

Bhabha Atomic Research Centre

Atomic Fuels Division

Technical Services Section

Ref.AFD/TSS/BP/18/186602

Date: 28/09/2018

Sub: Tender enquiry for supply, wiring & installation, testing and commissioning of LED lights along with fixtures for main plant, offices and corridors of AFD.

Sealed offers are invited for and on behalf of the President of India, supply, wiring & installation, testing and commissioning of LED lights along with fixtures and required wiring for main plant, offices and corridors of Atomic Fuels Division (AFD), BARC. This work includes supply & installation of LED lighting fixtures, supply & laying of PVC conduits, supply and laying of cable, supply & installation of LED lights, testing and commissioning of overall supplied lighting system.

Scope of Work:

S.No.	Description	Specification and Qty.
1.	Supply, wiring & installation, testing and commissioning of LED lights along with fixtures for main plant, offices and corridors of AFD.	As per Annexure -I

Terms and conditions:

1. Offer should be valid for minimum 90 days otherwise it will be rejected.
2. Only Lumsum prices to be quoted.
3. The completion period of this job should be within 6 months from the date of issue of work order.
4. Persons having valid PVC will only be allowed to enter BARC to execute the job.
5. Warranty period should be 12 months (Minimum) after completion of work.
6. The payment will be made after the satisfactory completion of the work.
7. Income Tax and S.C. as applicable will be deducted from the bill.
8. Any delay which is attributed to the contractor is liable for penalty @0.5 % Per Week (Max 5%).
9. Quotations are to be printed on letter head / quotation format which should consist of GST registration number registered with local authority, PAN of the firm. Computer generated quotation shall be considered as invalid & rejected.
10. Sealed offer with tender no and due date legibly written on the sealed envelope should reach **through speed/registered post** on or before **12/10/2018**

To,
Shri Bhupendra Patidar,
Scientific Officer (E)
Atomic Fuels Division
Bhabha Atomic Research Centre
Trombay, Mumbai 400 085.

- b) The contractor shall have to visit the site to comprehend the scope of work and equipment condition. The same will be arranged by the undersigned. The site can be visited between 03/10/2018 to 05/10/2018 on working days between 10:30am to 4:00 pm. however prior intimation of at least three working days is necessary.(Tel : 022 25594962, email: bpatidar@barc.gov.in)
- c) Supplier shall have valid electrical license and previous experience of similar work with documentary evidence.

The quotation submitted without site visit will not be considered.

Details and Confidentially & Publicity Clause

- I. No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as“proprietary” in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party.

This clause shall apply to the sub-contractor, consultant, adviser or employees engaged by a party with equal force

II. “Restricted information” categories under section 18n of the Atomic Energy Act, 1962 and “Official Secret under Section 5 of the Official Secret Act, 1923: -

Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequence under the aforesaid legislation.

- III. Prohibition against use of BARC’s name without permission for the publicity purpose:

The contractor, sub-contractor, consultant, adviser or the employees engaged by the contractor, shall not use BARC’s name for any publicity purpose through any public media like press, Radio, T.V. or Internet without the prior written of BARC. Contractor shall obtain Police verification certificate for all his employees including his supervisors and workers engaged in the work.

(B. Patidar)

SO/E, TSS, AFD

For & On behalf of President of India

Annexure-I

I. Detailed technical specification of LED lights along with wiring and fixtures for main plant, offices and corridors of AFD.

1. Supply and testing of 12 W LED lights along with fixtures having following specification

- 1.1. Quantity : 50 Nos.
- 1.2. Make : Philips/Surya/GE
- 1.3. Voltage : 240 V \pm 10% or better
- 1.4. Power factor : 0.9 or better
- 1.5. THD : < 20%
- 1.6. CRI : > 80
- 1.7. System lumen efficiency : \geq 65 lm/W
- 1.8. Colour temperature : 6000 K
- 1.9. Lumen maintenance : 50,000 Hrs @ L70
- 1.10. Lamp type : LM80 certified LEDs
- 1.11. IP class : IP 20 or better
- 1.12. Housing : Powder coated, PDC aluminium housing
- 1.13. Front Cover : Diffused PMMA
- 1.14. Gear : Electronic constant current driver
- 1.15. Internal wiring : PVC copper conductor

2. Supply and testing of 20 W LED lights along with fixtures having following specification

- 2.1. Quantity : 600 Nos.
- 2.2. Make : Philips/Surya/GE
- 2.3. Voltage : 240 V \pm 10% or better
- 2.4. Power factor : 0.9 or better
- 2.5. THD : < 20%
- 2.6. CRI : > 80
- 2.7. System lumen efficiency : \geq 65 lm/W
- 2.8. Colour temperature : 6000 K
- 2.9. Lumen maintenance : 50,000 Hrs @ L70
- 2.10. Lamp type : LM80 certified LEDs
- 2.11. IP class : IP 20 or better
- 2.12. Housing : Powder coated, PDC aluminium housing

- 2.13. Front Cover : Diffused PMMA
- 2.14. Gear : Electronic constant current driver
- 2.15. Internal wiring : PVC copper conductor
3. Supply and testing of 35 W LED lights along with fixtures having following specification
- 3.1. Quantity : 27 Nos.
- 3.2. Make : Philips/Surya/GE
- 3.3. Voltage : 240 V \pm 10% or better
- 3.4. Power factor : 0.9 or better
- 3.5. THD : < 20%
- 3.6. CRI : > 80
- 3.7. System lumen efficiency : \geq 65 lm/W
- 3.8. Colour temperature : 6000 K
- 3.9. Lumen maintenance : 50,000 Hrs @ L70
- 3.10. Lamp type : LM80 certified LEDs
- 3.11. IP class : IP 20 or better
- 3.12. Housing : Powder coated, PDC aluminium housing
- 3.13. Front Cover : Diffused PMMA
- 3.14. Gear : Electronic constant current driver
- 3.15. Internal wiring : PVC copper conductor
4. Supply and testing of 60 W LED lights along with fixtures having following specification
- 4.1. Quantity : 26 Nos.
- 4.2. Make : Philips/Surya/GE
- 4.3. Voltage : 240 V \pm 10% or better
- 4.4. Power factor : 0.95 or better
- 4.5. THD : < 10%
- 4.6. Efficiency : 80% or better
- 4.7. CRI : > 70
- 4.8. System lumen efficiency : \geq 100 lm/W
- 4.9. Colour temperature : 5700 K
- 4.10. Lumen maintenance : 50,000 Hrs @ L70
- 4.11. Surge protection : 5 kV interval
- 4.12. Lamp type : LM80 certified ,discrete LEDs
- 4.13. Optic : Suitable lens cluster for optimum light distribution

- 4.14. IP class : IP 54 or better
 - 4.15. Impact resistance : IK08
 - 4.16. Housing : PDC housing
 - 4.17. Front cover : Toughened glass
5. Supply and testing of 90 W LED lights along with fixtures having following specification
- 5.1. Quantity : 54 Nos.
 - 5.2. Make : Philips/Surya/GE
 - 5.3. Voltage : 240 V \pm 10% or better
 - 5.4. Power factor : 0.95 or better
 - 5.5. THD : < 10%
 - 5.6. Efficiency : 80% or better
 - 5.7. CRI : > 70
 - 5.8. System lumen efficiency : \geq 100 lm/W
 - 5.9. Colour temperature : 5700 K
 - 5.10. Lumen maintenance : 50,000 Hrs @ L70
 - 5.11. Surge protection : 5 kV interval
 - 5.12. Lamp type : LM80 certified ,discrete LEDs
 - 5.13. Optic : Suitable lens cluster for optimum light distribution
 - 5.14. IP class : IP 54 or better
 - 5.15. Impact resistance : IK08
 - 5.16. Housing : PDC housing
 - 5.17. Front cover : Toughened glass
6. Supply and testing of 150 W LED lights along with fixtures having following specification
- 6.1. Quantity : 6 Nos.
 - 6.2. Make : Philips/Surya/GE
 - 6.3. Voltage : 240 V \pm 10% or better
 - 6.4. Power factor : 0.95 or better
 - 6.5. THD : < 10%
 - 6.6. Efficiency : 80 % or better
 - 6.7. CRI : > 70
 - 6.8. System lumen efficiency : \geq 100 lm/W
 - 6.9. Colour temperature : 5700 K
 - 6.10. Lumen maintenance : 50,000 Hrs @ L70

- 6.11. Surge protection : 5 kV interval
 - 6.12. Lamp type : LM80 certified ,discrete LEDs
 - 6.13. Optic : Suitable lens cluster for optimum light distribution
 - 6.14. IP class : IP 54 or better
 - 6.15. Impact resistance : IK08
 - 6.16. Housing : PDC housing
 - 6.17. Front cover : Toughened glass
7. Multistrand XLPE insulated copper cable : 800 m
- 7.1. Quantity : 800 m
 - 7.2. Make : Polycab/Finolex/Thermocable
 - 7.3. Size : 2.5 sq mm
 - 7.4. Material : Copper
 - 7.5. No of core : 3
 - 7.6. Voltage : 440V±10%
8. Ceiling Rose
- 8.1. Quantity : 100 Nos
 - 8.2. Voltage : 230 V±10%
 - 8.3. Current : 2 Amp
9. ¾ inch PVC conduit pipe
- 9.1. Quantity : 500 m

II. General conditions

1. Lighting fixture Should have following features,
 - 1.1. Easy to install
 - 1.2. High heat resistance sealing ring.
 - 1.3. Strong flat glass or polycarbonate lens with standard optical performance, stainless steel fasteners and clip.
 - 1.4. High pure anodized aluminium reflector with standard optical performance, high fixture efficiency.
 - 1.5. Inbuilt electronic constant current driver
 - 1.6. Open circuit & short circuit protection, reverse polarity protection and surge protection
 - 1.7. As per IS10322/IEC60598
2. All Light shall be flickering free.
3. All wire and cable shall be FRLS type.
4. All Electrical components shall be of reputed make.

III. Inspection and test

1. Before leaving the supplier work, all lamps shall have been inspected and tested and the results recorded in test report in presence of purchaser.
2. The supplier shall provide test report of each and every electrical components of lighting system and submit at the time of pre-dispatch inspection.

IV. Following test shall be carried out

1. Visual and functional check of all LED fixtures will be carried out at supplier site.
2. Cable testing as per IS,
 - 2.1. Continuity test
 - 2.2. Insulation resistance test
 - 2.3. High voltage test
 - 2.4. All FRLS test

V. Installation and testing

1. Supplier shall prepare layout drawing of LED lighting fixtures in plant area to get more than 40 % light uniformity on work plane.
2. Supplier shall take approval of layout drawing of LED lighting fixtures in plant area from purchaser before actual installation.
3. Dismantling and decontamination of old light fittings and wiring and shifting of the same in scrap yard will be in the scope of supplier.
4. Supplier shall arrange all tools and safety switchgears requires for installation and testing of LED lighting fixtures.
5. PVC conduit laying and wiring for LED lighting fixtures of > 35 W will be in scope of supplier.

VI. Documentation

1. The manufacturer shall supply at least following drawing /documents in the quantities indicated.
 - 1.1. Bill of material
 - 1.2. Transport, installation, commissioning, operation, maintenance instruction and fault finding procedure.
 - 1.3. List of recommended spare parts
 - 1.4. Test certificate of each components
 - 1.5. Maintenance procedure of LED fixtures

VII. Warranty

Supplier shall provide minimum three year of warranty of LEDs along with fixture and one year warranty for other items.

VIII. Packing and forwarding

All the items shall be divided into several shipping sections for protection and ease of handling during transportation. The equipment shall be properly packed for transportation by ship or rail or trailer. Electrical items shall be wrapped in polyethylene sheet before being placed in the wooden crates or cases to prevent damage to the finish. This side up, centre of gravity, weight, owner particulars, purchase number, shall be clearly marked on the package together with other detail as per purchase order.