



# **Solar Street Light Initiative**

Solar street lights were initially used mainly in third world countries or remote and off grid areas, where electricity is not always available. Today's solar energy technology has evolved and solar projects are appearing in both developed and developing countries.

Street lights using solar technology can be quickly and easily deployed.

Well chosen, sola powered street lights will give years of reliable and maintenance-free operation

## Advantages of solar energy lights

The prime advantages of the sola street lights are:-

### 1. Saves money and energy

- After the initial investment, the energy from the sun is practically FREE. So it will save you money on electricity bill.
- The use of solar street lights will lower the cost of public lighting cost.
- Financial incentives are available from the government that will reduce the cost.
- It's not affected by the supply and demand of fuel and is therefore not subjected to the ever-increasing price of gasoline.
- The energy to be saved from solar street lights can be used for industrial growth.

### 2. Environmentally friendly

- Solar Energy is clean, renewable and sustainable, protecting our environment.
- Therefore Solar Energy does not contribute to global warming, acid rain or smog.
- By not using any fuel, Solar Energy does not contribute to the cost and problems of the recovery and transportation of fuel or the storage of radioactive waste.

### 3. Independent/ semi-independent

- A Solar Energy system can operate entirely independent, not requiring a connection to a power or gas grid at all. Systems can therefore be installed in anywhere, making it more practical and cost-effective than the supply of utility electricity to a new or existing site.
- The use of Solar Energy reduces our dependence on foreign and/or centralized sources of energy, influenced by natural disasters or international events and so contributes to a sustainable future.
- Solar Energy supports local job and wealth creation, fuelling local economies.

## 4. Low / no maintenance

- Solar Energy systems are virtually maintenance free and will last for decades.
- Once installed, there is hardly minor recurring costs.
- They operate silently, have no moving parts, do not release offensive smells and do not require you to add any fuel.
- More solar panels can easily be added in the future whenever needs grow

## Solar Panel

Its task is to convert the sun's energy into electricity. Different sizes and power outputs are available. They have to be carefully chosen for the desired application. Solar panels should be able to withhold and deliver in extreme weather conditions. Some are even designed unbreakable (vandal proof), others will work well in overcast weather.

## Projected Economic Feasibility

Cost of electricity to CDGK per unit per month	Rs.1165/-
Monthly electricity bill paid to KESC after down time	Rs.50. million
Number of 135 watts lights to be replaced	60,000 Nos
Number of 250 watts & above lights to be replaced	60,000 Nos
Average cost of solar light including solar panel, heavy duty battery and solar PV charge controller for each light	Rs.200,000/-
Estimated Cost of complete replacement	US \$ 300/- million
Repayment schedule	@ Rs.50 million per month @ on US \$ = Rs.85

