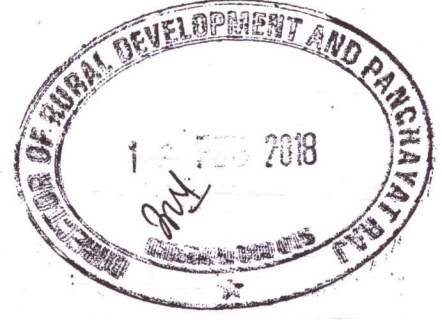


ADRD (PR)

**ABSTRACT**

Schemes – State Schemes – Replacement of Sodium Vapour Lamps, Mercury Vapour Lamps and balance tube lights with LED lights in the Street Lighting of Rural areas during the year 2017-18 – Release of fund and Guidelines – Orders – Issued.

Rural Development & Panchayat Raj (SGS-III) Department**G.O.(Ms) No.23**

Dated: 13.02.2018

Read:

1. G.O.(Ms) No.19, Rural Development and Panchayat Raj (SGS-3) Department, dated: 02.02.2016
2. G.O.(Ms) No.11, Rural Development and Panchayat Raj (PR-I) Department, dated. 25.01.2017.
3. G.O.(Ms) No.21, Rural Development and Panchayat Raj (PR-I) Department, dated 22.02.2017
4. From the Director of Rural Development & Panchayat Raj, Chennai-15 Letter Roc. No.60738/ 2017/PRI.3-2, dated 28.12.2017.

ORDER:

The Hon'ble Minister for Municipal Administration, Rural Development and Implementation of Special Programme has made the following announcement in Tamil Nadu Legislative Assembly on 21.06.2017:-

"மாண்புமிகு தமிழ்நாடு முதலமைச்சர் அவர்கள் விதி 110ன் கீழ் சட்டமன்றப் பேரவையில் வெளியிட்ட அறிவிப்பின் அடிப்படையில் ஊரகப் பகுதிகளில் உள்ள 17.06 லட்சம் குழல் தெரு விளக்குகளை ரூபாய் 600 கோடி மதிப்பீட்டில் எல்.இ.டி. தெரு விளக்குகளாக மாற்றி அமைத்திடும் பணி நடைபெற்று வருகிறது. இதனால், ஊராட்சிகள் செலுத்தும் தெரு விளக்குகளுக்கான மின் கட்டணம் ஆண்டுக்கு சுமார் 30 சதவீதம் வரை குறைந்துள்ளது. கிராம ஊராட்சிகளின் மின் கட்டணம் மற்றும் பராமரிப்பு செலவினத்தை குறைக்கும் வகையில், அதிக மின் நுகர்வு விளக்குகளான பாதுரச் ஆவி விளக்குகள், சோடியம் ஆவி விளக்குகள் மற்றும் மீதமுள்ள குழல் தெரு விளக்குகள் மாண்புமிகு இதயதெய்வம் புரட்சித் தலைவி அம்மா அவர்களின் ஆசியுடன், மாண்புமிகு முதலமைச்சர் அவர்களின் ஆணைப்படி, 2017-18ம் ஆண்டில், 200 கோடி ரூபாய் மதிப்பீட்டில் எல்.இ.டி. தெரு விளக்குகளாக மாற்றி அமைக்கப்படும்.

2. In the letter fourth read above, the Director of Rural Development and Panchayat Raj has sent a proposal along with Guidelines and Technical Specifications and stated that in the Government Order first read above, orders were issued to replace the existing tube light in street lighting of rural areas with 20 watt LED lights. In the order second read above, orders were issued with certain modifications to the Tender document for the purchase of LED Street Lights. As per the reports received from the Districts there are approximately another 150000 Tube lights, 6000 Mercury Vapour and 50000 Sodium Vapour lamps in the street lighting system in rural areas. The 150000 Tube lights will be replaced by 20 watt LED Lights as per specifications issued in the Government order 2nd read above. Out of 50000 Sodium Vapour lamps, the maximum number of Sodium Vapour Lamps in usage in rural area are in the range of 150 to 250 watts.

3. The Director of Rural Development and Panchayat Raj has further stated that Greater Chennai Corporation is a pioneer in the LED street lighting system and are maintaining large number of LED streetlights for which they have a separate electrical wing. Hence the technical opinion of Greater Chennai Corporation and the specification adopted by them were sought for replacement of Mercury Vapour Lamp and Sodium Vapour Lamps in the existing poles. The street light poles in rural areas are normally of 7.2 meter height and located in road margins which are normally of 7.5 meter width. The Commissioner, Greater Chennai Corporation has opined that, for the above conditions replacement of uniform wattage of 90-95 watt LED lights in the place of different wattages of Sodium Vapour Lamps and Mercury Vapour Lamps in the rural street lighting system would be suitable for rural areas. The corporation has also communicated the approved specification for installation of 90 Watt LED street lights. He has further stated that adoption of a uniform watt LED light across the State while replacing the Mercury Vapour Lamps and Sodium Vapour Lamps will be more suitable in rural areas. It will enable better procurement and hassle free subsequent services and maintenance. Hence all types of Mercury Vapour Lamps and Sodium Vapour Lamps, irrespective of the present watt may be replaced with 90 watt LED light. The technical specification approved by Greater Chennai Corporation for 90 watts LED Lights may be adopted for replacing the Mercury and Sodium Vapour lights in rural areas.

4. The Government, in accordance with the recommendation of the Fifth State Finance Commission vide G.O. (Ms) No.84, Finance (Finance Commission-IV) Department, dated 31.03.2017 has ordered the establishment of Capital Grant Fund by apportioning 20% of the aggregate devolution intended for Rural Local Bodies. Out of this fund, 20% shall be set apart for taking up projects which are deemed to be of importance at the State level. For the purpose of identifying and approving the projects which are deemed to be of importance at the State level, the Government have further issued orders vide G.O. (Ms) No.108 Rural Development and Panchayat Raj (PR1) Department, dated 21.09.2017, that a State Level Committee shall be constituted comprising of Secretary to Government, Rural Development and Panchayat Raj Department, Director of Rural Development and Panchayat Raj, a representative of the Finance Department and Member Secretary, State Planning Commission.

5. The Government have also ordered that the committee shall decide the projects which are deemed to be of importance at the state level, pertaining to

- (i) Strengthening and upgradation of roads
- (ii) Development of infrastructure towards basic amenities and other energy efficient measures
- (iii) Construction of infrastructure for sanitation and waste management.
- (iv) Provision of Drinking Water Supply to Rural areas
- (v) Improvement and Renovation of M.I. tanks

6. The Government vide G.O.(D).No.515, Rural Development and Panchayat Raj (PR-1) Department, dated: 25.10.2017, have constituted the State Level Committee to identify and approve the works to be taken up from Capital Grant Fund (20%) under Fifth State Finance Commission. The State level committee, in the meeting held on 27.10.2017 has resolved to undertake replacement of Sodium Vapour Lamps and Mercury Vapour Lamps in the street lighting system in rural areas with 90 watts LED lights as per the specification and all left out street tube lights in rural areas with 20 Watts LED lights from the 20% component of Capital Grant Fund during 2017-18, as part of energy efficient measure which has been ordered by the Government in the Capital Grant Fund Guidelines.

7. The Director of Rural Development and Panchayat Raj has further added that the required funds for replacing all the Sodium Vapour Lamps, Mercury Vapour Lamps and balance tube lights with LED lights in the street lighting of rural areas will be met from Capital Grant Fund (20%). During 2017-18 the Government have earmarked an amount of Rs.206.38 crore under this component. Any amount further required to reach saturation will be met from SFC Grant and 14th Finance Commission Grants funds available with the Village Panchayats. He has also stated that the Government have authorized him to draw and disburse the Capital Grant Fund (20%) in two installments. The fund under this component will be released by the Director of Rural Development and Panchayat Raj to the District Collectors based on the progress on installation of the LED lights.

8. The Director of Rural Development and Panchayat Raj has furnished the Guidelines and Technical Specification for Replacement of all the Sodium Vapour Lamp, Mercury Vapour Lamp using 90 Watt LED lights and the balance street tube lights with 20 Watt LED lights with specifications already approved vide Government Order 2nd read above, from the Capital Grant Fund (20%). The Director of Rural Development and Panchayat Raj has requested the Government to approve the guidelines and technical specifications.

9. The Government have examined the proposal, Guidelines and Technical specifications of the Director of Rural Development and Panchayat Raj and decided to accept the proposal, and approve the guidelines and Technical specifications and accord permission to release a sum of Rs.206.38 crores (Rupees Two Hundred and Six crores and Thirty Eight Lakhs only) from Capital Grant Fund for replacing all the Sodium Vapour Lamps/ Mercury Vapour Lamps with 90 watt LED lights and the balance street tube lights with 20 Watt LED lights in rural areas.

10. The Detailed Guidelines and Technical specification for the implementation of the scheme are annexed to this order.

11. This order is issued with the concurrence of Energy Department vide its U.O.No.57/D3/2018, dated 03.01.2018 and Finance Department vide its U.O. No.7979/RD/2018 dated 13.02.2018.

(BY ORDER OF THE GOVERNOR)

HANS RAJ VERMA
ADDITIONAL CHIEF SECRETARY TO GOVERNMENT

To

The Director of Rural Development and Panchayat Raj,
Chennai-15.
All District Collectors. (except Chennai)
All Project Directors, District Rural Development Agencies
(Thro' DRD&PR, Chennai-15)
The Accountant General, Chennai-9/18/35.
The Pay and Accounts Officer, Chennai-35
The Pay and Accounts Officer, Madurai.
All District Treasury Officers
National Informatics Centre, Chennai - 9.

Copy to:

The Senior Personal Assistant to the Hon'ble Minister for
Municipal Administration, Rural Development & Spl. Programme Implementation
Department, Chennai-9.
Finance (RD/FC-IV) Department, Chennai-9.
Energy Departments.
SF/SC

//Forwarded by order//


Section Officer. 13.2.18

ANNEXURE-I**(G.O. (Ms) No.23, Rural Development and Panchayat Raj (SGS.3)****Department, dated 13.02.2018)****Guidelines for replacement of Sodium Vapour lamp, Mercury Vapour Lamp and balance tube lights of street lighting of rural areas with LED lights in Village Panchayats**

1. Introduction:

As per section 110 of Tamil Nadu Panchayats Act, 1994, provision and maintenance of street lights in rural area is one of the statutory duties of Village Panchayats. Approximately 35% of the Village Panchayat income is spent towards current consumption (cc) charges which heavily affects the other development initiatives in the Village Panchayat area. The Government have taken various steps to reduce the CC charges and increase the power efficiency such as switching over to LED, regularization of usage, improvisation of gadgets. Considering the increased electricity consumption and maintenance cost of street light systems, an efficient street lighting through installation of LED lights in Village Panchayats will ensure energy efficiency, proper lighting and durability.

Based on the Announcement of Hon'ble Chief Minister in the Tamil Nadu Legislative Assembly under Rule 110 in the year 2015-16 and 2016-17 around 17.06 Lakh tube lights have been taken up for conversion into LED lights during the last two years. The RLBs have taken up conversion of tube lights into LED lights from the Devolutionary grant of State Finance Commission, Pooled Assigned Revenue and Fourteenth Central Finance Commission Grant. As on 31.03.2017, as per the report received from the districts, there are approximately 1.5 Lakh tube lights which are left out in Street lighting system. Apart from this there are approximately 6,000 mercury vapour lamps and approximately 50000 sodium vapour lamps available in the Street lighting system in rural areas.

The Hon'ble Minister for Municipal Administration, Rural Development and Implementation of Special Programme announced in the Tamil Nadu Legislative Assembly on 21.6.2017 that all the Mercury Vapour lamps and Sodium Vapour lamps and remaining tube lights will be replaced with LED lights in the current year at an estimated cost of Rs.200 crore. By replacing it, **Tamil Nadu will be the first State in the country to have replaced all the Mercury Vapour lamps and Sodium Vapour lamps and the tube lights in street lighting system of rural area with LED lights.**

2. Advantages of LED Lights:

- i) Gives higher light output without generating ultra violet (UV) and Infrared rays. Minimal heat generation.
- ii) 7 to 10 times more efficient than incandescent light sources. Twice as efficient as fluorescent/ CFL sources.
- iii) Can be switched ON-OFF electronically without delay or flicker.
- iv) Lasts 5 to 7 times longer than fluorescent/CFL sources and much higher than 25 times incandescent sources.
- v) Requires low maintenance and operating costs due to minimum electricity consumption and a longer life.
- vi) Reduces electricity consumption by 80% compared to halogen or incandescent lights. Absence of mercury and UV, better recyclability and reduced waste generation, make LED is one of the most eco-friendly lighting system.
- vii) Saves energy and reduces the carbon foot print.
- viii) More than 50% of energy saving when compared to other lights.

3. Allocation for the year 2017-18:

As mentioned above as on 31.03.2017, as per the report received from the district collectors there are approximately 1.5 Lakh tube lights, approximately 6,000 mercury vapour lamps and 50000 sodium vapour lamps available in the Street lighting system in rural areas. During the year 2017-18, all Mercury Vapour Lamps, Sodium Vapour Lamps and balance tube lights will be replaced with LED lights at an approximate estimate cost of Rs. 200 crore from the Capital Grant Fund (20%).

Accordingly, the Director of Rural Development and Panchayat Raj will decide the district wise allocation based on the number of street lights available in the Districts.

4. Allotment to Village Panchayats:

The District Collector and Chairman, District Rural Development Agency will identify the Village Panchayats at District level and allot number of LED lights to be installed in each Village Panchayat based on the available number of Mercury Vapour Lamps, Sodium Vapour Lamps and balance tube lights in the village Panchayat

5. Technical specification and tender document:

A State Level Committee was constituted in 2015-16 vide G.O. (Ms) No.19, RD & PR (SGS.3) Department, dated 2.2.2016 to finalise the specification and the technical details of LED lighting given by TEDA and also to finalise the tender procedure, draft tender notice and tender schedule.

The Members of the Committee were:

1. The Director of Rural Development and Panchayat Raj - Chairman
2. The Chairman / Managing Director, TEDA or a nominee of CMD, TEDA.
3. The Additional Chief Secretary to Government, Finance Department or his nominee.
4. The Superintending Engineer (Rural Development), Directorate of Rural Development and Panchayat Raj
5. One Superintending Engineer nominated by the Chairman, TANGEDCO.

The above members of the State level Committee had conducted the meeting on 08.02.2016 and finalised the specification and tender document for LED street lighting in the year 2015-16. The Government vide G.O. (Ms) No.21, Rural development and Panchayat Raj (SGS-III) dated 22.02.2017 has amended certain provisions in the tender condition and the same will be applicable for this tender also.

Greater Chennai Corporation is a pioneer in the LED street lighting system and are maintaining large number of LED streetlights for which they have a separate

electrical wing. Hence the technical opinion of Greater Chennai Corporation and the specification adopted by them were sought for replacement of Mercury Vapour Lamp and Sodium Vapour Lamps in the existing poles. The street light poles in rural areas are normally of 7.2 meter height and located in road margins which are normally of 7.5 meter width. The Commissioner, Greater Chennai Corporation has opined that, for the above conditions uniform wattage of 90-95 watt LED lights in the place of different wattages of Sodium and Mercury Vapour Lamps in the rural street lighting system would be suitable for rural areas. The corporation has also communicated the approved specification for installation of 90 Watt LED street lights.

Adoption of a uniform watt LED light across the state while replacing the Mercury Vapour Lamps and Sodium Vapour Lamps will be more suitable in rural areas. It will enable better procurement and hassle free subsequent services and maintenance.

Hence all type of Mercury Vapour Lamps and Sodium Vapour Lamps, irrespective of the watt will be replaced with 90 watt LED light. The technical and other specifications/ parameters approved and communicated by Greater Chennai Corporation in respect of LED lighting in rural areas is enclosed with this guidelines. The Project Director, DRDA will call for tenders based on the above technical specifications.

6. District Level Committee:

District Collector is the authority for implementation of the scheme at District level. There will be a Committee at the District level for procurement of LED lights and to monitor the installation in Village Panchayats. The District level Committee consists of:

i)	District Collector	:	Chairman
ii)	Project Director, District Rural Development Agency	:	Member Secretary
iii)	Executive Engineer (RD)	:	Member
iv)	Executive Engineer (TANGEDCO) nominated by Superintendent Engineer (TANGEDCO)	:	Member
v)	Assistant Director (Panchayats)	:	Member

Tender will be called for at District level for the allocation made to the District. Even though, the operation and maintenance of street lights are done by the Village Panchayats, they are not capable to call for tender for purchase of LED street light materials. Hence, considering the size of procurement and the technicality involved, it is recommended to call for tender at District level. The Project Director, District Rural Development Agency will be the tender inviting authority. The District Collector will be the tender accepting authority. Installation of LED street lights will be done by the Village Panchayats. The Zonal Deputy Block Development Officer and the Block Development Officer (Village Panchayats) will be responsible for monitoring the installation of LED street lights at the Village Panchayat level and Block level respectively.

7. Issue of work order:

After finalization of tender and identification of Company / Agency for supply of LED street lights, work order will be issued by the District Collector and agreement should be executed by the Company / Agency for supply of lights within the time limit and for maintenance of street lights upto certain period as per the tender.

8. Execution of works:

The LED street lights should be supplied to the Village Panchayat by the Company / Agency approved by the District Collector. The Village Panchayats should make entry in the Stock Register after receipt from the Company / Agency. The Village Panchayat will install the LED street lights by replacing the already identified/available Sodium Vapour Lamp/ Mercury Vapour Lamp/ Tube lights. The installation charges will be met from the Village Panchayat general funds for which order has already been issued by the Government. Payment will be made by the District Rural Development Agency / Village Panchayats concerned to the supplying Agency / Company after receipt of certificate from the Village Panchayats for receipt of LED street lights.

9. Quality Control:

In order to ensure that the LED lights supplied by the approved firms / companies are as per required standards and specifications the following measures will be put in place:

1. The bidding firms shall submit 3 samples of 90 Watts LED Street Light and 3 samples of 20 watts LED street light with fitting unit along with test reports from a NABL accredited laboratory at the time of tendering. The samples will also be tested at the field by Electrical department, Corporation of Chennai, to check illumination levels. The test results should be satisfactory for the bidder to qualify in the technical bid evaluation. Quality of the products selected by bidding should be ensured based on previous experience and standard test results available.
2. The Departmental officials will select three random samples of LED street lights from each consignment after delivery and these random samples will be sent for complete testing in any of the NABL accredited laboratory. The cost of carrying out all these tests shall be borne by the Contractor.
3. In the event of the LED street light fitting fails to confirm to any of the tests carried out in the NABL laboratories then the entire consignment of LED street lights shall be rejected.
4. Payment shall be released only if the LED street light fittings confirm to all the tests carried out in the NABL laboratory.
5. The LED lights will carry a 5 year warranty period.
6. The LED lights will also carry a 5 year replacement guarantee in case of any defect.

10. Fund release and maintenance of Accounts:

The funds required for installation of LED street lights will be utilized from the Capital Grant Fund (20%) maintained at State level.

The Director, Rural Development and Panchayat Raj will draw funds from Capital Grant Fund and release to the District Collectors. Any additional fund

requirement to reach saturation will be met from SFC Grant and 14th Finance Commission Grants fund available with the Village Panchayats.

A separate Saving Bank Account should be maintained in a Nationalized Bank by the District Rural Development Agency for maintenance of this fund at District level. Funds to the Companies should be released in two installments based on the certificate received from Village Panchayats after receipt of LED street lights and the receipt of Certificate on the proper lighting by the Village Panchayats.

11. Monitoring:

The District Collector will review the progress of supply and installation of LED street lights at District level. The Project Director, District Rural Development Agency is responsible for installation of LED lights and expenditure at District level. The Executive Engineer (Rural Development) is also responsible for execution and installation of LED Street Lights. Nodal Officers in the cadre of Assistant Director should be appointed by the District Collector for each block to supervise the works in Village Panchayats.

12. The Additional Chief Secretary to Government, Rural Development and Panchayat Raj Department may be empowered to modify the guidelines issued for this Scheme whenever necessary in consultation with the Director of Rural Development and Panchayat Raj and Finance Department.

HANS RAJ VERMA,
ADDITIONAL CHIEF SECRETARY TO GOVERNMENT.

// Forwarded By Order //

S. V. Singh
Section Officer. 13-02-18
13/02/18