

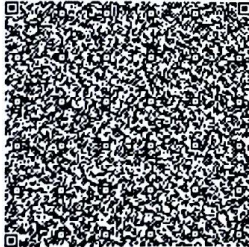
INDIA NON JUDICIAL
Government of Jharkhand

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Certificate No. : IN-JH05036905738980P
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Account Reference : NONACC (FI)/ jhdopic07/ DORANDA/ JH-RNC
Unique Doc. Reference : SUBIN-JHJHDOPJC0707131954181011P
Purchased by : ENERGY EFFICIENCY SERVICES LTD
Description of Document : Article 5 Agreement or memorandum of an Agreement
Property Description : AGREEMENT
Consideration Price (Rs.) : 0
(Zero)
First Party : ENERGY EFFICIENCY SERVICES LTD
Second Party : RANCHI MUNICIPAL CORPORATION
Stamp Duty Paid By : ENERGY EFFICIENCY SERVICES LTD
Stamp Duty Amount(Rs.) : 100
(One Hundred only)



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Page 1 of 19

This MoU is made and executed on 12th this day of August 2017, at Ranchi
place of execution by and between

अपर नगर आयुक्त
रांची नगर निगम,
रांची

VO 0003241526



Statutory Alert:

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2. The onus of checking the legitimacy is on the users of the certificate.
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Ranchi Municipal Corporation, Government of Jharkhand acting through its representative _____ (hereinafter referred to as the "ULB" which expression shall, unless the context otherwise requires, include its administrators, successors and permitted assigns) of First Part;

And

Energy Efficiency Services Limited, a company incorporated under the provisions of the Companies Act, 1956 as a joint venture of PSUs of the Ministry of Power, Government of India, having its office at 4th Floor, WAI Building, A-13, Sector -1, Noida - 201301 (UP) acting through its representative D. Y. Mangar (Technical) (hereinafter referred to as "EESL" which expression shall, unless repugnant to the context or meaning thereof, include its successors, permitted assigns and substitutes) of Second Part.

ULB and EESL are individually referred to as a Party and collectively referred to as the Parties.

Whereas

1. Urban Development & Housing Department (UD&HD) vide MOU dated 31st August 2016, confirmed that UD&HD would like to initiate the Energy Efficient Street Lighting Programme for the state of Jharkhand for the replacement of existing conventional street light by Energy efficient LED street light. Wherein, EESL is to facilitate the supply, installation, commissioning, service and maintenance of LED Street Lights including their post installation maintenance and warranty replacement during the project period.

2. In response thereto, EESL has agreed to facilitate installation of the latest LED street light technology as replacements to the existing conventional streetlight fixture (i.e. concept & scope of the project) and shall facilitate the achievement of energy savings, rectification work based on consumer complaints and establishing project monitoring cell in coordination with the respective ULB.

NOW THEREFORE, in consideration of the foregoing and the respective covenants and agreements set forth in this Agreement, the sufficiency and adequacy of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree as follows:

ARTICLE 1 – EFFECTIVENESS AND TERM OF AGREEMENT

1.1 Effectiveness and Term

1.1.1 This Agreement shall come into force and effect on the date of execution of this Agreement by both Parties (the Effective Date).

1.1.2 This Agreement shall remain in force for 7 years from the date as mentioned, unless rescinded by either party. The Agreement can be extended further by the mutual consent of all the Parties.

1.1.3 Unless terminated earlier by either Party in accordance with the terms of this Agreement, this Agreement shall continue in full force and effect until all obligations of the Parties in relation to the Project have been fulfilled, discharged and/or waived (Terms of Agreement).

ARTICLE 2 - SCOPE OF THE PROJECT

2.1 Project Title

2.1.1 The Project shall be known as the LED Street light Project in Ranchi Municipal Corporation of the State of Jharkhand.

2.2 Exclusivity

2.2.1 On and from the date of the execution of this Agreement and subject to the right of ULB to terminate this Agreement under Article 8.1, ULB grants to EESL for the Term of Agreement, the exclusive right to implement the Project in the Project Area. ULB agrees that it shall not enter into similar arrangement(s) with any third party for implementation of projects in the Project Area involving replacement of street light with Energy Efficient LED Street Light identified for replacement by EESL under the MOU between UD & HD and EESL dated 31st August 2016.

Handwritten signatures and stamps for ULB and EESL. The ULB stamp is circular and contains the text "RANCHI MUNICIPAL CORPORATION" and "JHARKHAND". The EESL stamp is circular and contains the text "ENERGY EFFICIENCY SERVICES LIMITED" and "INDIA".

2.3 Project Scope

2.3.1 The Project shall include financing, supply, installation, commissioning, service and maintenance of LED street light including post installation maintenance, warranty replacement during the project period in accordance with the terms of this Agreement to achieve energy savings. It is agreed by ULB that EESL may appoint contractors, sub-contractors, agents, advisors and consultants to implement the Project and carry out its obligations under this Agreement. The key elements of the Project are set out below.

- (a) As part of this Project, EESL shall conduct joint survey before implementation of Energy Efficient (EE) LED Street light which includes infrastructure requirements for installation and proper functioning of LED street lights. The IDC determined through the joint survey shall be agreed upon and all such IDC shall be recovered from ULB at actual.
- (b) As part of the Project, ULB agrees to EESL replacing up conventional street lights shall be replaced with Energy Efficient LED street lights with specifications and features as stated in Article 3.1 of this Agreement.

However, the Parties agree that the number of conventional street lights to be replaced by EESL as part of the Project may vary. In case of any variation in specified number of fixtures as declared by ULB, the same shall be accounted for and be brought to the notice of ULBs before replacement and such adjustment in quantity variations, at actual, shall results in adjustment of annuity receivables by EESL from ULBs or pro rata basis.

- (c) EESL shall finance (or arrange for finance) to fund the implementation of the Project and performance of its obligations under this Agreement.

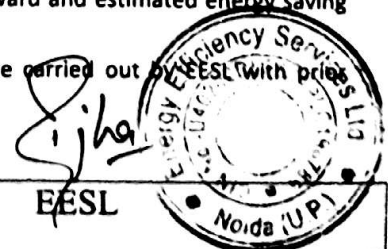
2.4 Project Schedule

2.4.1 EESL shall undertake the implementation of Energy efficient LED street lights in time span of 14 to 18 weeks from the effective date,

2.5 Project Implementation Deliverables:

- 2.5.1 EESL shall rectify LED street lights faults through service setup arrangement of EESL and suppliers.
- 2.5.2 EESL shall maintain a minimum uptime of retrofit luminaries of 95% excluding the period of non-availability of power supply. The following shall be the performance requirement for replacement that EESL agrees to under this Agreement:
- 2.5.3 (a) In case of default by EESL, maintaining uptime of lights of 95%, a penalty equivalent to monetized value of energy savings from the defective/ non burning lamps shall be deducted from EESL monthly payment. The penalty shall be reckoned as follows.
(b) Penalty@1% of yearly AMC charges for every 1% reduction in yearly uptime below 95% and in proportion for part thereof. Total Amount of Penalty shall be limited to 5% of Annual AMC charges. And also incentive shall be payable by ULB to EESL for yearly uptime greater than 96% @0.5% of yearly AMC charges for every 1% increase in yearly uptime above 96% and in proportion for part thereof.
- 2.5.4 EESL shall replace existing conventional streetlight fixture, with LED fixtures, (excluding LED fixtures already installed) in the jurisdiction of ULB's on the existing Pole / mounting / Infrastructure and electrical connections.
- 2.5.5 The replacement of fixture shall be on point to point basis w.r.t. existing conventional streetlight fixtures (both functional/non-functional fixtures shall be considered for replacement).
- 2.5.6 A tripartite service levels agreement to be signed between EESL, ULB and concern vendors for better administration control of ULB's in O&M.
- 2.5.7 Replacement wattage of LED shall be finalized during tender processing/award and estimated energy saving as indicated under Annexure.
- 2.5.8 To enable proper functioning of lighting system, any additional work to be carried out by EESL with prior concurrence of ULB, cost of the same shall be borne by ULB.

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ULB
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- 2.5.9 Centralized Control and Monitoring System (CCMS) with grievance management to be established or alternate switching arrangement, as may be mutually agreed upon, shall replace exiting switching arrangement.
- 2.5.10 Network configuration i.e. supplies distribution through CCMS or otherwise along with fuse boxes shall be worked out based on the preliminary survey report.
- 2.5.11 LED Lights fixtures installed by EESL under subject agreement only, shall be maintained by EESL for the entire contract period. EESL shall insure the fittings during the period of the contract against any natural disaster such as fire, earthquake and safeguarding theft. The cost of insurance, including premium, shall be charged on actual, as part of the project cost. It is incumbent on the ULB to issue necessary documentary support for the damage/theft to the assets with reasons, as these assets are owned by the respective ULB, for the purpose of insurance claim.

ARTICLE 3 - SPECIFICATIONS

- 3.1 Specifications of EE LED Street lights to be installed under the Project as Per Pt. No. 14.

ARTICLE 4. DUTIES, RESPONSIBILITIES AND OBLIGATIONS OF THE PARTIES

4.1 ULB

1. ULB shall provide all the required data, approvals, permissions and necessary support as required during project preparation, implementation and service period under this agreement.
2. ULB shall provide, grant of all such permissions, authorizations which EESL or their authorized vendor/representatives may require or is obliged to seek from ULBs, in connection with implementation of the project and the performance of its obligations under this agreement.
3. In case of dispute or an ambiguity between the EESL and ULB, the URBAN DEVELOPEMENT & HOUSING DEPARTMENT shall have the obligation to resolve the dispute/ambiguity.
4. ULB shall appoint a nodal officer who shall be the part of project monitoring cell and shall work with EESL to enable successful LED project implementation, in the respective ULB.
5. ULB shall appoint a scheduled bank as the escrow agent for the project and execute an Escrow Agreement with the Escrow Agent in accordance with the terms of this Agreement within 15 days from the date of effective date and ensure that at all times during the project period, the Escrow Account is credited with the sum equal to 12months eligible monthly payment for the contract year calculated in accordance with Article 6.1 of this Agreement.
6. During the project period, ULB shall pay to EESL, each month, as per Article 6 of this Agreement.

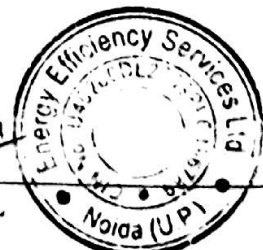
4.2 EESL

1. Baseline estimation to assess- reduction on actual energy consumption, number of street lights in actual operation for each type, hours of operation of each type and tariff.
2. Project Management including project preparation, issuance of bids, evaluation and selection of implementing agency based on open competitive bidding, as per prevailing Rules.
3. Implementation of LED lights including supply, installation and commissioning, as per the agreed schedule. A tentative schedule is placed at Point number 16.
4. Operation & Maintenance of the lights during the contract period. For AMC payments and its escalations, kindly refer "Article 5" section.
5. EESL shall hand over the existing street lights which have to be replaced by LED, to respective ULBs, at actual condition. If there is no fixture found on the pole, the same should be recorded by concerned official of EESL and respective ULB. The receiving certificate, of the same shall be issued by the competent authority of the respective ULB.

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ULB

[Handwritten Signature]
EESL



ARTICLE 5 CALCULATION OF ELIGIBLE MONTHLY PAYMENT

- 5.1 ULBs shall make payment to EESL as per the following principle:
1. All capital costs shall be on actual, as per competitive bidding and shall be included in project cost
 2. EESL pre-tax return on equity shall be 21% per annum.
 3. The debt equity ratio shall be 80:20
 4. The interest rate on debt shall be on actual, subject to a maximum rate of 12.5%.
 5. AMC charges including fixtures and accessories shall be 3% of the total project cost per annum, throughout the contract period.
 6. PMC charges during 7 years towards erection and commissioning of the project shall be 3% of the total Project Cost including IDC component.
 7. All statutory taxes/duties shall be reimbursed by ULB to EESL on actual. Tax presently applicable is service tax at the rate of 14% of total pay-out to EESL. Any change in law on account of the introduction of any new taxes or change in rates of existing tax shall be account of and reimbursed by ULB.
 8. Primarily the concerned ULB shall make the payment through its electricity unit savings, annual purchasing cost of fixtures (Capital Cost) and O&M Charges. Payments shall be made from Urban Cess and any shortfall shall be paid through the grant provided to ULB, by URBAN DEVELOPEMENT DEPARTMENT.
 9. Payment of monthly annuity charges shall be arrived on the basis of the principles mentioned above from clause 1 to 7 under section 5.
 10. The power savings due to non-availability of power supply cannot be considered for calculation of energy savings.
 11. Tariff used for calculating monetary savings shall be the applicable tariff for street lighting by state regulatory commission.
 12. The expenditure for installing MIS System [which includes-fault status, energy monitoring and On/Off status of streetlights], project monitoring cell and call center shall be charged on actual, as part of the project cost.
 13. The "EESL" shall extend warranty of the LED streetlight fixtures supplied under this BA throughout the contract period (i.e., 7 years) covering any manufacturing defects. However the warranty shall also not be applicable for any damage or malfunctioning of LED streetlight fixtures on account of lightning strike, fire or any kind of Act of God beyond the control of either of the Parties including adverse weather conditions, earth quakes, rains, tempest, whirlwind, landslides, storms, volcanic eruptions, fire or any calamities, riots, high voltage, phase-to-phase voltage, unauthorized handling, accidents and thefts

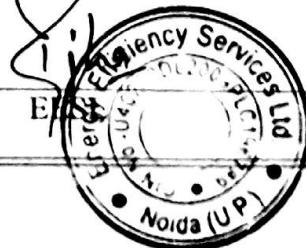
ARTICLE 6- PAYMENT MECHANISM**6.1 Payments to EESL**

- 6.1.1 Annuity amount determined as per article no. 5.1 shall be paid to EESL on monthly basis from the Escrow Account. EESL shall raise and deliver an invoice to ULB for the eligible monthly payment by 1st week of the every month immediately as detailed under 6.1.3.
- 6.1.2 The invoiced amount shall be paid by ULB from Escrow Account to EESL within 30 days from the date of submission of such invoice by EESL ("Payment Due Date"). If the payment due date is a public holiday, the payment of the invoice shall be made by ULB on the next working day.
- 6.1.3 Payment Terms –
 - a) Monthly annuity payment on pro rata basis proportional to capital cost incurred on commissioning of 100% of Luminaries (total number of luminaries to be replaced identified through survey will be considered as 100%).
 - b) Balance part of monthly annuity payment shall be released on completion of CCMS, including arrears for the previous period.

6.2 Default Interest

- 6.2.1. Any delay in payment of eligible monthly payment by or on before the payment due date by ULB shall attract a default interest at the rate of SBI Base rate +2% from the date the payment became due till the date ULB makes full payment of such invoice. EESL's right to claim default interest is without prejudice to any other right or remedy available to it under this agreement or applicable laws.

[Signature]
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 राँची



6.3 Escrow Arrangement and Payment Security

- 6.3.1 ULB shall not be entitled to retain any amount due to EESL under this agreement or set off any amount due to it from EESL against any eligible monthly payment. If the payment of any amount pursuant to article 7.2 is disputed, then the entire undisputed element of that amount shall be paid and the disputed element shall be dealt with in accordance with article 10.

ARTICLE 7- AMENDMENT & CANCELLATION

- 7.1 No change to this Agreement shall be valid or binding unless it is set forth in writing and duly executed by the authorized representatives of the Parties hereto.
- 7.2 This AGREEMENT may be renegotiated, if at any time during its term, the work or environment of the ULB and EESL, is so altered that the contents of the Agreement are no longer appropriate.

ARTICLE 8 - TERMINATION FOR DEFAULT

8.1 The "ULB" Events of Default

Each of the following events or circumstances, to the extent caused by a default of the "ULB" and if not cured within the Cure Period, which shall be 30 (thirty) days (unless provided otherwise in this Agreement), from the date of notice of default (the "Default Notice") from the "EESL", shall be considered for the purpose of this Agreement as events of default of the ULB.

1. The ULB is in breach of its obligations under this Agreement, which has a Material Adverse Effect upon the "EESL" or the Project and this breach is not cured within a Cure Period of 30 days from the date of Default Notice.
2. The ULB is in breach of any representation or warranty made under this Agreement or it repudiates this Agreement.
3. UD&HD or any Competent Authority has by an act of commission or omission created a circumstance that has a Material Adverse Effect on the "EESL" and the ULB has failed to compensate the EESL for the same through an adjustment.
4. The ULB fail to pay the EESL the consideration as applicable.

8.2 Termination by the "EESL"

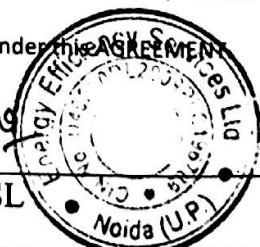
- 8.2.1 Without prejudice to any right or remedy, which the "EESL" may have under this AGREEMENT, upon occurrence of Default or Event of Default by the "ULB", the "EESL" shall be entitled to issue a Termination Notice to the "ULB". The Termination Notice shall grant the "ULB" a further period of 30 (thirty) days (the Termination Period) to make a representation, and if, during the Termination Period the "ULB" takes suitable steps to remedy the situation, the "EESL" shall be entitled to withdraw the Termination Notice. If the Termination Notice is not withdrawn within the Termination Period, this Agreement shall automatically terminate on the expiry of the Termination Period. In case of termination, EESL shall issue notice in writing. The notice given on the address given in the title article of this AGREEMENT shall be considered as a valid notice.

8.3 EESL Event of Default

- 8.3.1 Each of the following events or circumstances, to the extent caused by default of the EESL, and if not cured within the "Cure Period which shall be 30 (thirty) days from the date of notice of default (the "Default Notice") from the "ULB", shall be considered for the purpose of this AGREEMENT as Events of Default of the "EESL":
1. The "EESL" is in breach of its obligations under this AGREEMENT, which has a Material Adverse Effect upon the "ULB" or the Project.
 2. The "EESL" is in breach of any representation or warranty made under this AGREEMENT or it repudiates this AGREEMENT.
 3. The "EESL" abandons the Project or any of its material obligations as provided under this AGREEMENT

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EESL



8.4 Termination by the "ULB"

8.4.1 Without prejudice to any other right or remedies which the ULB may have under or be entitled to terminate this AGREEMENT by following the procedure set forth under this AGREEMENT, upon occurrence of "EESL" Event of Default, the ULB shall be entitled to terminate this AGREEMENT by following the procedure set forth hereinafter:

1. The ULB shall be entitled to issue a Termination Notice to the "EESL". The Termination Notice shall grant the "EESL" 30 (thirty) days (the "Termination Period") to make a representation, and if, during the Termination Period the "EESL" takes suitable steps to remedy the default situation, the "ULB" shall be entitled to withdraw the Termination Notice.
2. If the "EESL" fails to cure the defaults within the Termination Period the agreement stands terminated by the respective ULB.
3. In case of termination, ULB shall issue notice in writing. The notice given on the address given in the title article of this AGREEMENT shall be considered as a valid notice.

8.5 Consequences of termination

Upon termination of this AGREEMENT for any reason, the terms specified in this AGREEMENT shall cease to exist and are not enforceable.

8.5.1 Termination Payment for Termination by "EESL"

1. Upon Termination by the "EESL" on account of the "ULB" Default under Articles 8.1, the "EESL" shall be entitled to receive from ULB by the way of Termination Payment a sum equal to the consideration of the Project as specified in section "Payment Terms" of this AGREEMENT minus the amounts paid till termination of the AGREEMENT minus the interest not applicable for the balance period of the AGREEMENT after termination.
2. Payments due to the "EESL", as calculated under section "Payment Terms" shall be made within 30 (thirty days) days of termination of the AGREEMENT pursuant to article 9.1, "The "ULB" Events of Default".
3. In case of termination of AGREEMENT, either party shall have no claims against each other.

8.5.2 Termination Payment for Termination by ULB

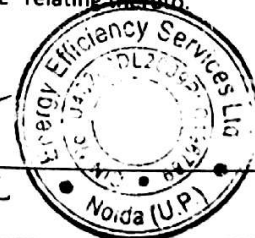
1. Upon Termination by the "ULB" on account of default by the "EESL" during period of this MOU, in accordance with the provisions of Articles 9.3, "EESL" Event of Default", EESL" shall be entitled to receive from the ULB by the way of Termination Payment a sum equal to 98% of the sum equal to the amount invested by EESL towards the capital cost as specified in Payment Terms less the amounts paid till termination without interest applicable for the balance period of the contract period after termination.
2. However, if the Termination by the ULB is on account of the default by the "EESL" before supplies are affected in terms of this AGREEMENT, then the "EESL" shall not be entitled for any Termination Payments.

8.5.3 Other rights and obligations upon Termination

1. Upon Termination of this AGREEMENT and payment of Termination Payment to the "EESL" as applicable in full, the ULB shall:-
 - i. Take control of the Project forthwith;
 - ii. Take control of all Energy Efficient LED Street Lights supplied under this AGREEMENT.
2. Upon Termination of this AGREEMENT it shall be the responsibility of the "EESL" to co-operate with the ULB and comply with all reasonable requests thereof including the execution of any documents and other actions, provided the ULB bears any reasonable Costs incurred by the "EESL" relating thereto.

ULB

EESL



ARTICLE 9- FORCE MAJEURE**9.1 Force Majeure Event**

In this AGREEMENT "Force Majeure" means an event occurrence in India of any or all of the Non-Political Force Majeure Event. Indirect Political Force Majeure Event and Political Force Majeure Event described in this section, hereinafter which prevents the Party claiming Force Majeure (the "Affected Party") from performing its obligations under this AGREEMENT and which act or event:-

1. Is beyond the reasonable control of and not arising out of the fault or negligence of the Affected Party or the failure of such Party to perform its obligations hereunder;
2. The Affected Party has been unable to prevent by the exercise of due diligence and reasonable efforts, skill and care and
3. Has a Materially Adverse Effect on the Project.

9.2 Non-Political Force Majeure Events

For the purposes of Article 9.1, Non-Political Force Majeure Events shall mean one or more of the following acts or events:

1. Acts of God or events beyond the reasonable control of the Affected Party which could not reasonably have been expected to occur, extreme adverse, weather or environmental conditions, lightning, earthquakes, heavy rains, cyclones, tempest, whirlwind, landslides, storms, floods, volcanic eruptions or fire (to the extent originating from a source external to the Facility or not designed for in Implementation Works);
2. Radioactive contamination or ionizing radiation;

9.3 Indirect Political Force Majeure Event

For the purposes of Article 9.1, indirect Political Force Majeure Events mean one or more of the following acts or events:

1. An act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, unexpected call up of armed forces, blockade, embargo, rebellion, riot, religious strife, bombs or civil commotion, sabotage, terrorism which prevents normal operations of the "EESL" for a continuous period exceeding 6 (six) months from the Compliance Date.
2. Industry wide or state wide or India wide strikes or industrial action for a continuous period exceeding 6 (six) months from the Compliance Date.

9.4 Political Force Majeure Event

For the purposes of Article 9.1, Political Force Majeure Events shall mean one or more of the following acts or events by or on account of the ULB, Govt. of Jharkhand, Government of India or any other Competent Authority:

1. Appropriation or compulsory confiscation, by any Competent Authority any Project Assets or rights of the "EESL" or of the Contractors; or
2. Any unlawful or unauthorized or without jurisdiction, revocation of, refusal to renew or grant without valid cause any consent or approval required by the EESL" or any of the Contractors to perform their respective obligations under this AGREEMENT (other than a consent, the obtaining of which is a condition precedent) provided that such delay, modification, denial, refusal or revocation did not result from the EESL or any contractor's inability or failure to comply with any condition relating to the grant, maintenance or renewal of such consents or permits.

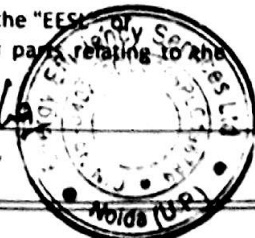
9.5 Exceptions Applicable to the "EESL"

The "EESL" shall not have the right to consider any of the following circumstances to be an event of Force Majeure that would suspend the performance or excuse the non-performance of its obligations under this AGREEMENT other than the circumstances resulting from an event of Force Majeure:-

1. Delay in performance by the "EESL", Subcontractor(s), agents and employees of the "EESL" or any of the Contractors;
2. Breakdown or ordinary wear and tear of materials, equipment machinery or parts relating to the Project.

ULB

EESL



9.6 Exceptions Applicable to the "ULB"

The ULB shall not have the right to consider any of the following circumstances to be an event of Force Majeure that would suspend the performance or excuse the non-performance of its obligations under this AGREEMENT:

1. The appropriation, confiscation, nationalization or requisition of the Project, Project Assets by the ULB;
2. The imposition of any blockade, embargo, import restrictions, rationing or allocation by the ULB or any Competent Authority; or
3. Change of Governments or administrators of ULB.

9.7 Effect of Force Majeure after Compliance Date

Upon occurrence of any Force Majeure Event after the Compliance Date, the following shall apply:

1. There shall be no Termination of this AGREEMENT except as provided in article 9.9, 9.10 and 9.11.
2. Where the Force Majeure Event occurs after the Compliance Date the critical time limits set forth in this AGREEMENT shall be extended by the period for which such Force Majeure Event shall subsist;
3. All cost arising out or concerning such Force Majeure Event shall be borne in accordance with provisions of article 9.8.

9.8 Allocation of costs during the subsistence of Force Majeure

Upon occurrence of a Force Majeure Event after Compliance Date, the cost arising out of such event shall be allocated as follows:

1. When the Force Majeure Event is a Non Political Event, the Parties shall bear their respective costs and neither Party shall be required to pay to the other Party any cost arising out of any such Force Majeure Event;
2. Where the Force Majeure Event is an Indirect Political Event, the costs attributable to such Force Majeure Event and directly relating to the Project (the Force Majeure Costs), shall be reimbursed by the ULB to the "EESL" within 30 (thirty) days from the date of receipt of EESL claim therefore;
3. Where the Force Majeure Event is a Political Event, the Force Majeure Costs to the extent actually incurred and duly certified by the Statutory Auditors shall be reimbursed by the ULB to the "EESL" in one lump sum not later than 30 (thirty) days after the end of the Force Majeure Event and receipt of notice by the "ULB" to that effect.

9.9 Termination Notice

If the Force Majeure Event subsists for a period of 270 (two hundred seventy days or more within a continuous period of 365 (three hundred sixty five) days either Party may in its sole discretion terminate the agreement by giving 30 (thirty) days Termination Notice in writing to the other Party without being liable any manner whatsoever, save and except as per the provisions of in Article 11

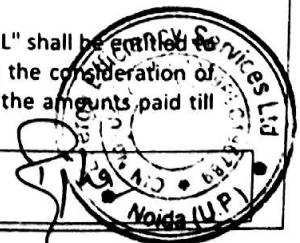
9.10 Termination Payments for Force Majeure Events

Upon Termination of this AGREEMENT pursuant to Article 9.9, the Termination Payment to the "EESL" shall be made in accordance with the following:

1. If the Termination is on account of Non Political Event, the "EESL" shall be entitled to receive from the ULB by way of Termination Payment an amount equal to 90% (ninety percent) of the consideration of the project as specified in section "Payment Terms" of this AGREEMENT minus the amounts paid till termination of the AGREEMENT minus the interest not applicable for the balance period of the AGREEMENT after termination.
2. If the Termination of this AGREEMENT is on account of an Indirect Political Event, the "EESL" shall be entitled to receive from the "ULB" by the way of Termination Payment an amount equal to the consideration of the project as specified in section "Payment Terms" of this AGREEMENT minus the interest not applicable for the balance period of AGREEMENT after termination.
3. If the Termination of this AGREEMENT is on account of a Political Event, the "EESL" shall be entitled to receive from the ULB, by the way of Termination Payment an amount equal to the consideration of the project as specified in section "Payment Terms" of this AGREEMENT minus the amounts paid till

ULB
अपर नगर आबुकर
राजी नगर निगम,
राजी

EESL



termination of the AGREEMENT minus the interest not applicable for the balance period of the AGREEMENT after termination.

9.11 Termination Payments

The Termination Payments pursuant to the Article 9.10 shall become due and payable to the "EESL" by the ULB in one lump sum not later than 30 (thirty) days after the end of the Force Majeure Event and notice to the ULB to that effect.

ARTICLE 10- DISPUTE RESOLUTION

10.1 Dispute


Any dispute, difference or controversy of whatever nature regarding the validity, interpretation, implementation or the rights and obligations arising out of, or in relation to, or howsoever arising under or in relation to this AGREEMENT between the Parties, and so notified by either Party to the other Party (the "Dispute") shall subject to the dispute resolution procedure set out in this section. It is specially clarified here that in case of any ambiguity regarding the works, the practices existing at the time of submission of the proposal as per Good Industry Practice would prevail.

10.2 Direct discussion between Parties

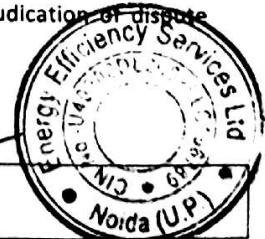
The Parties agree that any Dispute that may arise between them shall be first submitted for direct discussion between the Parties. For this purpose, the notice of Dispute (the "Notice of Dispute") sent by one Party to the other Party under this AGREEMENT shall be considered as invitation for direct discussion, and it should specify a reasonable time and venue for the conducting of negotiation proceedings. In addition, the Notice of Dispute shall specify the basis of the Dispute and the amount claimed. In the direct discussion proceedings, each Party shall be represented by their representatives/officials or employees with sufficient knowledge and authority over the subject matter of the Dispute in order to have a meaningful discussion. At the discussion proceedings, the Party that has given the Notice of Dispute shall present an offer of settlement, which may form the starting point of discussions between the two Parties during the discussion proceedings. The direct discussion meeting as stated above shall be held at the Office of the Project In-charge of respective ULBs. The proceedings of this meeting shall be recorded by the Project In-charge.

10.3 Arbitration or Adjudication

1. In the event that the parties are unable to resolve the Dispute through Direct Discussion under Article 10.2, the Parties shall submit the Dispute for arbitration in accordance with the Arbitration and Conciliation Act, 1996. There shall be a board of 3 (three) arbitrators of whom 1 (one) shall be appointed by the ULB, 1 (one) shall be appointed by the "EESL" and the third appointed by the 2 (two) arbitrators appointed as aforesaid in the event of disagreement between the two arbitrators, the appointment shall be made in accordance with the provisions of the Arbitration & Conciliation Act, 1996 and the Rules made thereunder.
2. The arbitration proceedings shall be conducted in Ranchi in English language only.
3. The cost incurred on the process of arbitration including inter alia the fees of the arbitral tribunal and the cost of the proceedings shall be borne by the parties in equal proportions. Each Party shall bear its own legal fees incurred as of any Dispute under this Article.
4. The arbitrators shall make a reasoned award (the Award). Any Award made by the Arbitral Tribunal shall be final and binding on the Parties as from the date it is made, and the Parties agree and undertake to carry out such Award without delay.
5. This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any arbitration proceedings hereunder. If any dispute goes to the court of law, the jurisdiction of the court shall be the Court of Ranchi. This is only subject to adjudication or dispute resolution through arbitration.


ULB
भारत सरकार
राज्य सरकार


EESL



ARTICLE 11-COOPERATION

1. ULB and EESL shall consult with each other, whenever it may be appropriate, on the matters covered by this AGREEMENT and shall use their best endeavors to ensure that staffs of the organizations cooperate in good faith with one another.
2. All Parties should apprise / keep each other informed on project related matters. If any issue or dispute arises between ULB and EESL, they shall use their best endeavors to resolve the dispute promptly.

ARTICLE 12- INDEMNITIES

Each Party shall release, defend, indemnify, and hold harmless the other party and their respective directors, officers, agents, and employees, from and against any and all losses, claims, demands, costs, damages, liabilities (joint and several), reasonable expenses of any nature (including attorney's fees and disbursements and expenses incident to establishing the right to indemnification), judgments, fines and other amounts to the extent arising out of or related to any products, services, operations of each Party, the conduct of business or from any other activity, work, or thing done, permitted or suffered by the party under this Agreement including without limitation: (i) injury to or death of any person or persons, including employees of the party, or loss, damage, or destruction of any property, and (ii) each Party's provision of any personnel, services, and facilities under this Agreement; provided, that no such right of indemnification shall exist in any case where the act or failure to act giving rise to the claim to indemnification is finally adjudicated to have constituted wilful misconduct, negligence or recklessness on the part of the Party seeking indemnification and further provided that the right of indemnification shall not apply to the extent of each Party's indemnity obligations to the other Party pursuant to the provisions of this Agreement.

In case of any insurance undertaken by the indemnified Party, any liability or obligation that may arise due to any loss, damage, liability, payment, obligation or expense which is insured or for which such Party can claim compensation, under any Insurance shall not be charged to or payable by the indemnifying Party.

If a Force Majeure Event renders the EEPS no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis during the Term, DISCOM (JBVNL) shall have no claim on such proceeds of such Insurance.

ARTICLE 13 - MISCELLANEOUS AND NOTICES**13.1 Severability**

In the event that any term, condition or provision of this Agreement is held to be a violation of any applicable mandatory law, statute or regulation, the same shall be deemed to be deleted from this Agreement and shall be of no force and effect and this Agreement shall remain in full force and effect as if such term, condition or provision had not originally been contained in this Agreement. Notwithstanding the foregoing, in the event of any such deletion the Parties shall negotiate in good faith in order to agree the terms of a mutually acceptable and satisfactory alternative provision to be substituted for the provision so deleted which comes as close as possible to the economic intent of the deleted provision. The foregoing shall also apply in case of an unintended, material omission in this Agreement.

13.2 Compliance with applicable laws

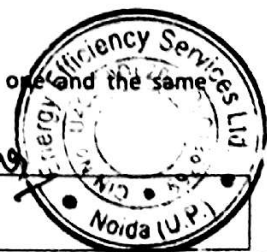
With respect to all matters and activities relating to this Agreement, each of the Parties shall comply with, in all material respects, all Applicable Laws.

13.3 Counterparts

This Agreement may be executed in two counterparts, both of which shall constitute one and the same agreement.

[Signature]
ULB
एन एन एल
की वरत निगम,
नोडा

[Signature]
EESL



13.4 No Partnership

The Parties do not intend to be partners to one another or partners as to any third party, or create any fiduciary relationship among themselves, solely by virtue of their status as Parties to this Agreement.

13.5 No agency

No Party, acting solely in its capacity as a Party to this Agreement shall act as an agent of the other or have any authority to act for or to bind the other Party.

13.6 Assignment

Except as specifically provided in this Agreement, no rights, liabilities or obligations under this Agreement shall be assigned by any Party hereto without the prior written consent of the other Party hereto. However, notwithstanding anything to the contrary contained in this Agreement, DISCOM (JBVNL) agrees that EESL shall be entitled, to the extent permitted by law and as may be required under its financing documents (if any), to assign or create liens over its rights and interests under or pursuant to this Agreement.

13.7 Entire Agreement

This Agreement cancels and supersedes any prior understandings and agreements between the Parties with respect to the subject matter hereof. There are no prior representations warranties, conditions or other agreements among the Parties, express or implied except as set forth herein. This Agreement, together with all annexures, exhibit and attachments hereto, represents the entire agreement and understanding between the Parties with respect to the subject matter of this Agreement and supersedes any prior agreement or understanding, written or oral, that the Parties may have had.

13.8 Waiver

No exercise, or failure to exercise, or delay in exercising any right, power or remedy vested in any Party under or pursuant hereto shall constitute a waiver by that Party of that or any other right power or remedy and a waiver shall only be deemed duly given if done unambiguously and in writing.

13.9 Notices

Notices, demands or other communication required to be given under this Agreement shall be in writing and delivered personally or sent by prepaid registered post with recorded delivery, addressed to the intended recipient at its address set forth below, or to such other address as either Party may from time to time duly notify to the other:

If to ULB:
Attention: _____
Address: Ranchi Municipal Corporation,
Kutchary, Ranchi- 834001

If to EESL:
Attention: Regional Manager (Jharkhand)
Address: Energy Efficiency Services Ltd
4th Floor, IWAI Building, A-13, Sector-1,
Noida

A notice shall be deemed to have been received, if sent by fax on the working day next following a successful transmission as evidenced by the telefax confirmation sheet of the sender or, if delivered or sent by registered mail with return receipt, to have been delivered and received on the date of such delivery.

Handwritten signature and stamp of ULB
ULB
की ओर
निकाला
गया

EESL



SIGNATURE

Both parties shall, in principle agree to the above points and its implementation in the ULBs shall be as per the approval by PPP Cell guideline as per rules of Govt. of Jharkhand.

IN WITNESS WHEREOF, the Parties have entered into this AGREEMENT, the day and year as mentioned above.

1.

Name *Dinyanshu Jha*

Designation *Addl- Municipal Commissioner, RMC*
अपन नगर आधिकारी
सर्वी नगर निगम

Executed for ULB

By its duly Authorized Representative

2. *Rakesh Jha*

Name *RAKESH JHA*

Designation *Dy. Manager*

Executed for EESL

By its duly Authorized Representative

Witness 1

Nagesh
12/08/17
(Nagesh Dubey)

Witness 1

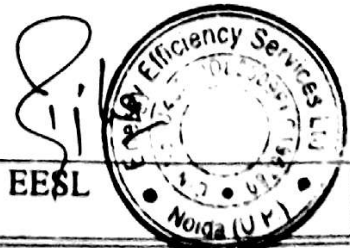
Rakesh Kumar
(Engg. Tech), EESL

Witness 2

Keshvi
12/08/17
Saurabh Kumar Keshvi
Assistant Engineer.

Witness 2

Prabhat Kumar
engg(Tech) EESL

ULB *अपन नगर आधिकारी*
सर्वी नगर निगम EESL 

14. Technical Specification**Definition:****Luminaries**

Lighting energy efficiency is a function of both the light source (the light "bulb" or lamp) and the fixture, including necessary controls, power supplies, other electronics, and optical elements. A luminaire is defined as a complete unit consisting of a lamp, together with the parts designed to distribute the light, to position and protect the lamp, and to connect the lamp to the power supply. Components that make up a luminaire include the reflector, the refractor, and the housing. These are important to ensure luminaire efficiency and cut-off and glare control, to guarantee the right level of lighting while avoiding light pollution. The specification for selection of street lighting luminaire has been provided in IS 10322 Part I to Part V.

Luminaire are classified into three categories according to the degree of glare (BIS, 1981) (their application is indicated in Table below):

Cutoff luminaire: A luminaire whose light distribution is characterized by rapid reduction of luminous intensity in the region between about 80° and the horizontal. The direction of maximum intensity may vary but should be below 65°. The principal advantage of the cut-off system is the reduction of glare.

Semi-cut-off luminaire: A luminaire whose light distribution is characterized by a less severe reduction in the intensity in the region of 80° to 90°. The direction of maximum intensity may vary but should be below 75°. The principal advantage of the semi-cutoff system is flexibility in setting.

Classification of Roads (BIS, 1944) Group Description

Group	Description
A1	For very important routes with rapid and dense traffic where the only considerations are the safety and speed of the traffic and the comfort of drivers
A2	For main roads with considerable mixed traffic like main city streets, arterial roads, and thoroughfares
B1	For secondary roads with considerable traffic such as local traffic routes, and shopping streets
B2	For secondary roads with light traffic

Mounting Height of Luminaries (BIS, 1944)

Group	Recommended Mounting Height
A1	9 to 10 meters
B1	7.5 to 9 meters
Others(Roads bordered by trees)	Less than 7.5 meters

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मैची नगर निगम,
मैची

EESL



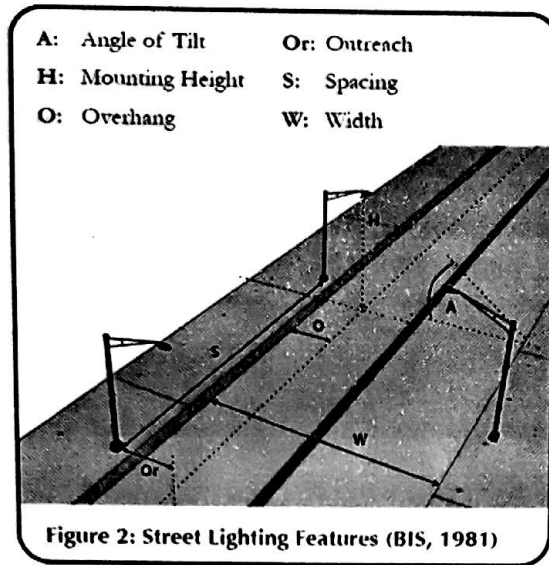


Figure 2: Street Lighting Features (BIS, 1981)

Light Technology

Type of Lamp	Luminous Efficacy (lm/W)	Color Rendering Properties	Lamp life in hrs	Remarks
Light Emitting Diode (LED)	>135 L/W at Tj 25 c	>70	>50,000	High energy savings, low maintenance, long life, no mercury.

Overhang

Overhang (see Figure 2 above) is the horizontal distance between the center of a luminaire mounted on a bracket and the adjacent edge of a carriage way. In general, overhang should not exceed one-fourth of the mounting height to avoid reduced visibility of curbs, obstacles, and footpaths

Sitting of Luminaire

Four fundamental types of sitting arrangements are recognized in street lighting (BIS, 1981). They are:

- Single side arrangement, 1. Where all the luminaire are on one side of the road. This is recommended only when the width of the road is equal to or less than the mounting height.
- Staggered arrangement, 2. Where the luminaire are placed on either side of the road in a zigzag formation. This is recommended when the road width is 1 to 1.5 times that of the mounting height.
- Opposite mounting, 3. Where the luminaire are situated on either side of the road opposite to one another. This is advisable for road widths more than 1.5 times that of the mounting height.
- Axial mounting, 4. Where the luminaire are placed along the axis of the road. This is recommended for narrow roads the width of which does not exceed the mounting height.

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 शाखा नगर निगम,
 रायबरेली

Silva
 Energy Efficiency Services Ltd.
 Noida (U.P.)

EESL

WHAT IS IP65/ IP 66 RATING?

The resistance offered by the fixture to the penetration of solids and liquids is indicated by the IP (Ingress Protection) rating. This is a 2 digit number, the first number identifies the degree of protection against the ingress of solids and the second number against liquids e.g. IP65 indicates total protection against dust and protection against low jets of water.

FIRST DIGIT PROTECTION AGAINST SOLIDS		SECOND DIGIT PROTECTION AGAINST LIQUIDS	
	No Protection		No Protection
1	Protected against solid objects than 50mm (e.g. accidental contact with hand)	1	Protection against vertical water drops (e.g. condensation)
2	Protected against solid objects than 12mm (e.g. accidental contact with finger)	2	Protection against direct sprays of water, up to 15° from vertical
3	Protected against solid objects than 2.5mm (e.g. tools and wires)	3	Protection against direct sprays of water up to 60° from vertical
4	Protected against solid objects than 1mm (e.g. fine tools and wires)	4	Protections against water spray from all directions.
5	Protected against dust	5	Protection against low pressure jets of water from all directions.
6	Total protection against dust	6	Protection against jets of water of similar to heavy seas
		7	Protection against immersion between 15 -100cm
		8	Protection against submersion

The LED Streetlight system consists of three parts:

1. LED
2. Luminaire
3. Driver

While the Table below provides the detailed specification of the various components and the test method, the testing protocol for all the three sub-components are given as below:

(1) LED

Single LED chip is allowed for a single category/wattage of product mixing of chip is not allowed for single product.

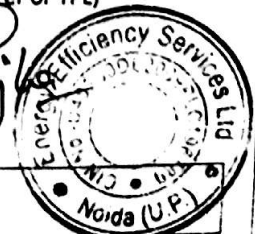
- LED report (For LED parameters like Lumen per watt , CCT , CRI , Beam Angle from ILAC/MRA/NVLAP/KOLAS/EPA/NABL accredited manufacturer or TPL)
- LM 80/IS:16105 report (From ILAC/MRA/KOLAS/NVLAP/EPA/NABL accredited manufacturer or TPL)
- IEC 62471 and assessment of blue light as per IEC/TR 62778 – Ed. 1.0

(2) Luminaire

- Type Tests report as per IS:10322 Part 5 sec-3 /IEC : 60598-2-3 from NABL accredited TPL (IP classification is IP 65/ 66 , INSITU/Junction temp measurement shall be part of Thermal test)
- Test Report as per LM 79/IS:16106 from ILAC/MRA/NVLAP/KOLAS/EPA/NABL accredited TPL (IP classification is IP 65/66)
- Test report for IK 07 as per IS 10322
- Test report with summary for compliance as per tender parameters (Operating voltage, Constant light output, Luminous flux per watt, CCT, CRI, Uniformity calculation, P.F, Wattage, (For LED parameters like Lumen per watt, CCT, CRI, Beam Angle from accredited manufacture or TPL)
- LM 80/IS:16105 report (From ILAC/MRA/KOLAS/NVLAP/EPA/NABL accredited manufacturer or TPL)
- Declaration and endorsement of BOM from Manufacture for components.

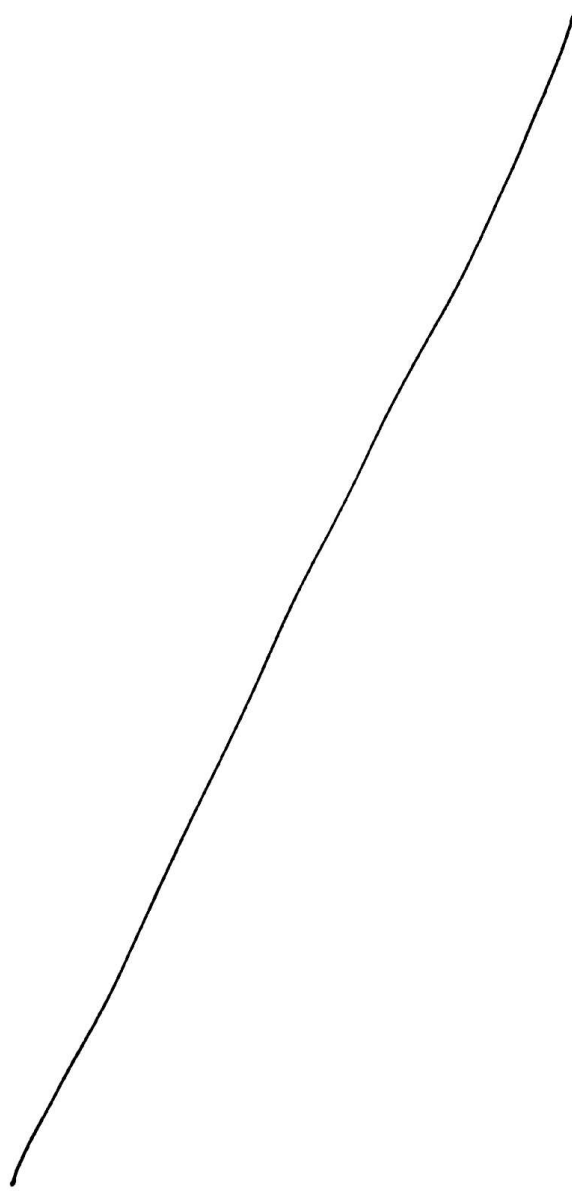
ULB

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LED Driver

- Type Tests report as per IS:15885 - Part 5 Sec-13, IS:16104.
- Test Report as per tender specification (Driver Efficiency, THD, Surge Protection > 4kV)
- EESL is at liberty to verify genuineness of LM80/ LM79/ NABL test reports and other supporting documents from the Lab/ LED Manufacturer.

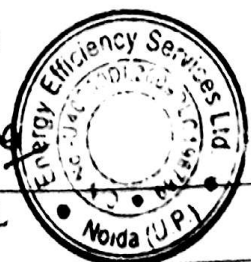


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EESL



15. TENTATIVE SCHEDULE FOR STREET LIGHTING PROJECTS FOR 1 ULB AT JHARKHAND

The entire implementation is done in a span of 14-18 weeks from initial discussions or 11-15 weeks from the date of signing of Implementation agreement, whichever is later. The draft work-plan to be adhered for each of the ULB is listed below.

PROJECT IMPLEMENTATION SCHEDULE FOR 1 ULB FOR STREET LIGHTING ESCO PROJECT BY EESL																				
Project Milestone Envisaged	Weeks																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Preliminary study and initial discussions & Inventory Data Collection	█	█																		
Finalization of implementation modalities and Signing of Implementation agreements			█	█	█															
Field Survey and Baseline Estimations				█	█	█														
RFP and solicitation of bids by EESL							█	█												
Pre-Bid Meeting & Issuance of amendments									█											
Bids opening and Issuance of LOA										█	█									
Ramping Up/Initialization Period												█	█							
Supply and commissioning of street lights by EESL/Vendor																				
Post project PMV by EESL & ULB																				
Completion certification from ULB and Annuity Calculations																				
O&M for 7 Years																				

Note: Exception to schedule in request of IDC items is permitted as input data is not available at the time of Agreement.

- (a) Field survey including identification of IDC items.
- (b) Approval for IDC items.
- (c) Ordering and supply of IDC items.
- (d) Finalization of CCMS configuration.
- (e) Design, manufacturing, inspection, supply, transportation of CCMS.
- (f) Supply and commissioning of CCMS.

Realistic timeline be indicated base on recent experiences.

DEFINITIONS

The following expressions shall have the following meanings:

Expression	Meaning
"MOU"	Memorandum of Understanding
"ULB"	Urban Local Bodies
"UD&HD"	Urban Development & Housing Department, Govt. of Jharkhand
"EESL"	Energy Efficiency Services Limited (A Joint Venture Company of PSUs of Ministry of Power, Govt. of India)
"NLC"	National Lighting Code
"IS"	Indian Standard
"PSU"	Public Sector Undertaking
"AMC"	Annual Maintenance Charge
"PMC"	Project Management Charge
"BEE"	Bureau of Energy Efficiency
"SDA"	State Designated Agency

[Handwritten Signature]
 ULB
 अखिल भारतीय
 सेवा मंत्रालय,
 नई दिल्ली

[Handwritten Signature]




	EESL
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Annexure 2

[Kindly Refer Section "Payment Terms"]

1. *Durgendra*
 Name *Durgendra Jha*
 Designation *Addl. Municipal Commissioner, RMC*
अपर नगर आयुक्त
संची नगर निगम,
राँची

2. *Rakesh Jha*
 Name *RAKESH JHA*
 Designation *Dy. Manager*
 Union
 ED
 (अवग)
 India
 (उ. प्रदेश)
 01, (UP)

ULB <i>अपर नगर आयुक्त</i> <i>संची नगर निगम,</i> <i>राँची</i>	EESL 
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