



Abstract

PRE-111
PRE-112
put up file
for

Schemes – State Scheme – Energisation of Street Lights with Solar Energy – Continuation of the Scheme for 2012-2013 – Sanction of funds and prescribing Guidelines – Orders – Issued.

Rural Development & Panchayat Raj (SGS-3) Department

G.O.(Ms.) No.67

Dated: 02.08.2012

63247

Read:

1. G.O.Ms.No.91, Rural Development and Panchayat Raj (SGS-3) Department dated 17.11.2011.
2. From the Commissioner of Rural Development and Panchayat Raj, Letter No.28710/2012/PRI.III-2, dated 07.05.2012.
3. G.O.(Ms)No.42, Rural Development and Panchayat Raj (PR-I) Department, dated 7.6.2012.

ORDER:

In the G.O. first read above, orders were issued for the implementation of energisation of one lakh street lights with solar power in 1000 Village Panchayats over a period of 5 years from the year 2011-2012. It has also been ordered that 20,000 street lights will be energized with solar energy at the estimated cost of Rs.52.50 crores for the year 2011-2012.

2. The Hon'ble Minister for MA&RD in his announcement in the Tamil Nadu Legislative Assembly on 9.4.2012 has reiterated that 20,000 street lights will be energized with solar power in Village Panchayats to the tune of Rs.52.50 crores for the year 2012-2013.

3. The Commissioner of Rural Development and Panchayat Raj in the letter second read above has sent proposals along with guidelines after vetted by the Chairman & Managing Director, Tamil Nadu Energy Development Agency. Accordingly, the estimate for energizing 20,000 street lights with solar power for the year 2011-2012 shall have to be revised for the year 2012-2013. Based on the bid price recently finalized for the year 2011-2012 by the TEDA, the cost of solar street lighting systems for the year 2012-2013 may be revised as below:

Sl. No.	Category	Cost of Light / Power plants (in Rs.)		
		Government of India Subsidy*	State Contribution	Total
1.	Individual / Stand alone Solar Street Light	4,050	20,950	25,000
2.	500 W Solar power plant for every 10 street lights	40,500	2,09,500	2,50,000

*Govt. Of India (MNRE) subsidy has been worked out based on 2011-2012 guidelines of MNRE and is subject to revision for the year 2012-2013.

The Estimate for energizing 20,000 street lights with Solar Power has been arrived at as detailed below:

I.	Cost for 1,000 individual / stand alone street lights with solar power @ Rs.25,000 X 1,000	Rs. 2.50 crores
II.	Cost for 500 W Solar power plant for energizing cluster of existing street lights (1900 units at the rate of 10 lights per unit for 19,000 lights) (1900 X Rs.2.50,000)	Rs.47.50 crores
III.	Cost for distribution network to be established by TANGEDCO for energizing cluster of new street lights (100 units for 1000 new lights) (100xRs.80,000)	Rs. 0.80 crores
IV.	Total cost for energisation of 20,000 street lights (I + II+III)	Rs.50.80 crores
V.	TEDA Service Charge @ 8%	Rs. 2.03 crores
	TOTAL STATE GOVERNMENT FUND	Rs.52.83 crores

3. The Commissioner of Rural Development and Panchayat Raj has requested the Government to issue necessary order for the continuation of the scheme "Energisation of street lights with solar power", sanction of funds of Rs.52.83 crores for energisation of 20,000 street lights with solar power in Village Panchayats for the year 2012-2013 and approve the draft guidelines. He has also requested the Government to authorize him to make any change/modification in the guidelines, if necessary, in consultation with the Government.

4. In the Government Order third read above, orders were issued to release State Finance Commission Grants to the Rural Local Bodies for the year 2012-2013.

5. The Government have examined the proposal of the Commissioner of Rural Development and Panchayat Raj in detail and decided to accept the same and issue the following orders:-

(i) The scheme "Energisation of street lights with solar power" will continue for the year 2012-2013.

(ii) Sanction ^{has been} accorded for a sum of Rs.52.83 crores (Rupees Fifty two crores and eighty three lakhs only) for 'energisation of 20,000 street lights with solar power' in Village Panchayats during the financial year 2012-13. The funds for the scheme may be provided as summed up below:

From concerned Village Panchayats	: Rs.21.35 crores
From Infrastructure Gap Filling Fund	: Rs.21.35 crores
From GOI subsidy (borne by Govt. of Tamil Nadu remitted later)	: Rs. 8.10 crores
Service Charge to TEDA from State Govt. fund (4%)	: Rs. 2.03 crores
Total	: Rs.52.83 crores

- (iii) The Tamil Nadu Energy Development Agency (TEDA) shall be the implementing agency.
- (iv) The Tamil Nadu Energy Development Agency shall be paid a service charges at the rate of 4% of the total cost for the supply of solar street lights / installation of solar power plants. The Commissioner of Rural Development and Panchayat Raj will disburse the funds to the Tamil Nadu Energy Development Agency.
- (v) The detailed guidelines for the implementation of the scheme are annexed to this order.

6. This order issues with the concurrence of Energy Department vide its U.O.No.5617/C2/2012 dated 16.5.2012 and the Finance Department vide its U.O.No.247/JS(PM)/2012 dated 2.8.2012.

(By Order of the Governor)

N.S. PALANIAPPAN,
Principal Secretary to Government

To
The Principal Secretary to Government, Energy Department, Chennai-9.
The Secretary, Information Technology Department, Chennai-9.
The Commissioner of Rural Development and Panchayat Raj, Chennai-15.

- The Managing Director, Tamil Nadu Energy Development Agency, Chennai-6.
- All District Collectors. (except Chennai)
- ✓ All Project Directors, District Rural Development Agencies (Thro' CRD & PR)
- The Pay and Accounts Officer (South), Chennai-5.

Copy to:

- The Additional Chief Secretary / Secretary-I to the Hon'ble C.M., Chennai-9.
- The Senior P.A. to Hon'ble Finance Minister, Chennai-9.
- The Senior P.A. to Hon'ble Minister for Electricity and Prohibition Excise, Chennai-9.
- The Senior P.A. to the Hon'ble Minister for MA & RD., Chennai-9.
- Finance (R.D / FC-IV) Department, Chennai-9.
- The Accountant General, Chennai-9/18/35.
- All District Treasury Officers.

//Forwarded by Order//

T. V. 
Section Officer

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ANNEXURE to G.O.(Ms.) No.67, RD & PR (SGS-3) Department dated 02.08.2012

GUIDELINES FOR ENERGISATION OF STREET LIGHTS WITH SOLAR POWER

1. Allocation for the year 2012-13 :

In the year 2012-13, it is proposed to replace 20,000 street lights in various Village Panchayats with Solar Photovoltaic (SPV) lights. The District wise allocation will be done by the Commissioner of Rural Development and Panchayat Raj.

2. Allotment to the Village Panchayats :

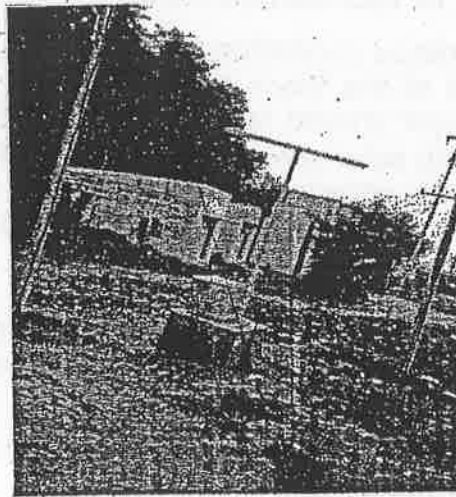
The District Collector and Chairman, District Rural Development Agency will select the Village Panchayats and number of lights in each village where the conversion of street lights into solar lights is required.

3. Selection of locations/areas:

A Committee consisting of Block Development Officer (Village Panchayat), AE/JE of TNEB of the Block area and the Panchayat President of the concerned Village Panchayat should identify the specific existing street lights which are to be replaced with solar power and locations for erection of new solar street lights, after taking into account of the following points. The TANGEDCO should be consulted with regard to energizing existing Street lights that are being powered from grid, with solar power.

- i) Replacement of incandescent lights should be given top priority. Individual lights in remote locations of the habitations should be given priority.
- ii) Street lights located in the far flung localities and forest areas should be given priority for replacement.
- iii) Habitations affected by chronic voltage problem should be given priority.
- iv) Street Lights located in Burial Ground, pathway to burial ground must be given priority.
- v) Habitations taken up under 'THAI' scheme shall be given priority.
- vi) A row of existing street lights (18,000 Nos) will be energised through centralised Solar PV power plants after replacing the existing incandescent lamps/ tube lights by 20W LED lights. The existing distribution line of TANGEDCO will be used for distribution of solar power and grid supply will be kept as backup for uninterrupted supply to street lights i.e., for charging the battery from grid when solar power is not sufficient to charge the battery and provision for automatic change over to grid when the solar system fails.

- vii) 3000 New street lights (1000 of 2011-12 & 2000 of 2012-13) proposed by RD Dept under this scheme for the year 2012-13 will be powered through solar with 20W LED as stand-alone SPV street lighting systems(2000 nos) and/or through centralized solar PV power (1000 nos), based on the proximity of locations. Centralized solar power plant network within 25m radius of the TANGEDCO grid will be backed up by grid supply with automatic changeover provision.
- viii) The street lights will be automatically energized through solar PV systems from dusk to dawn (6pm to 6 am). The street lights will also be timed to automatically dim down to 1/3rd capacity (6W-7W) from 10pm to 5am to save power.
- ix) The locations of Street Lights shall be identified by Rural Development and Panchayat Raj Department in coordination with TANGEDCO and the list will be handed over to TEDA for installation.
- x) The Village Panchayat shall provide a 30 sq.ft land for installation of centralized SPV power plant as shown in the picture below:



Photograph of pilot plant installed at Kanchipuram

This does not mean transfer of land to TEDA, but only making Panchayat vested lands available for this purpose.

4. Implementation Agency:

Tamil Nadu Energy Development Agency will be the implementing agency. The TEDA will invite Tenders for supply, installation and maintenance of solar street lighting systems for 5 years.

a) Street lighting through stand alone systems (2000 Nos)

It is proposed to install 2000 Nos SPV stand alone street lighting systems with 20W DC-LED for locations where the existing street light poles / newly proposed street light locations are quite far from each other. For eg: Burial ground and pathway to burial ground lighting, remote habitations etc., Stand alone SPV

street lighting system will be erected in between the existing street lights. The cost estimate per stand alone SPV street lighting system is Rs. 25,000/-. As the final bid price received for standalone street lights for the year 2011-12 was very high, the Empowered Committee resolved to include the target of 1000 Nos for the year 2011-12 in 2012-13. Hence it is estimated that total of 2000 stand alone street lights will be installed in 2012-13. However for the 1000 Nos of the year 2011-12, the funds already allotted for the same will be utilized.

b) Installation of 500 W Centralized Solar Photo Voltaic power plant towards powering a cluster of 10 street lights

(i) Existing Street Lights (18,000 Nos)

In case of existing street lights selected in a row, the available distribution line of TANGEDCO will be used for supply of solar power from the 500 W centralized SPV power plants and grid supply will be kept as backup with automatic change over option. The existing incandescent lamps/ tube lights will be replaced with 20W LED lights and the old streetlight lamps will be handed over to RD & PR Department. It is estimated that 18,000 street lights will be installed in this category.

(ii) New Street Lights (1000 Nos)

In respect of new street lights proposed in a row, 500 W centralized SPV power plant will be established to energise a cluster of 10 streetlights with LEDs lamps of capacity 20W each from dusk to dawn. The distribution network will be established by TANGEDCO for distribution of power to the street lights. It is estimated that 1000 street lights will be installed in this category.

Remote Monitoring Unit (RMU) will be integrated with each centralized SPV power plant, through another agency, for monitoring the system performance from the office of TEDA.

A manual change over switch / fuse carrier will also be provided to disconnect the solar power, during maintenance by TANGEDCO personnel. Necessary warning boards will be kept at the transformers & also painted on poles where there is dual supply.

5. Issue of work order:

After finalization of tender and identification of company / Agency for execution of works, work order will be issued by TEDA and agreement should be executed for completion of works within the time limit and for maintenance of lights up to certain period as per the existing norms.

6. Execution of works :

The contractor shall also be responsible for 5 year Comprehensive Maintenance of the systems including 5 year replacement warranty. The AE and the Junior Assistant appointed by TEDA at each DRDA will liaise with PD, DRDA for day to day coordination and supervision.

i. Quality Control & Inspection

TEDA will engage Project Management Consultants (PMC) and a third party inspection agency, whose responsibility will be to ensure that all the materials used and the workmanship conform to the prescribed specifications. The inspection will cover quality checks of major materials at pre-shipment stage at the vendor's outlet. The PMC will ensure 100% of the lights installed are inspected.

In case, quality check reveals 'unsatisfactory' work, the implementing agency (TEDA) shall ensure that the contractor replace the material or rectifies the workmanship within the time period stipulated. All works rated 'unsatisfactory' shall be re-inspected after a rectification report has been received from the contractor. Funds will be released to the contractor only after receiving successful inspection reports. TEDA will designate an appropriate senior officer as incharge of the Monitoring system.

The Village Panchayat will take over the solar powered street lights after successful Third Party Inspection.

ii. Maintenance of the System

As part of the tender, the contractor shall be responsible to train the panchayat assistant as well as 4 SHG members in each Panchayat to do regular preventive and routine maintenance.

iii. Standing Committee

Standing Committee will approve the cost estimate, technical specification, the tender documents and will recommend the final bid price to the Govt., based on TEDA's Technical/ Tender Scrutiny Committee's recommendation/ Evaluation. The Standing Committee will be constituted with the following members:

1. CMD/TEDA
2. CMD/TANGEDCO
3. The Secretary (Expenditure)/Finance Dept./GOTN
4. The Commissioner of Rural Development and Panchayat Raj
5. Prof.Dr.Ashok Jhunjunwala, Chairman, Rural Technology and Business Incubator (RTBI), IIT, Madras
6. Dr.S.Gomathi Nayagam, Executive Director, C-WET, Chennai

7. Funds release and Maintenance of Accounts:

The Commissioner of Rural Development and Panchayat Raj will draw the funds and release the same to TEDA. Funds to the companies shall be released based on the progress of installation. Final payment should be made after the satisfactory completion of work duly getting a certificate relating to completion from the competent authority of TEDA. TEDA will facilitate the Rural Development and Panchayat Raj Department in obtaining the subsidy share (CFA) from the Ministry of New and Renewable Energy (MNRE), Government of India for reimbursing to the State Government. In this regard the Rural Development and Panchayat Raj Department would submit the application in the format stipulated by MNRE.

8. Warranty:

TEDA should ensure the norms for good quality as per the approved standards of Ministry of New & Renewable Energy (MNRE). The SPV lighting system will have a comprehensive warranty of five years.

9. Training Materials :

TEDA will bring out Brochures/Hand outs and other training materials on the usage and maintenance of the SPV lighting equipments. A Handout on Dos and Don'ts will also be prepared and made available by TEDA.

10. Facilitation and Co-ordination by District administration:

- The list of Village Panchayats selected along with location of street lights to be converted into solar power should be communicated to TEDA well in advance.
- Coordination with Project Management Consultant appointed by TEDA through District Managers of TEDA, for the installation of Street Lights in the specified locations.
- Coordination and continuous monitoring of Field Technical Officials of TEDA with regard to the maintenance of the Street Lights installed.
- The full address and contact phone numbers of the contractors should be made available to the District level, Block level and at the Village Panchayats by TEDA for easy and effective communication at times of need.

11. Comprehensive Annual Maintenance Contract (CAMC):

The contractor should enter into an agreement for Comprehensive Annual Maintenance Contract (CAMC) for 5 years with the officials at Block / District level / TEDA.

12. Monitoring :

The District Collector will review the progress of works for both physical and financial achievement with block officials and officials of TEDA. Nodal Officers in the cadre of Assistant Director must be appointed by the District Collector to supervise the works. The District Collector and the Project Director, District Rural Development Agency are the Officers responsible for the proper implementation of the Scheme at District level and TEDA at the State level.

N.S. PALANIAPPAN,
Principal Secretary to Government

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Section Officer
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