



**BANGALORE ELECTRICITY SUPPLY COMPANY**

**( A GOVT OF KARNATAKA UNDERTAKING)**



**SOLAR ROOFTOP PROGRAM**

**UNDER NET METERING**



**The use of solar energy has not been opened up because the oil industry does not own the sun.**

**Ralph Nader**

# **IMPORTANT EVENTS**

- On 10.10.2013, the **KARNATAKA ELECTRICITY REGULATORY COMMISSION (KERC)** determined the tariff of Solar Rooftop PV systems as **Rs. 9.56 without subsidy & Rs.7.20 with subsidy.**
- On 22.05.2014, the **Government of Karnataka (GoK)** announced the **Solar policy 2014-2018** and set a target of **400MW.**
- On 07.11.2014, the Solar Rooftop policy launched in **BESCOM** and extended to **all ESCOM'S.**

# BESCOM JOURNERY TOWARDS SOLAR RTPV PROGRAM





- ❖ **On-line Applications** invited from all the consumers of BESCO
- ❖ SRTPV capacity is from **1 kW to 1 MW**
- ❖ Applicant can select any System integrator or PV module
- ❖ Mandatory use of BESCO empanelled **Grid Tied Inverter & Bi-directional meter**

## APPLICATION STATUS

| <b>Particulars</b>               | <b>No. of SRTPV installations</b> | <b>Capacity in MW</b> | <b>Remarks</b> |
|----------------------------------|-----------------------------------|-----------------------|----------------|
| <b>Total no. of Applications</b> | <b>3356</b>                       | <b>1339.7</b>         | -              |
| <b>Commissioned</b>              | <b>386</b>                        | <b>6.81</b>           | -              |
| <b>Total PPA executed</b>        | <b>1575</b>                       | <b>846.35</b>         | -              |

# COMMISSIONED INSTALLATIONS



**BESCOM Corporate office – 50kW**

**Karnataka state cricket association - 400kW**



**Residential house at kengari– 5 kW**



**Residential house at J P nagar – 1.8 kW**



**I for  
promotion of Solar  
rooftop program**

**THE SRTPV APPLICATION FORMAT,  
PROCEDURES, FAQ, GUIDELINES TO  
CONSUMERS & BESCOM OFFICERS,  
OTHER RELATED FORMATS**

**PREPARED BY BESCOM EXPERT  
COMMITTEE AND HOSTED IN BESCOM  
WEBSITE [WWW.BESCOM.ORG](http://WWW.BESCOM.ORG)**



# **FORMATION OF TECHNICAL & PROCESS COMMITTEE**

**EMINENT EXPERTS DRAWN FROM  
USAID, CPRI, GERMI, UL,**

**TO SIMPLIFY THE PROCESS AND TO MAKE  
HURDLE FREE GATEWAY**

## **Major decision taken in the committee are:**

- ✓ **Inspectorate approval exempted for SRTPV installation less than 10kW**
- ✓ **EMPOWERED AEE to Commission SRTPV installations less than 5 KWp.**
- ✓ **For HT installations interconnection point permitted at LT Bus Bar.**
- ✓ **Thus reduced technical loss and saving to consumer as cost of step-up DTC infrastructure is avoided.**

## **Major decision taken in the committee are:**

- ✓ **Penetration limit of Solar RTPV upto 80% of the Distribution Transformer capacity (DTC)**
- ✓ **Execution of TPA between BESCO, SRTPV consumer and investor / developer.**
- ✓ **Permitted registration of applications under construction.**
- ✓ **This opened the flood gates for registration of applications.**



# Empanelment of Manufacturers of:



## Grid tied Inverters

**ABB, SMA DELTA,  
Fronius, Studer etc**



## Bi-directional meters

**Make : Secure & genus**

# Empanelment of facilitators

**Mitcon, ORB, Sterling, Genus, Greenfuel etc**

# Empanelment of Hybrid Inverter :

- **With battery backup for assuring 24 \* 7 hrs P/S – Studer make**



Mahalakshmi N



# Hybrid system :

➤ **Solar + small wind mill system proposed for Govt buildings**



➤ **Combination of Hybrid & grid tied inverter for assuring uninterrupted P/S in Rural areas**



**Machohalli school**



- ✓ **Hand holding other Govt department for preparation of tender documents w.r.t Solar RTPV system**
- ✓ **Standardization of Technical specifications and qualification requirements for tender and hosted in BESCO website as ready reckoner for inviting bids for other departments**
- ✓ **Installation of SRTPV on all BESCO office buildings under IPDS scheme**

- ✓ **Invited service tender for installation of modems to all SRTPV locations**
- ✓ **SOLAR RTPV dashboard to know the Solar generation.**
- ✓ **Empanelment of agencies for installation of SRTPV on Govt schools / colleges to utilized the funds allocated by 13 th finance commission, Gol.**

# **SURYA RAITHA SOLAR PUMP - PILOT PROJECT :**



- ✓ **Introduced on 24.9.2014 for welfare of farmers.**
- ✓ **To harness energy from solar to run IP sets and feed in excess energy to grid.**
- ✓ **Assured quality of power supply to farmers during day time.**
- ✓ **Assured additional income to farmers.**
- ✓ **Improvement in water table.**
- ✓ **Reduction in peak load, losses and energy consumption.**
- ✓ **Execution of TPA between BESCO, SRTPV consumer and investor / developer.**

✓ **Formation of SOLAR  
HELP DESK at Corporate  
office BESCO**



✓ **In-house training to  
BESCO officers**





✓ **S RTPV**  
**PROSUMERS**  
**INTERACTION**  
**MEETING**



✓ **ADVERTISEMENTS**  
**Through DDIS at**  
**Reservation counters**  
**At all Major Railway**  
**Stations**







# ADVERTISEMENTS IN



**NEWS PAPER**

**RADIO JINGLES**

# BESCOM ACTIVE PARTICIPATION IN



# GREEN SUMMIT 2015



# BESCOM STALL AT ELEC RAMA 2016



## GLOBAL INVEST MEET (GIM) - 2016

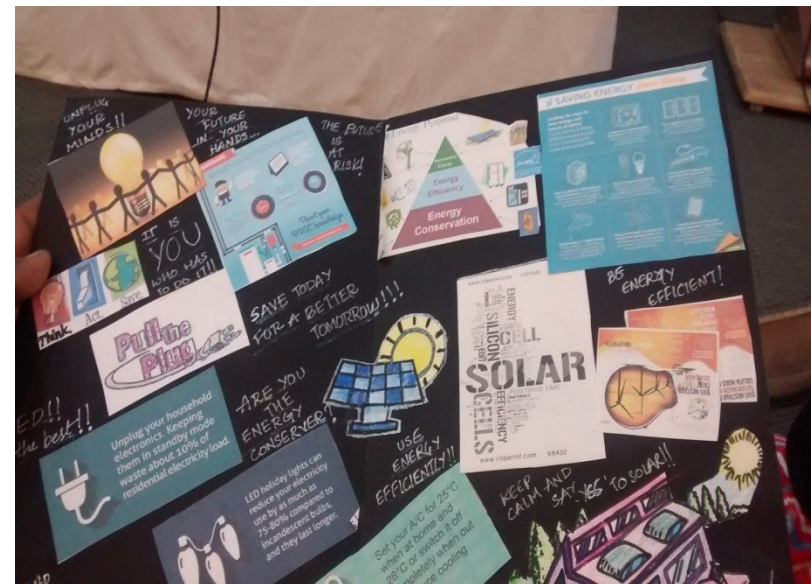


# Vidyuth Jagruthi Yojana

✓ **Energy saving & awareness program to school / college students**



✓ **Target of reaching 100 schools / colleges, 50 thousand students**





# New Innovative Technologies

✓ **Micro inverters**



✓ **Tracking system**

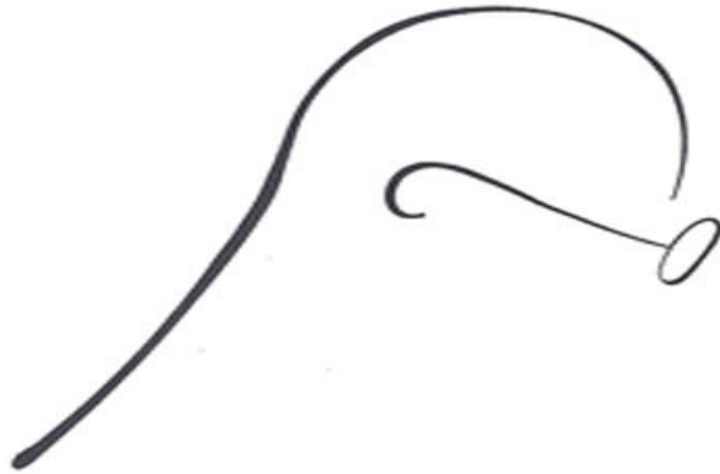


✓ **Composite panels which generate electricity and hot water**

✓ **Pyramid / Concentrated panels**

✓ **Battery storage system**

# THANK YOU



Be the change you want to see in the world