

**NUMALIGARH
REFINERY
LIMITED**

A GOVERNMENT OF INDIA ENTERPRISE



**TENDER DOCUMENT
FOR**

Supply, Dismantling & Installation of LED Street light fixture

Tender No. OC17000041/RAJ

[Total no. of pages against the tender = 39 pages = 1 page N.I.T., 34 pages tender document & 4 pages SOR]

Bidder's offer ref: _____ **Dtd.** _____

PART-I: UNPRICED BID

**PREPARED & ISSUED BY
NUMALIGARH REFINERY LIMITED
(A Govt. of India Enterprise)**

LETTER INVITING TENDER

	Date : 29 th September' 2011. Contact Person : Raja S. Ahmed; Mgr (Commercial) Phone : 03776 265439 E-mail ID : raja.ahmed@nrl.co.in Our Reference : OC17000041/RAJ
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Sub: Tender document for “Supply, Dismantling & Installation of LED Street light fixture.”
Tender No.: OC17000041/RAJ dated 29.09.2011

Dear Sirs,

Sealed offer in **Two Bid** is invited by Numaligarh Refinery Ltd. for the work as detailed below:-

1. **Name of the work** : Supply, Dismantling & Installation of LED Street light fixture.
2. **Earnest Money Deposit** : ` . 22,000.00 (Rupees twenty two thousand only)
3. **Contractual Period** : 30 days.
4. **Last date & time for receipt of bid** : Upto 15.00 hours on **20-10-2011**
5. **Date & time of Opening of bid** : After 15.30 hours on **20-10-2011**
6. **Place of submission of Bid** : GM (Commercial & CC)
Numaligarh Refinery Limited,
NRL Complex, Numaligarh,
Dist : Golaghat, Assam – 785 699
Phone : 03776 – 265545 / Fax No.: 03776-265514
7. **Submission of Bid** :

Bids should be submitted separately in two parts, viz. **PART I** & **PART II** in sealed envelopes superscribed with the Tender no., Due Date, and nature of bid (“Un-priced” or “Priced”).

PART I : One copy of “UN-PRICED BID”, complete with **Tender Document**, Technical & Commercial details, relevant documents etc. **duly signed & stamped on each page & Earnest Money Deposit** other than the priced bid.

PART II : One copy of “PRICED BID” with **Schedule of Rates** duly filled, signed & stamped on each page.

The two envelopes containing **Part I** and **Part II** of bids separately, should be enclosed in a single sealed envelope super-scribed :-

Quotation for the job:

“Supply, Dismantling & Installation of LED Street light fixture.”

(Tender No. OC17000041/RAJ dated 29.09.2011)

If the last date of receipt of tender happens to be a non-working day, the last date will be the next working day at the aforesaid time.

All corrections and alterations in the entries of tender paper shall be signed in full by the tenderer with date. No erasures or over writing are permissible.

8. **Earnest Money:**

The bidder shall deposit Earnest Money Deposit in the form of Demand draft of **STATE BANK OF INDIA** in favour of **Numaligarh Refinery Limited**, payable at **SBI, Numaligarh Refinery Complex Branch** (Code : 5377). Tender without earnest money will be summarily rejected.

9. **Scope of work and Supply:**

The scope of work & supply of this work will be in accordance with the Tender document, Special Condition of Contract, Schedule of Rates and as per the direction of Engineer-in-charge.

10. **Rate:**

Rate should be quoted both in figures and words as per enclosed Schedule of Rates i.e. **Priced bid.**

In case more than one agency becomes L1 after this exercise, the successful agency shall be determined through lottery.

11. **Security deposit:**

Applicable. Shall be released after expiry of defect liability period.

12. **Defect Liability Period:**

5 years against material supplied and workmanship.

15. **Measurement of work:**

Payment will be made on the basis of joint measurements, taken by the contractor and certified by Engineer-in-charge.

16. **Terms of payment:**

100% payment on completion and certification by Engineer-in-Charge.

Further break-up of payment terms if deemed necessary shall be decided by the E-I-C. The above payments are subject to deductions towards security deposit, income tax, works contract tax and other recoveries as applicable as per terms of the contract.

17. **Price, Taxes, Duties:**

Without prejudice to stipulations in General Conditions of Contract, the bidder should quote firm prices inclusive of all taxes, duties, sales tax on works contract and other levies on which no variation will be allowed. **However, the quoted price will be exclusive of Service Tax. Service Tax as applicable will be loaded by NRL.**

18. **Penalty Clause:**

In case the contractor fails to comply with provisions of tender and requirement, monetary penalty as deemed fit by the Officer-in-charge will be levied, subject to a maximum penalty of 10% of the contract value and the same shall be final and binding on the contractor.

19. **Other terms and conditions:**

- (a) Transfer of tender documents issued to one short-listed bidder to another is not permissible. Further, tender containing uncalled for remarks or any additional conditions are liable to be rejected.
- (b) ***Short-listed Bidders not participating in the bid, should return the bid document immediately on receipt***, stating the reasons for non-participation in the 'REGRET FORM' enclosed, failing which tender may not be issued in the future to the bidder.
- (c) The management of NRL reserves the right to reject any or all the tenders received without assigning

any reason thereof.

- (d) Variation in the value of the work will not vitiate the tender agreement.
- (e) The contractor will have to abide by the existing laws applicable to contract works and co-operate with other contractors working at site and will not cause hindrance to other works.
- (f) The contractor shall observe all labour and other statutory rules and regulation of State/Central Govt. in force including the Safety and Environmental rules & regulations. In case of any violations of such laws, rules & regulations, the cost involvement thereof shall exclusively be borne by the contractor and the company shall have no liability whatsoever on this account.
- (g) The contractor should engage skilled and unskilled labourers preferably from the families of displaced persons to the extent available.
- (h) **Senior Manager (Electrical Maintenance), NRL** shall be the Engineer-in-charge of the work and the contractor will have to abide by the instructions of Engineer-in-charge as given from time to time.
- (i) The General Conditions of contract of NRL will be applicable for this contract also. Intending tenderer may see the General Conditions of Contract of NRL at the Commercial Department of NRL site office on any working day during office hours or may visit our website www.nrl.co.in.
- (j) **Tenderer will fill up the all annexure attached to this Detailed Tender Notice clearly and sign every page of this Detailed Tender Notice before submission of the tender. Tender in which any of the required particulars and prescribed information are missing or are incomplete, are liable to be rejected.**
- (k) One authorized representative of the vendor/contractor may remain present during the tender opening on the due date, time and venue.
- (l) No escalation of contract value, in any form whatsoever will be entertained during the contract period.

Applicable Labour Wage:

- (i) The minimum wages per day (Inclusive of all allowances and benefits) of contract workers w.e.f. 01-01-2007 are as below:
 - Unskilled : Rs. 147.00 (Rupees one hundred and forty seven only)
 - Skilled : Rs. 162.00 (Rupees one hundred and sixty two only).
- (ii) For the purpose of calculating PF and other statutory payments, basic wage of unskilled and skilled category of contract workers per day will be Rs. 103.00 and Rs.122.00 respectively.
- (iii) Bonus is to be paid to the contract workers by the contractors as per the payment of Bonus Act, 1965.
- (iv) The contractors will make necessary deductions for PF from the wages of the workers as per the PF Act and deposit the same to the authorities concerned along with the employers' contribution.
- (v) The contract workers will also be entitled to the following leave annually:
 - Earned Leave - 18 days
 - Casual Leave -06 days.
 - Sick Leave - 04 days.
- (vi) An annual increment of Rs. 5.00 (Rupees five only) to the total wages of both Unskilled and Skilled category of workers will be given every year w.e.f. 1st January starting from 01-01-2008 till 31-12-2010.
- (m) No mobilization advance will be paid to the contractor for execution of this work.
- (n) Insurance shall be effected for all employees of the contractor, engaged in the performance of the subject job. (Refer clause 104.1 (ii) of GCC).
- (o) **The contractor is required to obtain** labour license under Contract Labour (R&A) Act, 1970 & **PF**

registration number on awarding the contract. The present rate of PF is 12% (Refer Clause 107.2 of GCC)

- (p) The contractor will not engage minor labour below 18 (eighteen) years of age under any circumstances. The contractor will further comply with the provisions of the following act and indemnify the company against all claims, which may arise out of the following Acts, & Rules framed there-under:
- i. The Contract Labour (Regulation and Abolition) Act,
 - ii. The Minimum Wages Act.
 - iii. The Workman's Compensation Act.
 - iv. The Payment of Wages Act,
 - v. The Payment of Bonus Act,
 - vi. The Employees Provident Fund & Misc. Provisions Act,
 - vii. Family Pension Scheme,
 - viii. Inter State Migrant Workmen (Regulation of Employment & Condition of Service) Act, or any other acts or statute not hereinabove specifically mentioned having bearing over engagement of workers directly or indirectly for execution of work.
- (r) In case any of the document/information(s) furnished by a bidder are found to be false/forged, such bidder will be kept in holiday list apart from other penal actions as deemed fit by NRL.
- (s) Agencies who are already blacklisted or against whom there is adverse report on committing criminal offence, their offers will be rejected

The bidder must submit PF Code, IT PAN No, Service Tax registration Certificate (PAN based) and valid Sales tax / VAT Clearance Certificate with their offer.

**GM (Commercial & CC)
Numaligarh Refinery Limited**

PRE-QUALIFICATION CRITERIA

Name of Work : Supply, Dismantling & Installation of LED Street light fixture.

Tender No. : OC17000041/RAJ

1. Past Experience of having successfully completed similar works* during last 10 years ending last month i.e., 31.08.2011 should be either of the following :

- One similar completed work costing not less than **Rs. 21.98 # Lacs**, OR
- Two similar completed works costing not less than **Rs. 17.59# Lacs** each, OR
- Three similar completed works costing not less than **Rs. 13.19 # Lacs** each.

***Similar Works: Experience in doing “Supply, installation and commissioning of lighting fixtures such as Street light, High Mast and Industrial Area lighting.”**

2. Technical Requirement:

- I. EXPERIENCE IN HANDLING SIMILAR PROJECTS: To be supported by PO Copies, Completion and Performance Certificates from clients.
- II. ESSENTIAL INFRASTRUCTURAL REQUIREMENTS: Documents to be supplied with the bid.

The following facilities/ machinery and plant are considered essential for the manufacturing of quality and reliable LED product:

- a) Dust free environment with ESD protection for the assembly of LEDs/ PCB.
- b) Testing jigs for the testing of assembled LEDs/ PCB.
- c) Component lead forming machines for through hole devices.
- d) Temperature controlled automatic wave-soldering machine with auto-fluxing facilities for through hole devices.
- e) Automatic Temperature controlled re-flow-soldering machine for surface mounted devices.
- f) Stencil and solder paste application machine for surface mounted devices
- g) Automatic Device insertion machine for surface mounted devices.
- h) Variable regulated AC supply at least up to 500 Volts.
- i) Heat chamber / oven having minimum range of 0-150°C with alternate arrangement of standby power supply for carrying out endurance tests.
- j) Center lathe, Milling machine, hydraulic press etc. for manufacture of luminaries

All the above facilities are considered essential at the manufacturer's premises and shall be verified by authorities as the case may be before considering the firm as a supplier. However, the firm may outsource assembly with the sub vendor(s) who shall have above facilities. The firm shall arrange the visit to the sub vendor's premises.

The value of past experience shall be adjusted (enhanced) at a simple rate of **07%** for every completed year (ending last day of the month, preceding the month in which bids are invited).

The bidder must submit copy(ies) of relevant Work Order(s) and Completion Certificate(s) along with the un-priced bid in support of the above criteria.

It is to be noted that experience as main contractor will only be taken cognizance of for the purpose of assessing qualifying criteria. However, authorized sub-contractors under principal contractors can also be

considered provided their works completion certificate is issued by the client organization in case of job executed elsewhere under PSUs, limited companies, Government Departments, Quasi government and autonomous bodies. However, in case of sub-contractors under contractors engaged by NRL, the works completion certificate issued by the main contractor will only be acceptable provided the same is endorsed in original by Engineer-in-charge of NRL in terms of job description and value.

For accepting experience certificates issued by private organisations for the purpose of qualifying any bidder, TDS Certificate in addition to certificate issued by the Principal Contractor / Private Organisation (letter of award and job completion certificate etc.) shall form the basis for considering experience and value of work executed under a private organisation.

2. **Average Annual Turnover** during the last 3 years, ending 31st March of the previous financial year, shall be at least **Rs. 3.80 Lacs**. The bidder's financial capability shall be decided based on the average annual turn over and concurrent commitments.

The bidder must submit copy(ies) financial documents – Trading and P/L account(s) – certified by Chartered Accountant along with the un-priced bid in support of the above criteria.

Special Condition of Contract

Name of Work : Supply, Dismantling & Installation of LED Street light fixture.

Tender No. : OC17000041/RAJ

GENERAL SPECIFICATIONS FOR ENERGY EFFICIENT LED BASED LIGHTING SYSTEM

1.0 SCOPE

The intent and scope of this specification is design, development, manufacturing, supply, installation, testing and commissioning of energy efficient luminaries using High Power LEDs with suitable current control driver circuit and other accessories including mounting arrangement and related mechanical and electrical works and warranty period obligations at Numaligarh Refinery Limited Township conforming to this specification, Technical Data Sheets and other relevant Indian/ International Standards.

2.0 TECHNICAL REQUIREMENTS

2.1 LED FITTED LUMINAIRE

- 2.1.1 The lighting luminaries offered by a vendor shall be fitted with High Power LEDs having minimum luminous efficiency of 100 lumens/watt.
- 2.1.2 The LEDs shall be of reputed make such as Cree Inc. / Nichia Corporation/ OSRAM / Philips Lumileds/ Seoul Semiconductor.
- 2.1.3 LED module/ array shall deliver at least 70% of initial lumens, when installed for a minimum of 50,000 hours.
- 2.1.4 Total luminous output of an LED lighting fixture shall be as per Technical Data Sheet (TDS) enclosed as annexure to this specification.
- 2.1.5 To enhance the secondary optics of the fixture, suitable Acrylic Optical Lenses shall be used.
- 2.1.6 The CCT of the LED fixture shall be in the range of 6000- 6500 *K.
- 2.1.7 The luminaries shall ensure a CRI of minimum 75.
- 2.1.8 The Uniformity Ratio (E_{min} / E_{avg}) shall be greater than 35%.
- 2.1.9 The LED luminaries shall produce constant lux level in the voltage range of 100V to 280V. Voltage variations/ fluctuations in the specified voltage range shall not impinge upon the lux level it produces.
- 2.1.10 The life span of the LED source including its Driver shall be greater than 50000 hours.
- 2.1.11 The P/N junction temperature of individual LED must not exceed 100°C. High Thermal conduction must be achieved by use of silicon heat conductive greases an adhesive.
- 2.1.12 LED Light must be constructed to achieve the LUX level at the ground level/ working level as per relevant IS Standards for that particular application.
- 2.1.13 All fasteners must be of stainless steel.

- 2.1.14 LED must be mounted on heat sinking conductive bars if any with suitable large area surface by means of fins to dissipate the conducted heat. The fins must be exposed to ambient flowing air.
- 2.1.15 The electrical component of the LED and LED driver must be suitably enclosed in hermetically sealed unit.
- 2.1.16 The luminaire should be provided with in-built power unit & electronic driver. The luminaire should be so constructed to ensure that the drivers are replaceable, if required.
- 2.1.17 The luminaires shall conform to IEC 60598 or equivalent standard. The driver should comply with IEC 61347-2-13, IEC 61547, CISPR-15; and 61000-3-2. The supplier should submit luminaire test report conforming to the specified standards.
- 2.1.18 Light Distribution shall be Cut Off/ Semi Cut Off type in accordance with IESNA Type II/ III Lighting Distribution.
- 2.1.19 The minimum acceptable luminous efficacy of the fixture offered shall be 100 Lm/W.

2.2 CONSTRUCTION

- 2.2.2 The casing of the lighting luminaires shall be made of pressure die cast aluminum coated with epoxy-polyester powder coat single, self contained device not requiring any on-site assembly for installation onto an existing lighting luminaires integral with power supply unit. The driver unit must be accessible and if need be replaceable easily and with minimum use of tools.
- 2.2.3 The casing made of non-corrosive aluminum having high conductivity shall have external surface designed in a manner so as to act as an efficient heat sink to extract heat generated at pn-junction of a LED. Efforts shall be made to keep the overall outer dimensions as minimum as possible without compromising on the performance of the LEDs or luminaire.
- 2.2.4 The assembly and manufacturing process for the LED source assembly in modules/ arrays shall be designed to assure all internal components are adequately supported to withstand sudden impacts and mechanical shock and vibration from high winds and other sources.
- 2.2.5 No part shall be constructed of polycarbonate unless it is UV stabilized.
- 2.2.6 Material used for the lens of LED source shall be of toughened glass, heat resistant and shall not undergo discoloration during lifetime of the LED source. It shall conform to ASTM specifications for the materials. **Any discoloration observed in the lens shall be considered a failure under warranty clause.**
- 2.2.7 All luminaires shall be provided with acrylic / polycarbonate / glass diffusers and/or aluminized reflectors and/or lenses to provide proper road lighting distribution.
- 2.2.8 Toughened and/or tempered glass of sufficient strength may be provided under the LED chamber to protect the LEDs and luminaires.
- 2.2.9 The LED lens shall be UV stabilized and shall be capable of withstanding ultraviolet (direct sunlight) exposure for a minimum period of 60 months without exhibiting evidence of deterioration.
- 2.2.10 The finish of the fixture shall be powder coated and of grey colour.
- 2.2.11 The luminaires shall be capable of operating normally in ambient temperatures from -20°C to 50°C maintaining junction temperature below 100°C and heat sink temperature below 60°C, ensuring efficient thermal management of the luminaire.

2.2.12 The fixture shall be designed in such a manner that it is easy to handle and install, is not too large and unwieldy, is of robust construction, light weight and conforms to minimum IP65 class of protection for outdoor use and min. IP22 for indoor application against dust and moisture intrusion. Luminary's manufacturer should submit IP test report from Govt. Accredited Test Lab / R&D Labs.

2.2.13 The luminary shall be provided with a built-in external heat sink as well as an aluminum MCPCB printed circuit board, designed in such a way that the heat generated within the LED source is efficiently dissipated to the surrounding atmosphere without abnormal rise in temperature. Any debris build up shall not degrade heat dissipation performance of the luminaries. *A lighting luminaire fitted with an assisted cooling system is not acceptable.*

2.2.14 The fixture shall be capable of installation on the existing poles, brackets, and in the existing lighting cutouts in offices/ corridors etc. as per specified application.

2.3 THERMAL MANAGEMENT

2.3.1 The manufacturers shall ensure that the fixture is designed in such a manner that it conducts the heat away from the LEDs as efficiently as possible. The design shall ensure that the junction temperature is kept as low as possible during operation. Thermal management shall be in such a way that Luminary shall have trouble free operations from -20 °C to +50°C. The following tests shall be done to determine efficient thermal management:

2.3.1.1 The Fixture manufacturer shall perform solder point temperature (Tsp) measurement and compute junction temperature (Tj). The manufacturer shall show the proof that the junction temperature shall not go beyond the LED manufacturer's maximum junction temperature for long term lumen maintenance (i.e., 70% of the original value of lumen output after 50000 hours of operation).

2.3.2 The fixture manufacturer shall furnish proof that the LEDs that have been offered and used in the fixture have White Point stability data (6000 Hours) as per IESNA's LM80-08, done at high ambient temperature 85°C and solder point temperature of 85°C.

2.3.3 The fixture manufacturer shall furnish proof that the LEDs that have been offered and used in the fixture have been tested to IEC 62471 for safety requirements.

2.4 ELECTRICAL

2.4.1 The LEDs offered by the vendor for replacement of the existing lighting fixtures shall be as per the table given below. **The wattages indicated are inclusive of watts consumed by their respective drivers.** This is a rough comparison; the vendor shall offer the best possible replacement with maximum energy efficiency and required minimum illumination levels.

S.No.	Type of the Existing Fixture	To be Replaced with	Remarks
A)	OFFICE AREAS		
1.	9/11W CFL lamp fixtures (in corridors etc.)	5W LED Down light fixture.	The existing recesses/ locations shall be used for installing the LED fixtures using existing wiring connections. The job shall be done without disturbing the aesthetics of the office.
2.	2X40W FTL fixture (Rectangular Type) in Office areas.	2X18W LED fixture (Rect. Type) OR 1X 48W	
3.	4X20W FTL fixture (Square Type) in office areas.	1X48W LED fixture (Sq. Type)	

B)	STREET LIGHTING		
1.	70W HPS/HP/MH (7M Pole mounted)	40W LED (7M Pole mounted)	The existing poles shall be used for installing the LED based street lighting fixtures using the existing cables without compromising on existing aesthetics look
2.	150W HPSV (7.5M Pole mounted)	60W LED (7.5M Pole mounted)	
3.	250W HPS/HP/MH (9M Pole mounted)	90W LED (9M Pole mounted)	

- 2.4.2 The LED fitted lighting fittings shall operate at 50 Hz +/- 3Hz AC over a voltage ranging from 100V to 280V with a power factor > 0.95 in a 3-wire distribution system.
- 2.4.3 The total power consumption in the LED lighting fixture shall not exceed the total *guaranteed* power consumption including power consumption in the electronic circuit of the driver for that particular application over the entire voltage range given in clause 2.4.2. The fluctuations in line voltage shall have no visible effect on luminous intensity of the LED luminaries.
- 2.4.4 The operating voltage of the luminaries shall be 230V. All parameters measured at this voltage shall stand valid for the entire operating voltage range of 100- 280V.
- 2.4.5 Total harmonic distortion (THD) of current and voltage induced into the AC power supply by an LED lighting source shall not exceed 10% for current and 3% for voltage. Harmonic generation shall be as per EN61000-3-2 and EN61000-3-3 / IEEE 519.
- 2.4.6 The driver module on board circuitry shall include voltage surge protection to withstand high-repetition noise transients as stated in Section 2.1.6 of NEMA Standard TS-2/ 1992.
- 2.4.7 The LED circuitry shall function at an operating frequency that must be greater than 120 Hz to prevent perceptible flicker to the unaided eye over the entire voltage range specified above.
- 2.4.8 The lighting luminaries shall withstand the following tests
- a) HV test of 2.5 KV
 - b) IR test of 500V DC
- 2.4.9 Power supplies/ Driver unit shall operate between -20°C and 50°C.
- 2.4.10 Power supplies shall meet FCC 47 CFR Part 15/18 on Consumer Emission Limits. And shall have a Class-A sound rating as per ANSI Standard C63.4.
- 2.4.11 The Driver Unit shall have provision for proper grounding.
- 2.4.12 There shall be electrical isolation between input and output circuits of the driver.
- 2.4.13 The output circuit shall have short circuit and open circuit protection inbuilt to the driver unit.
- 2.4.14 The material used in the construction of driver printed boards; driver enclosure etc. shall be non-flammable and heat resistant. Also, all the PCBs in the system shall be coated to prevent any corrosion.

3 Testing

- 3.1.1 Design Qualification Testing shall be performed by the manufacturer or an independent testing lab hired by the manufacturer on new LED module/ array designs and when a major change has been implemented on an existing design.

- 3.1.2 The vendor shall submit manufacturer's test certificates complete with verification of Design Qualification Testing details by an independent testing authority.
- 3.1.3 The fixture manufacturer must show proof that the LEDs they use have been tested and approved to IESNA's LM80-09. The manufacturer must be able to provide the test data set to establish the authenticity and genuineness of the LEDs.
- 3.1.4 Tests conducted on LED luminaries are classified as: 1) Type test, 2) Acceptance test, 3) Routine test and 4) Mock-up test.
- 3.1.5 **Type Test** shall be carried out to prove confirmation with the requirements of specification and general quality/ design features of the unit. In case of any change in Bill of Material or design of unit, complete type test shall be repeated. If any sample fails in any of the type tests, fresh samples shall be taken and tested. If any sample again fails in that test, the whole lot shall be rejected.
- 3.1.6 **Acceptance Tests** are carried out by an inspecting authority at the supplier's premises on sample taken from a lot for the purpose of acceptance of a lot. Acceptance tests shall not be carried out from particular size or lot on which type tests have already been conducted.
- 3.1.7 **Routine Tests** shall be performed by the manufacturer on each complete unit of the same type and the results shall be submitted to the inspecting agency, prior to offering the lot for acceptance test. The firm shall maintain the records with traceability.
- 3.1.8 **Mock up Test** shall be performed prior to the commencement of design. The successful bidder shall provide proposed LED lamp and **luminaries on three consecutive poles as demonstration to prove the suitability** of the fittings matching with the requirement in regards to lux level, quality of illumination for professional, objective & impartial review jointly by the bidders team along with team of IOCL Engineers. This shall be carried out within two weeks from the date of issue of work order and prior to submission of detail design package for approval.

3.2 Sample size and criteria for conformity

3.2.1 The luminaries shall be selected from the lot at random. In order to ensure randomness of selection, procedures given in IS 4905-1968 (Reaffirmed 2001) may be followed.

3.2.2 Test Scheme:

Sr. No.	Description of Test	Type Test	Acceptance Tests	Routine Tests
1	Visual and Dimensional check	Y	Y	Y
2	Checking of documents of purchase of LED	Y	Y	Y
3	Résistance to humidity	Y	-	-
4	Insulation résistance test	Y	Y	Y
5	HV test	Y	Y	Y
6	Over voltage protection	Y	-	-
7	Surge protection	Y	-	-
8	Reverse polarity	Y	Y	Y
9	Température rise	Y	Y	-
10	Lux measurement	Y	Y	-
11	Fire retardant	Y	-	-

4	12	Test for IP65 protection	Y	-	-

MARKING

4.1 The following information shall be distinctly and indelibly marked on the housing:

- Year of manufacture
- Batch Number
- Serial Number
- Name of Manufacturer
- Rated Wattage and Voltage (Input)
- Markings like CE, CB

4.2 ISO Certification: The agency shall preferably possess the ISO certification for design, manufacturing and supply of the complete Lighting Unit.

5 GUARANTEED TERMS & CONDITIONS

5.1 Warranty

In addition to meeting the performance requirements for the minimum period of 60 months, the manufacturer shall provide a written warranty against defects in materials and workmanship for the modules/ arrays for a period of 60 months after acceptance of the modules/ arrays. Replacement modules shall be provided promptly after receipt of modules that have failed at no cost to the Owner.

5.1.1 The vendor shall stand guarantee for full replacement of the luminary due to any failure in 5 years, from the date of purchase. Failures shall include failure/ deterioration of LEDs in terms of performance like guaranteed luminous efficiency, high junction temperature, and abnormal lamp lumen depreciation, deterioration in LED including its lens, driver unit and quality of light. The vendor shall replace the entire LED module/ array of the defective luminaire with new module /array free of cost immediately.

5.1.2 In the event of single LED source getting defective, the entire array/ module shall be replaced by the vendor and the replaced part shall stand guaranteed for a further period of 5 years from the date of replacement.

5.1.3 The vendor shall stand guarantee against lumen depreciation beyond 30%. Vendor shall ensure that LED module/ array shall deliver at least 70% of initial lumens, when installed for a minimum of 50,000 hours, failing which vendor shall carry out necessary rectification free of cost to the entire satisfaction of NRL.

5.1.4 The vendor shall have to furnish a Bank Guarantee / LC for an appropriate amount but not less than 10% of the Contract Value valid for the entire guarantee period as Performance Security. This bank guarantee shall be released after satisfactory completion of the guarantee period.

5.1.5 The vendor shall maintain appropriate level of inventory in India for immediate replacement of a defective/ malfunctioning luminary/ LED module/ array/ driver etc.

6 COMPLIANCE TO STANDARDS

6.1 The luminaries shall comply with IS 10322 for functional, photometric and safety requirements. The fixture shall conform to safety standard EN60598.

6.2 The luminaries shall conform to EM & RF interference norms as per EN55015 and EN61547, CISPR 11, FCC Part 15, IEC 61000 (3-2,4-2/3/4/5/6/8/11).

- 6.3 The luminaries shall conform to norms on transient voltages, voltage dips and fluctuations as per EN 61547.
- 6.4 The luminaries fitted with LED source shall be CE and ISO certified to ensure quality of the LED source.
- 6.5 The other relevant standards applicable to LED based lighting solutions to which lighting luminary must conform are as under:

ANSIC78.377.2008	Specifications for the Chromaticity of Solid State Lighting Products
IESNA LM- 79-08	IESNA Approved Method for the Electrical and Photometric Measurements of Solid State Lighting Products.
IESNA LM-80-08 (Recommended)	IESNA Approved Method for Measuring Lumen Maintenance of LED Lighting Sources.
UL Standards (Latest Approved)	<ul style="list-style-type: none"> • 8750 Light Emitting Diode (LED) Light Sources for use in Lighting Products. • 1598 Luminaries • 1012 Power Units other than Class-2 • 1310 Class-2 Power Units • 2108 Low Voltage Lighting Systems.
IEC 62471	Photo-biological safety of lamps and lamp systems.

7 INSTRUCTION TO BIDDERS

- 7.1 The bidder should be a manufacturer or authorized company of LED manufacturing firms.
- 7.2 The firms should carry out the complete job along with sample proto type fittings on three consecutive poles (for demonstration) to prove the suitability of the fittings matching with the requirement in regards to quality of illumination and provide professional, objective & impartial advice and at all times holding the client's interests paramount.
- 7.3 While preparing the technical proposal, Bidders must give particular attention to the following:
- 7.3.1 The P/N junction temperature of individual LED must not exceed 100°C. High Thermal conduction must be achieved by use of silicon heat conductive greases as adhesive.
- 7.3.2 Luminaries must be constructed with high corrosion proof, powder coated or anodized aluminum extracted aluminum sheet or bars.
- 7.3.3 All fasteners must be of stainless steel.
- 7.3.4 LED must be mounted on heat sinking conductive bars with suitable large area surface by means of fins to dissipate the conduct heat. The fins must be exposed to ambient flowing air.
- 7.3.5 The electrical component of the LED and LED driver must be suitably enclosed in hermetically sealed unit.
- 7.3.6 There should be sufficient inventory of LED lamps, so that the defective lamps can be replaced immediately.
- 7.4 The Technical proposal should also include the following for IOCL consideration:

- 7.4.1 A brief description of the firm's organization and an outline of recent experience on assignments of a similar nature jobs/ projects executed. For each assignment, the outline should indicate, inter alia the profiles and names of the staff provided duration of the assignment, contract amount, and firm's involvement.
- 7.4.2 Any comments or suggestions on the terms of reference and on the data, services and facilities to be provided by the Under signed and a description of the methodology (work plan) by which the Bidder proposes to execute the services, illustrated , as appropriate , with bar charts of activities and graphics.
- 7.4.3 Any additional information requested in the data sheet.
- 7.4.4 Incomplete /conditional bidders and bidders submitted on lines indicated above are liable to be straightway rejected.
- 7.4.5 Any deviations to the Clauses in the tender specifications must be clearly and separately indicated otherwise it shall be presumed that the offer is in line with the requirements of tender. The firm will have to produce invoice/gate pass of the manufacturer for major items like LEDs etc. to be installed against supply & erection of work for genuineness of the material.
- 7.4.6 The firm will be responsible to achieve the desired lux level and uniformity on the road/ in office areas and all the testing equipment shall be arranged by the firm at his own cost to check the same in the presence the representative of the client.
- 7.4.7 Considering the tolerable variations of different makes, the vendor shall specify the following with supporting documentation/ technical literature/ test certificates as proof:

- i) Individual wattage of LED
- ii) Type and specification
- iii) Make: that is manufacturer of LED shall be as per clause 2.1.2 above.
- iv) The maximum junction temperature
- v) Lumen depreciation in percentage vs. operating hours and lumen life maintenance during lifetime performance.
- vi) Expected luminous efficacy need to be specified along with operating temperature
- vii) Thermal management details such as built-in external heat sink as well as details of technology employed such as aluminum MCPCB printed circuit boards etc.
- viii) Recyclability aspects and eco-friendliness of components
- ix) Light pollution free Certificate
- x) Specify Auto Adjusting Voltage range e.g., 100V to 280V
- xi) Expected luminous efficacy need to be specified along with operating temperature.
- xii) Luminaire Cut Off details
- xiii) Effective water drainage system
- xiv) Luminaire shall have tool free access
- xv) Details regarding distribution of the light such as optic lens.

7.5 TEST CERTIFICATES AND INSTRUCTION BOOK ETC.

- 7.5.1 The supplier/agency shall furnish to the department the following documents along with the consignment.
- a) Four Copies of Printed Pamphlets/Catalogues: for each item of equipment it includes all the specification
 - b) Drawing of all the equipments
 - c) Any other relevant information to be incorporated at the time of placing the purchase order four copies.
 - d) The manufacturer/agency shall furnish the required certificates along with consignment of material.

- e) Test Certificate of all the materials.
- f) The bidder will carry out necessary testing for the uniformity of lighting levels achieved on completion of the work and submit final lighting levels.
- g) All the testing documentation as mentioned in TDS.
- h) Test certificates from ERTL/ CPRI/MNRE shall be attached.

7.5.2 Manufacturer's catalogue should clearly define the claimed life of LEDs (L70) in hours. Wherever asked for, the manufacturer shall submit the lumen depreciation test report as per LM80 of the specific or a similar typically representative LED. Manufacturers have to give a declaration for Type and Make of LEDs / Modules used in their luminaire and may be required to submit proof of procurement at the time of testing.

7.5.3 Supplier shall provide the Photometric test report of the luminaries as per LM79. Test for the Street Lighting luminary should be preferably done in a Goniophotometer (not in an optical sphere since the size of sphere will be too big) with due precautions (temperature, humidity, airflow, input power supply) and will provide test data on total luminary flux (absolute Lumens), Luminous efficacy (ratio total lumens / total input power in watts), Luminous intensities (absolute candela) at typical C and Y angles. The supplier should have sufficient ability to simulate the test data for the desired application and meet the application criteria e.g. lux level & uniformity on given road.

7.5.4 The efficacy (ratio of lumen output from luminary to the luminary wattage) of the luminary at test conditions shall be more than 100 lm/W. The quality of optical distribution will be integrally calculated, from wattage required per meter square or road stretch in meters meeting criteria for lux level & uniformity, while comparing the performance of luminary and set up a minimum standard for acceptance (in future).

7.5.5 Life of a luminary will be defined as the effective life i.e. the life of hardware (LEDs + Electronics) and time till which it maintains 70% of the initial lumens. The operating lifespan of the luminary will be a factor of junction temperature (case temperature for LED Modules) at an ambient temperature of 50°C. This may be directly calculated e.g. as mentioned at Clause 2.4 of this specification.

7.5.6 LED manufacturer will also provide a life degradation curve with junction temperature which may be used for calculating the expected life.

7.5.7 Alternatively, the manufacturer of LEDs will provide the LM80 data at different case temperature for LEDs / LED Modules. A direct measurement of the case temperature of LEDs / LED Module inside luminary at specified ambient temperature will be taken. The expected lumen maintenance can be calculated by a direct interpolation from LM80 data. The life of the luminary showing at least 94.1% lumen maintained after the test period of 6000 hours at 25°C will signify a minimum useful life class of 35000 hours at specified ambient. For Electronics, in the same stipulated period (35000 hours) there should not be more than 10% failure of Hardware.

7.5.8 Housing shall act as a heat sink with proper thermal management to optimize LED efficiency and life. The manufacture shall provide luminary Heat Test report ensuring operation of LEDs within limits of the solder pad temperature.

8. TECHNICAL EVALUATION:

8.1 The Technical Evaluation of Pre-qualified Bidders shall be carried out to achieve the objective of the assignment as detailed in the Terms of Reference. The Bidders will outline their methodology in their proposals giving a brief description of methods that they intend to adopt to achieve this objective. The wattage of the fittings should not be more than guaranteed watts. Due weight-age will be given to this methodology in the evaluation of the technical bids.

8.2 The evaluation of the proposals shall be carried out in two stages: Firstly the quality, and then the cost. The financial proposals shall be opened only after the technical proposals have been evaluated and concluded. The department shall evaluate the technical proposals taking into account several criteria:

- The Bidders' a relevant experience in the field of LED lighting technology including manufacturing capability, testing as per international standards and supply of LED based lighting products.
- Details of essential infrastructure to establish manufacturing capability of the Bidder to manufacture and test LED lighting luminaries in quality and reliability.
- Parameters specified in the specifications.
- The energy consumption of the LED Fitting.
- The qualification of the key staff proposed.
- Transfer of knowledge and training.

8.2.1 During warranty period, the bidder shall attend the defects free of cost (including replacement of spares) for any manufacturing defects in the luminary.

8.2.2 Experience in handling Similar Projects to be supported by PO Copies , Completion and Performance Certificates from clients.

8.3 While submitting the Bid, the manufacturer / bidder firm shall submit the following documents/ technical details for our technical evaluation:

- Technical Catalogue of Product
- Lumen Depreciation Curve of LEDs used (supplied by LED manufacturer)
- Polar Diagram of Luminaire tested in certified laboratory
- LM79 Measurement Report for the luminaire
- LM80 Report for the LEDs used (supplied by LED manufacturer)
- Detailed design / calculation of lighting scheme with the following parameters:

1. Lux Level
2. Uniformity
3. Pole height
4. Pole spacing
5. Tilt
6. Conforming to road category.
7. The detailed calculation for lux levels with uniform distribution including the lux distribution curve / graph / spatial distribution shall be submitted in support of the dimensions selected and variation thereof.

8.4 Type Test Certificate of luminaire from Govt. accredited Test Lab/ CPRI/ ERTL.

8.5 Test certificates for compliance to IP test.

9 ESSENTIAL INFRASTRUCTURAL REQUIREMENTS

9.1 The following facilities/ machinery and plant are considered essential for the manufacturing of quality and reliable LED product:

- Dust free environment with ESD protection for the assembly of LEDs/ PCB.
- Testing jigs for the testing of assembled LEDs/ PCB.
- Component lead forming machines for through hole devices.

- Temperature controlled automatic wave-soldering machine with auto-fluxing facilities for through hole devices.
- Automatic Temperature controlled re-flow-soldering machine for surface mounted devices.
- Stencil and solder paste application machine for surface mounted devices
- Automatic Device insertion machine for surface mounted devices.
- Variable regulated AC supply at least up to 500 Volts.
- Heat chamber / oven having minimum range of 0-150°C with alternate arrangement of standby power supply for carrying out endurance tests.
- Center lathe, Milling machine, hydraulic press etc. for manufacture of luminaire

9.2 All the above facilities are considered essential at the manufacturer's premises and shall be verified by authorities as the case may be before considering the firm as a supplier. However, the firm may outsource assembly with the sub vendor(s) who shall have above facilities. The firm shall arrange the visit to the subvendor's premises.

10. ESSENTIAL MEASURING INSTRUMENTS FOR TESTING

The following instruments with up-to-date calibration are considered essential for testing purposes: -

- H.V. Tester.
- Adequate number of meters for measurement of different electrical parameters.
- Megger (500Volt)
- Measuring Gauges such as Vernier caliper, micrometers, dial gauge,
- Non-contact digital thermometer, contact less thermometer and room thermometer.
- Digital multimeter.
- Noise/Decibel meter.
- Digital Weighing machine.
- Complete test bench for measuring the different parameters as mentioned in the specification.
- Milli Ohm/Micro Ohm meter
- Lux meter.
- Storage type Oscilloscope.
- Power analyzer
- Surge tester
- Temperature Simulation facility
- Gonio Photometer.
- Integrating Sphere
- Spectroradiometer

TECHNICAL DATA SHEET ON LED BASED LIGHTING LUMINAIRY FOR STREET LIGHTING

A) TECHNICAL PARTICULARS		
Technical parameters	NRL specification requirement	Vendor confirmation
Light Source	1- 1.2 W High Power LED	
Make of LED	Cree Inc. / Nichia Corporation/ OSRAM/ Philips Lumileds/ Seoul Semiconductor.	
Make of Fixtures/ Luminaries	Philips/ Crompton Greaves/ Bajaj/ Havells/ Avni/ Osram/ Goldwyn/GreenOlite/ MIC Electronics/ Binay/ Insta Power/ECIL	
Lighting Distribution Type	Cut Off/ Semi Cut Off type as per IESNA Type II/ III Lighting Distribution.	
Efficiency	>100 lm/W	
Operating Voltage Range	100- 280V	
Operating Voltage	230V ± 10%	
LED Operating Frequency	≥ 120 Hz	
Operating Frequency	50 Hz ± 3 Hz	
Total Harmonic Distortion	Current < 10%; Voltage < 3%	
Power Factor	>0.95	
Operating current	<350 mA	
Technical parameters	NRL specification requirement	Vendor confirmation
Usage Hours	Dusk to dawn (12 hours)	
Audible Noise	Shall have Class-A sound rating with audible noise in power supply not to exceed 24 dB.	
Beam Angle	120 Degrees (Minimum)	

Wattage	Equivalent LED Source (Input Power) Including driver power	For Conventional Light Source Replacement	Lum. Output of LED Source (Lumens)	Average Illum. Levels reqd. at road level with LED (Lux)	Equivalent LED Source (Input Power) Including driver power	Lum. Output of LED source (Lumen)	Average. Illum. Levels reqd. at working height (Lux)	
	60 W	150W HPSV Street Light	>4800	10				
Life Span		50000 Burning hours with 70% Lumens						
Color Temperature		6000 - 6500K (suitable for "Cool White" light)						
Color Rendering Index (CRI)		Min. 75						
Uniformity Ratio (Emin/Eav)		35%						
Ingress Protection		IP 65 for street lighting						
Driver efficiency		>85%						
Optical Efficiency		> 95%						
P/N junction temperature		<100 Degrees C at Junction point and <60 at Heat Sink.						
Working Temperature		-5 degree to 50 degree						
Working Humidity		10% to 90% RH						
Housing		The fixture should comprise of a top canopy made of di-cast aluminum alloy of adequate thickness and a lower part comprises of UV resistant acrylic bowl top frosted for visual comfort						
Construction		LED's are mounted on a circular/ array MCPCB which is thermally glued to an aluminum sheet provided with aluminum fins firmly connected to the housing for excellent heat dissipation.						
Mounting System		Street Lighting Poles of Height:7.5Meter above ground Arm length: 1.5M; Tilt:15 Degree						
Street light arrangement		Pole Height: 7.5 M above ground Arm length: 1.5M Tilt: 15 degree Distance between adjacent poles: 30M Arrangement: Single sided						

B) TESTING & DOCUMENTATION			
Performance Characteristic	Methods of Measurement	Required Documentation	Vendor to Confirm / Attach to the TBD
Integral LED Lamp Efficacy: Light Output Input Power	IESNA LM-79-2008 ANSI C82.2-2002	Laboratory test results must be produced using the specific modules/ arrays and power supply combination that will be used in production.	
Power Factor	ANSI C82.77-2002	Laboratory test results must be produced using the specific modules/ arrays and power supply combination that will be used in production	
Lumen Maintenance (L70) for LEDs	IESNA LM-80-2008	LED manufacturer test results for Minimum 6000 hour lumen maintenance data for the LED packages/arrays/modules used in the integral LED lamp. Lumen maintenance data must meet at least the following conditions: <ul style="list-style-type: none"> - Collected at LED case or solder point temperature (Ts) equal to or greater than the verified TMP temperature of the integral LED lamp; and - Measured at a forward drive current equal to or greater than the drive current applied to the LEDs in the integral LED lamp. 	
Performance Characteristic	Methods of Measurement	Required Documentation	Vendor to Confirm / Attach to the TBD
Colour Rendering Index	ANSI C78.377-2008 IESNA LM-79-2008 CIE 13.3-1995 IESNA LM-58-94	Laboratory test results must be produced using the specific modules/ arrays and power supply combination that will be used in production	

Chromaticity & Correlated Colour Temperature	ANSI C78.377-2008 IESNA LM-79-2008 CIE 15 : 2004 IESNA LM-58-94 IESNA LM-16-93	Laboratory test results must be produced using the specific modules/ arrays and power supply combination that will be used in production	
Colour Spatial Uniformity and Colour Maintenance	IESNA LM-79-2008 CIE 15 : 2004 IESNA LM-58 IESNA LM-16 IESNA LM-80	Self Certification	
Audible Noise	Class-A sound rating: Power supply not to exceed 24 dB	Self Certification	
Integral LED lamp Warranty		Provide copy of the actual three-year manufacturer warranty included in the packaging.	
Safety of LED lamps	UL 8750	LED manufacturer test results of the safety safety test report with a general coverage statement from an OSHA NRTL laboratory.	
Performance Characteristic	Methods of Measurement	Required Documentation	Vendor to Confirm / Attach to the TBD
Test certificates	ERTL / CPRI/MNRE	The vendor shall furnish test certificates certifying performance of the integral luminaries' for the tests mentioned as below: <ul style="list-style-type: none"> a) Insulation resistance test b) HV test c) Over Voltage Protection test d) Surge Protection test e) Reverse polarity test f) Temperature rise test g) Fire Retardant test h) Photometric tests i) IP class test j) Power Consumption 	

***** SCC *****

ANNUAL TURNOVER IN LAST THREE YEARS

Name of Work : “Supply, Dismantling & Installation of LED Street light fixture.”

Tender No. : OC17000041/RAJ

Name of Bidder :

Sl. No	Financial Year	Turnover
1	2008-2009	
2	2009-2010	
3	2010-2011	

Copy of audited Trading & P/L accounts of respective years to be provided.

(SIGNATURE OF BIDDER)

PROPOSED SITE ORGANISATION

Name of Work : “Supply, Dismantling & Installation of LED Street light fixture.”

Tender No. : OC1700041/RAJ

Name of Bidder :

Our site organisation shall consists of the following categories of manpower with tentative numbers. Numbers of manpower of any category shall be increased based on instruction of the Engineer-in-Charge

(SIGNATURE OF BIDDER)

Name of Work : "Supply, Dismantling & Installation of LED Street light fixture."
Tender No. : OC17000041/RAJ
Name of Bidder :

DETAILS OF EQUIPMENTS TOOLS & TACKLES

The bidder shall submit herein details of equipments, tools, tackles proposed to be deployed for this work and shall indicate in each case whether the same is (a) already owned by bidder and available for use on this Contract.(b) anticipated to be hired by Contractor or (c) anticipated to be purchased by Contractor. In case of (a) present location shall be stated. In case of (b) and (c) location of hirer or supplier shall be stated.

Item proposed to be deployed	Description make model & capacity	Numbers	Year of manufacture	Category (a) or (b) or (c) above	Location	Remarks
1	2	3	4	5	6	7

Contractor agrees to augment the above chart with additional number/categories of equipment if required to complete the work within the agreed time schedule of completion, as directed by the Engineer-in-Charge.

(SIGNATURE OF BIDDER)

DETAILS OF SIMILAR WORKS DONE DURING THE PAST TEN YEARS

Name of Work : “Supply, Dismantling & Installation of LED Street light fixture.”

Tender No. : OC17000041/RAJ

Name of Bidder :

Sl.No.	Full postal address of client & name of officer-in-charge	Description of work	Value of contract	Date of commencement	Actual compln. time in months	Year of Compln.	Delay If any	Reason of Delay	Remarks

(SIGNATURE OF BIDDER)
ANNEXURE-V

CONCURRENT COMMITMENTS OF THE TENDERER

Name of Work : “Supply, Dismantling & Installation of LED Street light fixture.”

Tender No. : OC17000041/RAJ

Name of Bidder :

SL. NO.	Full Postal Address of Client & Name of Officer-in-Charge	Description of the work	Value of contract	Date of commencement of work	Scheduled completion period	Percentage completion as on date	Expected date of completion
1	2	3	4	5	6	7	8

(SIGNATURE OF BIDDER)

COMPLIANCE TO BID REQUIREMENTS

Name of Work : “Supply, Dismantling & Installation of LED Street light fixture.”

Tender No. : OC17000041/RAJ

Name of Bidder :

We confirm that our bid complies to the total techno-commercial requirements of bidding document without any deviation.

(SIGNATURE OF BIDDER)

BID VALIDITY

Name of Work : “Supply, Dismantling & Installation of LED Street light fixture.”

Tender No. : OC17000041/RAJ

Name of Bidder :

We hereby undertake that our bid for the above stated work shall remain valid for a period of 6 (six) months from the date of opening. In case of our revoking or canceling the bid within the validity period, NRL is entitled to forfeit the Earnest Money Deposit paid by us along with the bid.

(SIGNATURE OF BIDDER)

CHECKLIST FOR SUBMISSION OF BIDS

Bidders are requested to fill this checklist and also to ensure that the details/ documents have been furnished as called for in this bidding document.

Please tick (√) the box for this details furnished in the bid.

1. Power of Attorney in the name of the signatory of the bid.	:	<input type="checkbox"/>
2. Submission of bid letter along with one set of bidding document.	:	<input type="checkbox"/>
3. Validity of bid for 6 (six) months from the date of opening of bid as per format.	:	<input type="checkbox"/>
4. Earnest Money Deposit.	:	<input type="checkbox"/>
5. Copy of valid STCC	:	<input type="checkbox"/>
6. Copy of Service Tax Registration Certificate (PAN based)	:	<input type="checkbox"/>
7. Equipment proposed for deployment as per tender requirement	:	<input type="checkbox"/>
8. Organogram with qualification and experience of the personnel to be deployed at site as mentioned in the SCC	:	<input type="checkbox"/>
9. Details of concurrent commitment.	:	<input type="checkbox"/>
10. Copy of PAN card.	:	<input type="checkbox"/>
11. Copy(ies) of work order(s) and completion certificate(s) in support of the similar work(s) mentioned by you	:	<input type="checkbox"/>
12. Copy of P.F. Certificate / Registration no.	:	<input type="checkbox"/>
13. Compliance to the requirement of bidding document	:	<input type="checkbox"/>
14. Copy of Audited Trading and profit & loss accounts as proof of turnover.	:	<input type="checkbox"/>
15. Each page of the submitted tender document duly sealed & signed.	:	<input type="checkbox"/>

Bidder should list the exclusion, if any, along with the reasons thereof.

(SIGNATURE OF THE BIDDER)

Name of Work : “Supply, Dismantling & Installation of LED Street light fixture.”

Tender No. : OC17000041/RAJ

01. NAME OF BIDDER :
- ADDRESS :
- PHONE NO :
- E-MAIL :
- CONTACT PERSON :
02. REGISTRATION NO. & CLASS :
IF ANY
(SPECIFY ORGANISATION)
03. EARNEST MONEY DEPOSIT :
WITH DETAILS
04. PREVIOUS EXPERIENCE :
(Contractor should submit the
work order copy and completion
certificate along with the offer)
05. Sales Tax / VAT clearance certificate :
06. WHETHER SSI UNIT :
(If yes, please furnish the copy
of the Registration Certificate)
07. PAN No issued by Income Tax Dept :
(Please furnish the copy, if any)
08. Provident Fund Code No. :
(Please furnish the copy, if any)
09. Service Tax Registration No. :
(Please furnish the copy of PAN based
Service tax registration certificate)

I/We hereby offer to execute the above mentioned work as per enclosed SOR (PRICED BID) and as per laid down terms and conditions of this Bid document.

(SIGNATURE OF BIDDER)

Date :

Place :



NUMALIGARH REFINERY LIMITED
COMMERCIAL DEPARTMENT

REGRET FORM

To,

Date:.....

THE GM (COMMERCIAL & CC)
NUMALIGARH REFINERY LTD.,
DIST- GOLAGHAT,
ASSAM – 785699

Dear Sir,

Sub : Supply, Dismantling & Installation of LED Street light fixture.

Tender No. : OC17000041/RAJ

With reference to your above mentioned Tender Enquiry, we regret our inability to quote for the same due to _____

Yours faithfully,

Signature

Name : _____

Designation : _____

For M/s : _____

Name of the party/seal

NOTES :

1. Please mention in the blank space, the reason for not being able to quote for this enquiry.
2. The “Regret Form” shall be sent under sealed envelope so as to reach before due date of the Tender Enquiry.

Paste This Slip On the Envelope of the Offer:

-----✂-----

Quotation for the job of:

“Supply, Dismantling & Installation of LED Street light fixture.”

(Tender No. OC17000041/RAJ)

Due date: 20-10-2011

To,

GM (Commercial & CC)
Numaligarh Refinery Limited,
NRL Complex, Numaligarh,
Dist : Golaghat
Assam – 785 699
Phone : 03776 – 265545 / Fax No.: 03776-265514

From:

M/s.....

.....

-----✂-----

TENDER DOCUMENT RECEIPT

Name of Work : “Supply, Dismantling & Installation of LED Street light fixture.”

Tender No. : OC17000041/RAJ

Received the tender document for the above mentioned job.

Name of the bidder : M/s.

Address :

Phone & fax :

Contact Person :

Sign of the Bidder/Representative

Date :

Kindly return this receipt to **Commercial Dept. NRL Site**

CLAUSES RELATED TO ARBITRATION SHALL BE AS PER THE AMENDMENT BELOW WHEREVER THE TERM GCC APPEARS:

110.0 ARBITRATION:

- a) Any dispute or difference of any nature whatsoever, any claim, cross-claim, counter-claim or set off of the COMPANY against the Contractor or regarding any right, liability, act, omission on account of any of the parties hereto arising out of or in relation to his agreement shall be referred to the sole Arbitration of the Managing Director of the COMPANY or of some officer of the COMPANY who may be nominated by the Managing Director. The Contractor will not be entitled to raise any objection to any such arbitrator on the ground that the arbitrator is an Officer of the COMPANY or that he has dealt with the matters to which the contract relates or that in the course of his duties as an Officer of the COMPANY he had expressed views on all or any other matters in dispute or difference. In the event of the arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason, the Managing Director as aforesaid at the time of such transfer, vacation of office or inability to act may in the discretion of the Managing Director designate another person to act as arbitrator in accordance with the terms of the agreement to the end and intent that the original Arbitrator shall be entitled to continue the arbitration proceedings notwithstanding his transfer or vacation of office as an Officer of the COMPANY if the Managing Director does not designate another person to act as arbitrator on such transfer, vacation of Office or inability of original arbitrator. Such persons shall be entitled to proceed with the reference from the point at which it was left by his predecessor. It is also a term of this contract that no person other than the Managing Director or a person nominated by such Managing Director of the COMPANY as aforesaid shall act as arbitrator, hereunder. The award of the arbitrator so appointed shall be final conclusive and binding on all parties to the agreement subject to the provisions of the Arbitration Act, 1940 or any statutory modification or re-enactment thereof any the rules made thereunder for the time being in force shall apply to the arbitration proceedings under this clause.
- b) The award shall be made in writing and published by the Arbitrator within two years after entering upon the reference or within such extended time not exceeding further twelve months as to sole Arbitrator shall by a writing under his own hands appoint. The parties hereto shall be deemed to have irrevocably given their consent to the Arbitrator to make an publish the award within the period referred to hereinabove and shall not be entitled to raise any objection or protest thereto under any circumstances whatsoever.
- c) The arbitrator shall have power to order and direct either of the parties to abide by, observe and perform all such directions as the arbitrator may think fit having regard to the matters in difference i.e. dispute before him. The arbitrator shall have all summary powers and may take such evidence oral an / or documentary, as the arbitrator in his absolute discretion thinks fit and shall be entitled to exercise all powers under the Arbitration Act, 1940 including admission of any affidavit as evidence concerning the matters in difference i.e. dispute before him.
- d) The parties against whom the arbitration proceedings have been initiated, that is to say, the Respondents in the proceedings, shall be entitled to prefer a cross-claim, counter-claim or set off before the Arbitrator in respect of any matter an issue arising out of or in relation to the Agreement without seeking a formal reference of arbitration to the Managing Director for such counter-claim, cross or set off and the Arbitrator shall be entitled to consider an deal with the same as if the matters arising there from has been referred to him originally and deemed to form part of the reference made by the Managing Director.

- e) The arbitrator shall be at liberty to appoint, if necessary any accountant or engineering or other technical person to assist him and to act by the opinion so taken.
 - f) The arbitrator shall have power to make one or more awards whether interim or otherwise in respect of the dispute and difference and in particular will be entitled to make separate awards in respect of claims or cross-claims of the parties.
 - g) The arbitrator shall be entitled to direct any one of the parties to pay the costs of the other party in such manner and to such extent as the arbitrator may in his discretion determine and shall also be entitled to require one or both the parties to deposit funds in such proportion to meet the arbitrators expenses whenever called upon to do so.
 - h) The parties hereby agree that the courts in the town of Golaghat alone shall have jurisdiction to entertain any application or other proceedings in respect of anything arising under this agreement and any award or awards made by the Sole Arbitrator hereunder shall be filed in the concerned courts in the town of Golaghat only.
-

TENDERS FROM NSIC / SSI UNITS

The following procedures are applicable in regard to invitation of tenders from NSIC /SSI Units:

I. Earnest Money / Security Deposit need not be taken from these Units.

II. Tender sets may be given free of cost.

The above are subject to the fulfilling of under mentioned conditions, which should be clearly indicated in the tender conditions:.

- a) SSI Units should be registered with National Small Scale Industrial Corporation Limited (NSIC).
- b) The Unit should be registered for the item tendered.
- c) The monetary limit indicated in NSIC registration certificate should cover value of items ordered.
- d) Registration Certificate is valid as on date of order.
- e) Photostat copy of valid NSIC registration certificate should be submitted in support.

Registration with DGS&D will not entitle a Tenderer to claim exemption from Security Deposits.
