

# Light for Education

Solar powered lighting for underprivileged students

## The problem :

- Unreliable access to the grid in rural and remote areas, causes a loss of valuable study time during school hours and at home during the night.
- Light from kerosene lamps or candles is too dim, unsuitable for studying.
- Fumes and heat from kerosene lamps irritate the eyes and nose, affecting health and concentration.
- Risk of fire accidents from kerosene lamps.

## The solution :

SELCO Foundation initiated **Light For Education (LFE) program** with these needs in mind that. This is a unique program of providing sustainable energy solutions to power the lighting needs of school going children and in the process also creating awareness towards renewable energy sources and the importance of a clean environment.

### • **LFE-Lamps:** This solution has three important components, a **centralized solar charging system, pocket size battery and LED study lamp.**

- Each student is provided with a pocket size, light weight battery and a LED study lamp. The lamp is placed at home where students study at night.
- The battery (size of a soap) is carried to the school every day for charging.
- At school the batteries are charged by the centralized solar charging system. In the evening when it is time to go back home, kids carry the charged battery to home.
- A completely charged battery will provide light for 4 hours a day for 2 days.

### **Benefits of programme:**

- Provides safe, bright and sufficient light; does not emit harmful smoke or heat, like a kerosene lamp.
- Cost-effective due to a shared, centralized solar charging system
- To charge the batteries the students need to attend school every day. This improved attendance of students.
- Technically the performance of the central system is much better than individual solar panels in portable lantern models especially during rainy weather.

### • **Hostel and school lighting:** The Solar lighting system contains **Solar panels** which will be installed at the roof top of the schools/ hostels. The Panels will convert the solar energy and store in a **central battery system** which in turn will power **DC lights** installed at the study halls where students study during night.

### **Benefits of programme:**

- A stable source of light for the school/hostel. The number and brightness of the lights are designed based on specific need.
- Enable students to work in the evening for tutorial classes conducted in some schools.
- Ensures better safety for some of these very remote hostels in the night.
- Students can also do some recreational activities using solar lighting system during the night.

**After-sales service:** SELCO has an extensive network of 45 branches that ensure the long term sustainability of the systems. SELCO signs an Annual Maintenance Contract (AMC) with the school or hostel at the project initiation phase.



Solar Panels atop school in Muthur



Handover of lanterns to students in Muthur



Students study under Selco Solar lanterns



Solar lamps and charging station



Muthur Charging station



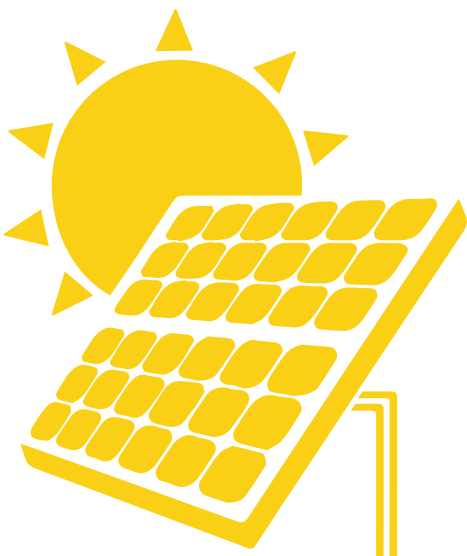
Solar lit dining Hall in a residential school

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# Digital education Program

Solar powered, digital and audio-video content for underprivileged students

**The context:** SELCO with its vision of making renewable energy available to all has come up with an innovative solution called eShala which enables the delivery of the syllabus based, digitized educational content through Solar powered digital projector OR a 32" flat-screen LED television with movable trolley.

## Features of eShala:

- Solar powered projector to deliver the content in remote /off the grid schools
- Licensed educational content as per the syllabus installed on a minicomputer
- Training to teachers for effective usage of the system
- Handheld tablet with the digitized content for teachers -for class preparation
- Annual Maintenance Contract for five years to ensure the proper functioning of the system
- On time service, repair and replacement of the system components

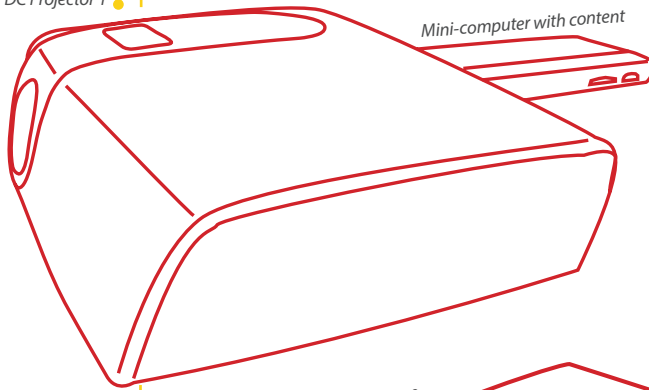
## Benefits of programme:

- Improvement in quality of classroom education
- Reduction in drop outs
- Effective Learning- Better understanding and retention
- Increased awareness among children about Solar Energy, a form of renewable energy, and its usage.

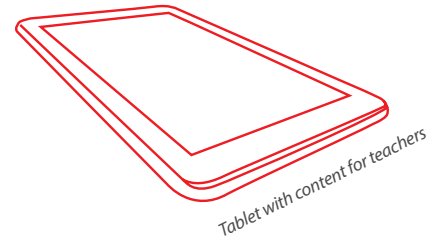
32" TV instead of projector



DC Projector 1

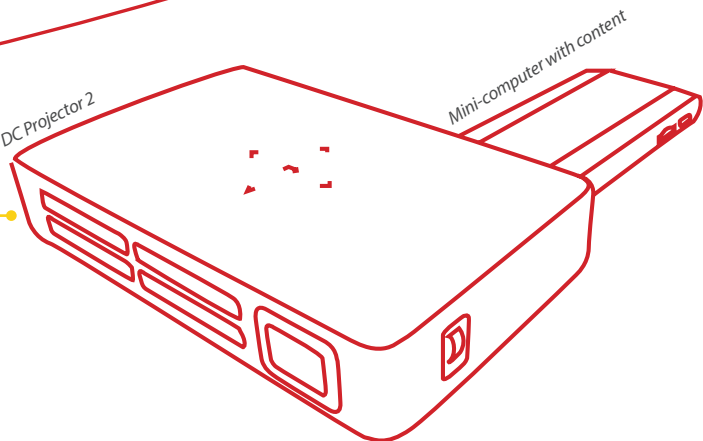


Mini-computer with content



Tablet with content for teachers

DC Projector 2



Mini-computer with content



Solar Panels on the school terrace



Class in progress using audio-visual digital content



A student turns on the projector while in class

SELCO Solar Pvt. Ltd, a social enterprise established in 1995, provides need based sustainable energy solutions and services to under-served households and businesses.

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