

## ENERGY CELL

Program Coordinator : S. N. Jayaram, Sr. Project Engineer

KSCST set up Energy Cell on 30th September 2015 to create awareness about usage of renewable energy devices and Energy Conservation, capacity building and bring in Innovative projects in the Energy Sector.

### Objectives

- Provide the Technical & Management support for implementation of Renewable Energy Projects and Programmes in Government organisations and Institutions.
- Organize Training programs and Workshop for ESCOM's Executives about grid interactive Solar PV Programmes including roof top power generation.
- Build awareness on Energy conservation, popularization of grid interactive Solar PV and Renewable Energy sources and independent decentralized power generation systems.
- Demonstration of new technologies developed by R&D Institutions.
- Demonstration field testing of new technologies developed by the R&D Institutions

### Technical and Management support:

Energy cell provided the Technical and Management support for implementation of Renewable Energy Projects and Programmes for the following institutions during September 2018 to January 2020.

Activity	Outcome
Prepared project proposal on behalf of Karnataka Residential Educational Institutions Society (KREIS) for setting up of 900 kWp Rooftop Solar PV plants and Insulation of open conductors at 30 in the Residential Schools across Karnataka which are working under KREIS under the CSR programme.	Submitted to Rural Electrification Corporation Ltd. Government of India (REC)
KSCST along with KREIS Engineers visited the 30 residential Schools for baseline survey.	Baseline survey report submitted to REC
Prepared the Tender Documents for setting up of 900 kWp rooftop Solar PV Power plants & Insulation of open conductors at 30 residential schools across the state.	Report submitted to REC and KREIS.
Techno-economic feasibility report for installation of 30kWp capacity for installation of rooftop SPV Power Plant.	Techno economical feasibility report submitted to Karnataka Science & Technology Academy
Technical support for preparation of estimate for rooftop on grid and off grid SPV power plants & Solar water Heaters.	University of Agricultural Sciences, Dharwad.
Technical and management support for installation of rooftop SPV power plants at International Centre for Theoretical Science (ICTS) for setting up of 500 kWp capacity grid interactive rooftop SPV Power Plant.	ICTS has submitted the proposal to REC for financial assistance under CSR Programme.
Setting up of 10 kWp rooftop Solar PV Power plants for supply power to the E-learning centres at 60 KREIS residential schools.	Tender document for KREIS

The KSCST technical team members visited the following tribal villages, habitations and settlements in Mysore, Chamarajanagara and Kodagu districts to study the feasibility for setting up of Solar PV Hybrid Ultra Capacitor (HUC) based power plants for community income generation activities and drinking water supply system, Street lights etc. Organised a meeting at KSCST involving faculty of IISc, CFTRI Scientists and officials from Directorate of Tribal welfare, Government of Karnataka to finalise the report.

### **Third Party Inspection of Solar PV Power plants installed at Government organisations.**

1. On the request of the CEO, Zilla Panchayath, Bengaluru Urban District, KSCST technical team visited Zilla Panchayath office at Bengaluru on 10.01.2019 and inspected the 48kWp capacity rooftop on Grid Solar PV Power plant and 20 kVA UPS system installed at Bangalore Urban District Zilla Panchayat office building at Banashankari, Bengaluru.
2. Zilla Panchayath, Chamarajanagara District requested KSCST to conduct third party inspection of Centralized off Grid Solar Power plant, installed at Adijambava Colony, Santemaranahalli village, Chamarajanagara district. Inspected the Solar PV System with LED street lighting installed under Soura Belaku programme site on 04.12.2018
  - 5 kWp Centralized SPV Power plant with 60 LED Street lights
  - 2 kWp Centralized SPV Power plant with 24 LED Street lights
  - Standalone Solar PV street lights 8 numbers

The project team members attended the 6<sup>th</sup> Meeting of DST T2 Screening Committee on State S&T Programmes (T2SC – SSTP) held on 13 & 14th May 2019 at Bhopal and made a presentation about the progress of the project titled “Field Testing of Hybrid Ultra Capacitors (HUC) Powered Solar Lighting Kits and Solar Street Lights for grid deprived rural areas lighting in varying climatic zones of India”. Under this project KSCST installed around 1000 HUC lighting kits in 22 States for field testing the performance of the HUC technology under different climatic conditions.