

IoT Enabled Village Lighting



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Rural electrification schemes which addresses the separation of feeder for domestic and agricultural utility so as to avoid power interruption due to unbalance supply and demand. Since this is a huge activities and prolonged work In order to provide lighting and agricultural utilization at a reasonably short time we are suggesting 2 stages of implementation. We are primarily addressing non agricultural activities to start with 4,10,58,821 House Holds who does not have basic lighting and clubbed with corresponding other public lighting and the power required for community utilization i.e for schools/community centers and panchayath office etc.

Present scenario

100% Villages Electrified in 3 states.
Lowest 44.07% in Jharkhand, followed by Orissa 46.57%
The households (HH) yet to be electrified 4,10,58,821

Basic power requirement in a village

Those BPL (below poverty line) provided with 3 numbers of LED bulbs equivalent 11W CFL or 60W incandescent lamp
Affordable are provided with 1 no. LED tube light +3 bulb1no+DC table /wall mounting fan

Besides power requirements for HH , requirements are public lighting like street lights, community lighting like schools that will support a PC and other welfare centers, panchayat offices etc.

For the above the power requirement is:

House holds:

1 NO. 2' LED tube light equ, conv. 4' tube light -- 8W
3 LED bulbs of 2.65W -- 8W
DC Fan of 10W -- 10W
Total -- 26 W say 30W

Assuming 2 basic sizes of 50 (HH) and 100 HH / per village:

For a 50 HH village the power required is
30x50 + other req. as specified above is 3KW
For a 100 HH village the power required is
30x100 + other req. as specified above is 5KW

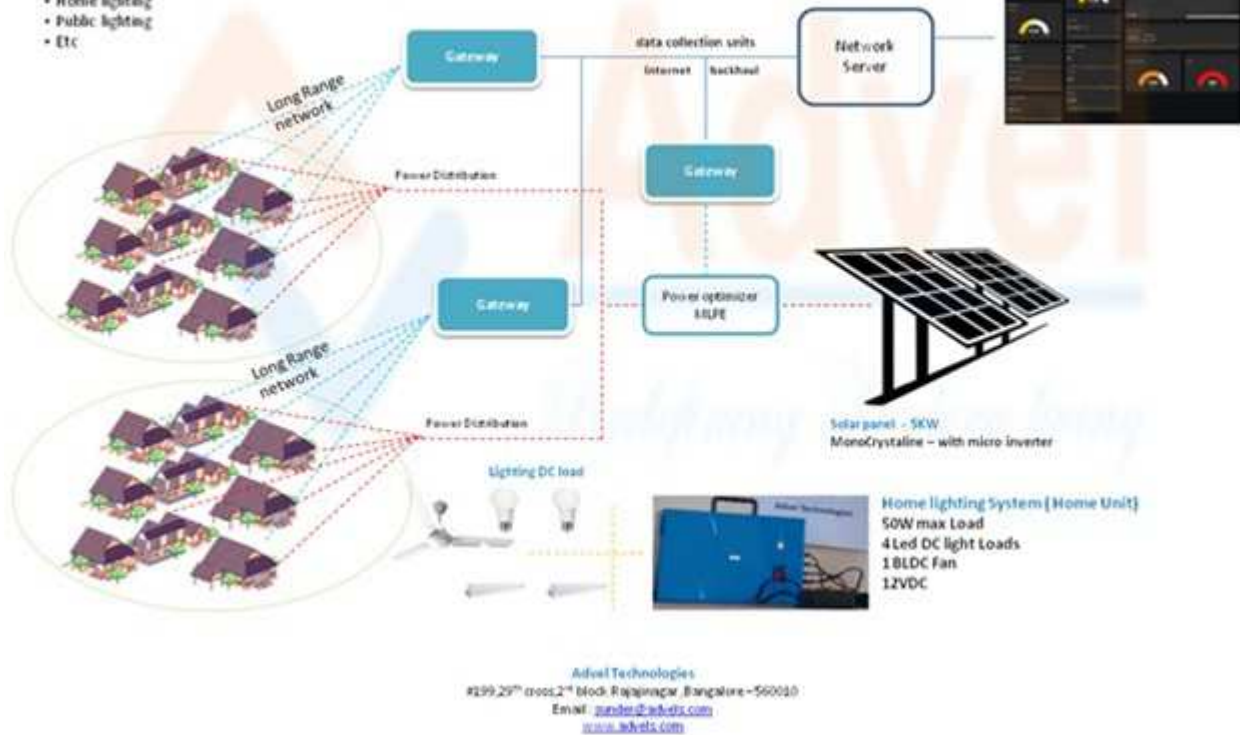
In the case of outdoor lighting the power saving of our ultra low power offers 85 to 92% .

Public utility like street lighting, road lighting, highway lighting and high mast lighting are the broad categorization. For most of the items Optical/illuminations/safety standards are available as per BEE recommendation /BIS standards for conventional lamp and additional information what should be applicable for LED lamps are published by ELCOMA/EESL.

Village Solar lighting System

Lighting solution with IOT Based monitoring System.

- Home lighting
- Public lighting
- Etc



Source: Advel Technologies, Bangalore

Similarly for commercial, industrial, corporate, advertisement and the other sectors the quality consciousness is an added advantage. The standards applicable for public utility lighting can also be applied for all outdoor lighting. All utilities are Wi-Fi enabled, the purpose is to keep a check on the status, and communicable for maintenance and monitoring. No centralized battery system, to avoid bulk battery maintenance. The centralized solar power generation with grid tied micro inverter (which is useful to merge with mains power on later date when the power is extended by the electrical administrations) with intelligence and enable wifi connectivity for the maintenance and monitoring. A 230V line will be extended through the village. The household (HH) are tapped at the individual house and each house is provided with a lighting system with battery backed and Wi-Fi enabled.

Leadership Quotes

A leader is the one, who knows the way, goes the way and show the way

A leader is a dealer in hope

The quality of a leader is reflected in the standards they set for themselves

Innovation distinguishes between a leader and a follower

Leadership is the capacity to translate vision into reality

Strong convictions precede great actions

Leadership is a privilege to better the lives of others. It is not an opportunity to satisfy personal greed

The function of leadership is to produce more leaders, not more follower

Leadership comes in small, act as well as bold strokes

The art of communication is the language of leadership

To succeed one must be creative and persistent