



# Action for Climate Change for Bangladesh By Green Housing & Energy Ltd

Established  
In 2010

Number of Street Light	901
Quantity of Carbon we have reduced per Year	14798

## Project Description

### Street Light

Most solar lights turn on and turn off automatically by sensing outdoor light using solar panel voltage. Solar streetlights are designed to work throughout the night. Many can stay lit for more than one night if the sun is not in the sky for an extended period of time. Older models included lamps that were not fluorescent or LED. Solar lights installed in windy regions are generally equipped with flat panels to better cope with the winds.

Modern designs use wireless technology and [fuzzy control](#) theory for battery management. The street lights using this technology can operate as a network with each light having the capability of performing the turning on and off of the network

### Solar Panel [\[edit\]](#)

The solar panel is one of the most important parts of a solar street light, as the solar panel can convert solar energy into electricity that the lamps can use. There are two types of solar panels commonly used in solar street lights: mono-crystalline and polycrystalline. The conversion rate of mono-crystalline solar panels is much higher than their poly-crystalline counterparts. Solar panels also vary in wattage systems.

### Lighting Fixture [\[edit\]](#)

LEDs are usually used as the primary lighting source of modern solar street lights, as the LED will provide much higher luminosity with lower energy consumption. The energy consumption of an LED fixture is at least 50% lower than the HPS fixture counterpart which is widely used as the lighting source in traditional street lights. A lack of warm-up time in LEDs also allows for use of motion detectors for additional efficiency gains.

### Rechargeable Battery [\[edit\]](#)

Batteries will store the electricity generated by the solar panel during the day and provide energy to the fixture during the night. The life cycle of the battery is very important to the lifetime of the light and the capacity of the battery will affect the backup days of the lights. There are two types of batteries commonly used in solar-powered street lights- gel cell deep cycle batteries as well as lead acid batteries. Lithium-ion batteries are also popular these days as they are compact in size and not prone to theft due to their lack of use in other situations unlike lead acid batteries.

### Pole [\[edit\]](#)

Strong poles are necessary to all street lights, especially to solar street lights as there are often



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