# Urban-LEDS project

## Low-carbon development: planning and actions implemented

### Transportation: Thane Railway Station Area Traffic Improvement Scheme (SATIS)



#### Impacts / Results

- Improved travel speed
- Reduction in accident rate
- GHG emissions reduction
- Reduction in air and noise pollution
- Reduction in energy consumption
- Project is pro-economical, pro-environmental and pro-poor and conforms to National Urban Transport Policy-2006

### Energy Efficiency in Municipal Streetlights & Buildings:

- Implementation of energy efficient BEE star rated appliances
- Use of Microprocessor based Almanac timers street lighting (based seasonal changes)/Use of energy efficient HPSV lamps
- Pilot project of GSM based advanced street light management
- Use of tri band Phosphor T-5 & T-8 tube lights, CFL lamps, electronic ballast, reflectors
- Improvement in power factor near to unity by providing Automatic power factor correction panels
- Optimum utilization of air-conditioning system
- An Energy Conservation Cell formed

#### Impacts / Results

- 50% energy saving with better illumination from street lights
- Reduction in Energy consumption of 2,70,000 kwh annum from Energy efficient fans
- Reduction in Energy consumption of 3,60,000 kwh/annum

### Water Supply: Augmentation & upgradation of water supply scheme

- Water and Energy Audit for Bulk, Distribution network
- Redesigning of Raw water Pumps for reducing head
- System Automation with SCADA system from Raw water lifting up to the distribution Reservoirs
- Use VVFD for water pumps

#### Impacts / Results

- Energy savings about 33 %
- Saving around Rs. 5.2 Million/annum

### Renewable Energy

- Solar City Master Plan prepared under Solar City programme by Gol
- Policy on: Use of Solar Assisted Water Heating System in all new buildings/ 10% Incentive in property tax for residential buildings
- Installation of Solar Water Heaters (SWH) in Municipal buildings and the buildings constructed for slum dwellers under Basic Services for urban Poor (BSUP) scheme
- Solar Photovoltaic system installation in Municipal buildings
- Renovation of Biomethanation Plant in Kalwa hospital

#### Impacts / Results

- Annual generation of 73000 Units, about INR 45 lakhs annual savings from solar photovoltaic
- Annual generation of 1.50 lakh units about INR 9 lakhs annual savings from Biomethanation plant
- Curtails in consumption of Diesel during load shedding

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

#### Challenges

- Budget constraints
- EE/RE measures in municipal services
- Scientific disposal of MSW
- Land availability
- Pressure of Increasing population density

#### Solutions

- Adoption of PPP model
- Active public participation
- Effective implementation of rules and regulations
- Capacity building for new technologies and documentation
- Awareness programmes

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

1. To seek political consensus while implementation of RE/EE related projects.
2. Partnership with International organizations helps in exploration of new technologies and identification of various financial mechanisms.
3. Pilot study helps in assessing the techno-economic feasibility of the project.
4. O& M of RE particularly projects, ensures long term sustenance of the projects and shall be included during the initial stage

