

EESL Toolkit for
**DSM based Efficient Lighting
Programme (DELP)**



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MESSAGE

Energy is the prime mover of economic growth and is vital to the sustenance of a modern economy. Sustainable development requires long term availability of energy from sources that are affordable, accessible and environmentally friendly. India ranks sixth in the world in total energy consumption at present and needs to accelerate the growth in energy sector to meet the growing demands of a vibrant economy. India being a net importer of energy with more than 25 percent of primary energy needs being met through imports, is conscious of taking measures that reduce the import dependence and enhance Energy Security. Energy efficiency is therefore an important resource in this endeavour.

Ministry of Power and Bureau of Energy Efficiency have been promoting energy efficiency in all sectors. Efficient lighting in household sector, which accounts for about 20% of the energy, is an important thrust area as it can reduce peak demand as well as enhance awareness about energy efficiency and conservation to household consumers. The interventions will have a replication on other economic sectors leading to increased attention towards energy efficiency in the country. This would supplement efforts made by Ministry of Power and Bureau of Energy Efficiency to scale up energy efficient investments in the country.

I am happy to note that EESL, a Public Sector entity under the Ministry of Power, in close association with Government of Puducherry, Joint Electricity Regulatory Commission and Bureau of Energy Efficiency is implementing DSM based Efficient Lighting Program (DELP) in Puducherry. The innovative scheme seeks to provide high quality LED bulbs to households for Rs.10 each as replacements to ICLs. It is also encouraging to note that EESL has developed DELP Tool Kit that captures the methodology and best practices to enable other states and distribution companies in the country to implement this programme. I wish the endeavor all success.

Jyoti Arora
(JYOTI ARORA)



Message


There is a significant untapped potential for energy efficiency in the country. The Energy Conservation Act 2001 was enacted to provide a conducive regulatory and policy framework to catalyse market based energy efficiency implementation. The Act empowers the Government to unveil a combination of regulatory and policy measure to help unlock the potential for energy efficiency. The potential investment in energy efficiency is estimated at Rs.74000 crores which would lead to avoided capacity addition of around 20,000 MW in the country.

Bureau of Energy Efficiency (BEE) has undertaken several initiatives during the 11th and 12th Plan to stimulate implementation of energy efficiency in sectors like appliances, large industries, buildings, agriculture, etc.

BEE developed an innovative scheme to promote efficient lighting in household sector during the 11th Plan, Bachat Lamp Yojana (BLY), as the scheme is called, helped overcome the first high cost barrier of CFLs by providing CFLs to households at the cost of incandescent bulbs. The upfront investment in subsidizing the capital cost of the bulb was recovered through carbon finance for which BEE developed a Programme of Activities and registered it with CDM Executive Board

I am happy to note that EESL has taken the BLY scheme forward by linking with the Demand Side Management (DSM) regulations that have been evolved in the country. The DSM-based Efficient Lighting Programme (DELDP) scheme would become an important tool to promote efficient lighting in the country's household sector and has the potential to replace 37 crores lighting points in the household sector that still use incandescent bulbs.

I am very pleased to see that EESL has captured the learning and the best practices of project development and implementation in the lighting area in the form of the DELDP Tool Kit. This is a wonderful resource that can help other distribution companies and governments to replicate the Puducherry model.


(Ajay Mathur)

FOREWORD

Energy Efficiency Services Limited is promoted by Ministry of Power, Government of India as a Joint Venture company of four Central Power Sector undertakings viz NTPC Ltd, PFC, REC and Power Grid. Energy Efficiency Services Limited (EESL) was set up to create and sustain markets for energy efficiency in the country. EESL works closely with the Bureau of Energy Efficiency (BEE) and is leading the market related activities of the National Mission for Enhanced Energy Efficiency (NMEEE), one of the 8 national missions under Prime Minister's National Action Plan on Climate Change. EESL has, taking note of the objectives for its creation, evolved a strategic approach to stimulate implementation of energy efficiency by assessing market conditions and the barriers by:

- Creating market access in public and private facilities through handholding, information dissemination, capacity building of facility owners
- Developing projects for various sectors addressing specific barriers and challenges
- Designing risk mitigation measures to address technical, financial and regulatory risks
- Aggregating projects to attract the most economical value for the facility owners
- Developing model templates of agreements, payment security, etc necessary for project implementation
- Disseminating best practices to stakeholders so that replication can occur
- Providing transaction support to facility owners to implement projects.

Bureau of Energy Efficiency (BEE) implemented Bachat Lamp Yojana (BLY) during the 11th Plan Period. This was an innovative scheme which provided CFL at the cost of incandescent bulb on a PPP basis. The recovery of investment was done by leveraging carbon finance by securitizing reduction in energy consumption. The scheme replaced about 3 crores incandescent bulbs with CFLs directly while at the same time triggering a market transformation in the CFL market. The BLY scheme has become commercially unviable due to the collapse of the international carbon market.

EESL has developed the DELP programme that uses BLY scheme architecture and uses the DSM regulations to create a viable business model that to promote large scale replacement of an estimated 76 crores incandescent lamps in India. The DELP programme uses LED as replacement of incandescent bulbs by sharing a part of the energy savings to the distribution companies through a long term contract under the regulatory oversight. The LED bulb procurement through open competitive bidding by EESL includes long term technical warranty to ensure that consumers avail of the benefits of reduced consumption over a period of time.

EESL is grateful to the Government of Puducherry in particular, the Chief Secretary for his vision, guidance and support to this programme. EESL also acknowledges the important role played by BEE, Puducherry Electricity Department, Renewable Energy Agency of Puducherry (REAP), International Institute of Energy Conservation (IIEC) and Shakti Sustainable Energy Foundation. EESL is also grateful to the encouragement provided by the Chairman of the Joint Electricity Regulatory Commission (JERC) and the entire staff members of JERC in finalizing this innovative scheme. This is the first such scheme in India to be launched and EESL hopes to replicate the same elsewhere in the country.



(Saurabh Kumar)
Managing Director



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DSM based Efficient Lighting Programme (DELP)

1. Background

Domestic consumer's account for almost 24% of the total electricity demand in the country. Major part of the energy consumption is used for lighting. A significant proportion of household lighting needs are met by use of incandescent bulbs, which are extremely energy inefficient as over 90% of electricity is wasted as heat. Promoting efficient lighting in household sector can reduce the electricity consumption by as much as 50 billion kWh every year at national level. This will also benefit the consumers by way of reduced electricity expenditure.

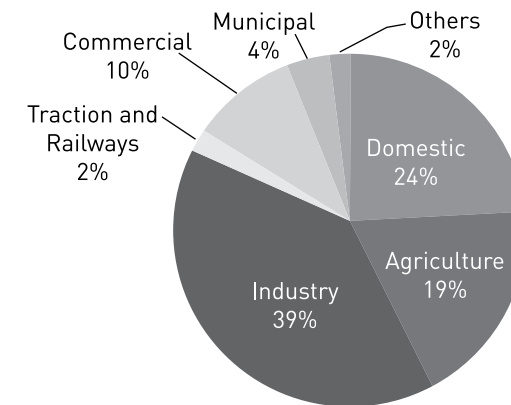


Figure 1: Sector Wise Consumption of Electricity during 2010-2011¹

2. Potential and Opportunity

As per the statistics of the Electric Lamp and Component Manufacturers Association of India (ELCOMA), more than 75.8 crores incandescent bulbs (ICLs) were sold in 2012 in India. The table below depicts the state-wise annual sale of ICLs in 2012. Replacement of these by sources like Light Emitting Diodes (LEDs), which uses 85% less electricity for delivering same light output, could lead to reduction of 50 billion kWh of electricity which is equivalent to around 19,000 MW of avoided generation capacity.

States	ICL Sale in 2012 (Fig in crores)	Energy Savings Potential (m KWh)	Cost Savings (Fig in Rs. crores)
AP	6.82	4530.526	2265.263
Assam	0.86	571.298	285.649
Bihar	6.2	4118.66	2059.33
Chattisgarh	1.8	1195.74	597.87
Delhi	5.1	3387.93	1693.965

1. Energy Statistics 2012, Ministry of Statistics and Programme Implementation

Gujarat	4.21	2796.703	1398.3515
Haryana	1.91	1268.813	634.4065
HP	0.4	265.72	132.86
J & K	0.62	411.866	205.933
Jharkhand	1.56	1036.308	518.154
Karnataka	4.25	2823.275	1411.6375
Kerala	2.1	1395.03	697.515
Maharashtra	9.27	6158.061	3079.0305
Manipur	0.13	86.359	43.1795
Meghalaya	0.12	79.716	39.858
MP	3.6	2391.48	1195.74
Nagaland	0.12	79.716	39.858
Odisha	1.22	810.446	405.223
Punjab	1.81	1202.383	601.1915
Rajasthan	2.6	1727.18	863.59
TN	5.1	3387.93	1693.965
Tripura	0.2	132.86	66.43
UP	8.2	5447.26	2723.63
Uttarakhand	0.7	465.01	232.505
WB	6.2	4190.29	2095.15
Other states	0.7	465.01	232.505
Total quantity in Crore pieces	75.8	50365.57	25212.79

The key barriers to use of efficient lighting in the household sector are the high cost of efficient lights (CFL at Rs. 100, LEDs at Rs. 400 as compared to ICLs at Rs. 10) and lack of awareness. Properly designed programme can overcome these barriers and help scaling up the use of efficient lighting in the household sector. As the use of efficient light reduces the overall peak demand of DISCOMs, it makes economic sense for the DISCOM to incentivize use of LEDs by sharing the ensuing commercial benefit of reduced power cost.

3. BEE Intervention in Household Lighting Sector -Bachat Lamp Yojana (BLY)

3.1 To address barriers of penetration of efficient lighting in households, BEE implemented BLY scheme during 2009-12. The scheme addressed the first high cost barrier by providing CFLs as replacement to ICLs at a cost of Rs. 15 each. BLY also provided information and awareness about the benefits of using CFLs as against ICLs to overcome the information asymmetry.

- 3.2 BLY aimed at large scale replacement of incandescent bulbs in households by CFLs by providing CFLs to households at the price similar to that of incandescent bulbs. The balance cost of CFL was been recovered by the Clean Development Mechanism (CDM) of the Kyoto Protocol. BLY was a public-private partnership between the Government of India, private sector CFL suppliers and State level Electricity Distribution Companies (DISCOMs). The CFL suppliers provided high quality CFLs to households at a price of Rs. 15 per CFL. BEE develops a Programme of Activities (PoA) to serve as an umbrella CDM project and got it registered with the CDM Executive Board. The individual projects, designed to be in conformance with the umbrella project, were added to the PoA and standard templates were prepared by BEE. A tripartite agreement (TPA) between BEE DISCOMs and the CFL suppliers was signed that laid out the roles and responsibilities of the three stakeholders.
- 3.3 There are several best practices that were integral part of BLY design which are useful for any similar programme. They are –
- Overcoming first cost barrier by leveraging carbon finance and providing CFLs at cost of ILBs.
 - Enhancing awareness amongst consumers and other key stakeholders
 - Reducing transaction cost for private sector and securing their participation and investment (through CDM PoA), and
 - Allocating clear roles and responsibilities to key stakeholders.
- 3.4 The monitoring methodology adopted by BEE was simple, easy to use and verify. It worked on the principles of deemed savings and thereby obviated the need for any complicated assessment of savings. It presumed that lamps would work for an average 3.5 hours every day for 300 days a year. The difference in wattage of existing and replaced lamp was used to calculate energy savings. The programme, having its commercial viability tied solely to CDM revenues, came to a halt when the carbon market crashed. Only about 3 crores ICLs could be replaced. However, the programme triggered the growth in CFL market which saw its annual sales rise from less than 10m peicess in 2007-08 to almost 33m pieces in 2012-13. The unit rate of CFLs also came down. A similar intervention is necessary for LEDs as well.

Lamp Equivalent	LEDs	CFL	Incandescent Bulbs
Life Expectancy	50,000 hrs	8000 hrs	1200 hrs
Watt	7 watts	13-15 watts	60 watts
Kwh of electricity used in 50,000 hrs	263	700	3000
Hazardous Materials	none	5mg mercury/ bulb	None
Color Rendition	Wide range of color	Restricted color option	Restricted color option
Dimmability	Yes	Restricted possibility	Yes
Robustness	Breakable	Sensitive	Sensitive
Start up Time	Instant	Delay	Almost instant
Cost of Ownership	Lowest	Low	High
Disposal	Via landfill	As per guidelines	Via landfill
Light Efficiency	620lum/8=78lm/wtt	620/15=53 lm/wtt	620/60=13 lm/wtt

4. Promoting LEDs

The high cost of LEDs is the single biggest factor in the lack of demand for them. LEDs are the future of lighting and their promotion would help in significantly enhancing the efficiency of the electricity system. LEDs are also benign to environment as they do not use mercury like CFLs. The best practices of BLY provide a framework for initiating large scale replication in usages of LEDs

LEDs are the most energy efficient and cost effective option available in the market as indicated below:

5. Ministry of Power Programme to Promote LEDs:

The Ministry of Power, Government of India, is implementing the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY). Under this flagship programme, almost 2 crore LED bulbs are being procured for providing lighting to BPL households. This programme, which is under finalization, will lead to a significant increase in the demand for LEDs and the ensuing economics to scale will lead to reduced cost thereby stimulating a virtuous cycle similar to witnessed in the case of CFLs. EESL, following the same objective, has designed

the Demand Side Management (DSM) based Efficient Lighting Programme (DELP).

6. DELP – Programme Design

DELP proposes to overcome this first cost barrier to promote LEDs by using the basic architecture and best practices of BLY. DELP is designed to monetize the energy consumption reduction in the households sector and attract investments therein. It also evolves a robust business model that secures commercial investment. The key steps involved in DELP are summarized below:

6.1 DELP Business Model:

The programme design of DELP can be done in any one of the three methods indicated below based on the analysis of the situation in a DISCOM/State leveraging state government subsidy reduction. They are:

- Standards Offer Programme
- DSM Regulations, and
- Leveraging reduction in State Government to DISCOMs

Detailed account of the three is provided below:

- Standards Offer Programme (SOP):** SOP is the latest concept that is becoming popular globally. The key concept of SOP is that it treats energy efficiency as a resource for DISCOMs. It evolves a regulatory mechanism to enable a DISCOM to buy energy savings based on a predetermined technology through an Energy Efficiency Purchase Agreement (EEPA).

Standard Offer Programme

- Energy efficiency treated as resource by DISCOMs.
- Energy savings are 'purchased' by DISCOM based on pre-decided technology at a rate determined by competitive bidding – called SOP rate.
- Floor SOP rate determined by the savings in energy that the identified technology can deliver.
- Sharing of saving with utility based on the peak power avoided or opportunity cost of selling saved power to commercial/industrial consumers.
- Regulatory oversight for the entire process.

- (b) **DSM Regulations:** Forum of Regulators (FOR) finalized model DSM Regulations that can be notified by the respective State Electricity Regulatory Commissions (SERCs) to promote DSM and energy efficiency. FOR also developed a manual for determining the cost effective of DSM interventions as a tool to evaluate and approve DSM programme. DSM regulations are necessary to allow investment by DISCOMs and/or payments to ESCOs for such programme. The present regulatory architecture for electricity sector requires approval by the SERC for any expenditure by DISCOM. Based on these regulations, the SERC will approve the project investment, returns to the investor and measurements and verification methodology.

DSM Regulations	
➤	The DSM regulations is cover the following aspects:
➤	DSM objectives, potential and targets
➤	Constitution of DSM cell and its roles and responsibilities
•	DSM process guidelines
•	Load and market research and development of baseline data
•	Formulation of DSM plan
•	Review and approval of DSM plan by the commission
•	Preparation of DSM programme document
•	Approval of DSM programme document
•	Implementation of DSM programmes
•	Mechanism for cost recovery
•	Monitoring and reporting of DSM programmes
•	Evaluation, measurement and verification (EMV) of DSM programme

- (c) **Leveraging State Government Subsidy:** In several states, the inability of DISCOM to achieve the AT&C loss reduction targets set by SERCs, has necessitated State Government subvention to fill the gap between the revenue realization and expenditure. In most of the states having this issue, the high and rising power procurement cost is the main reason for higher expenditure of DISCOMs. DELP, having the effect of reducing peak demand, could lead to narrowing the gap and therefore reducing subsidy burden. A part of the reduced subsidy can be leveraged to pay for the investments in providing efficient LED lights to households consumers.

Reduced Subsidy	
-	Use of efficient light to reduce subsidy of states
-	Reduced consumption will also have the effect on reducing AT&C losses
-	Leveraging a part of subsidy can pay for upfront investments in LED bulbs
-	Rig fencing of future increase in peak power procurement

6.2 Technical Performance Requirement:

The DELP programme recommends use of high quality LED bulbs. The key performance parameters recommended are:

- (a) Wattage

S. No.	ICL Wattage	LED wattage
1	40W	5W or less
2	60W	9W or less
3	100W	14W or less

- (b) BIS standards: All the bulbs must conform to BIS standards (IS 16101 to 16108).
- (c) Technical Warranty: The LED bulbs must have a free replacement warranty of 3-5 years depending upon the project lifetime.

The technical specifications evolved are at section 1.

6.3 Consumer Segment Targeted

The proposed DSM programme is aimed at all the domestic consumers in the DISCOM license area.

6.4 Estimate of Baseline ICL usage

In order to ascertain the pattern of usage of ICLs in the DISCOM area, a base line sample survey need to be conducted. This survey needs to be done by DISCOM. The survey objectives are:

- (a) To determine the number of ICLs in the project area.
- (b) Hours of usage of ICLs by households.
- (c) The survey done should highlight the total numbers of ICLs to be replaced. A template for sampling of households, model questionnaires and methodology is included in this document at section 2.

6.5 Mechanism for Recovery of Cost

Under the DELP programme, 3 or 4 LEDs per residential house will be distributed to residential households in exchange of an incandescent lamp (ICL). The reduction in connected load as a result of replacement will be 52W/lamp considering 60W to be replaced by 8W of LED. The Annual Energy Savings through DELP-SOP will be deemed as Energy Purchase by DISCOM over the Contract Period at a pre-determined DELP-SOP Price as approved by ERC.

The Energy Savings per LED that will be determined in the following manner:

- (i) Energy Savings = $CL(W) - LED(W)$
- (ii) Annual Energy Savings (KWH) = $\frac{((\text{Energy Savings} * \text{Run Time per day} * \text{Operating days per year} / 1000) / (1 - \text{T\&D Losses \%})) / (1 - \text{External Losses \%})}$

DISCOM will implement the DSM project through EESL and link the payment made to EESL with reduction in Power Procurement Cost. EESL will recover the investment over a period as specified in the DSM project from the payment made to them by DISCOMs as under:-

Annual SOP Payments = Number of LED distributed * Energy Savings (per LED per Annum) * DELP-SOP Price for the corresponding Financial Year.

Distribution Utilities will provide payment on a periodic basis as per Energy Saving Agreement and appropriate ESCROW/payment security mechanism will be built to reduce the revenue risk to EESL. The methodology of determining energy savings and the ensuing returns follows the CDM methodology AMS-II.J, approved by CDM, Executive Board in Bonn. The same was used for the BLY scheme. The model agreement is at section 3.

AMS-II.J Methodology

- Deemed savings approach
- Energy saving determined based on difference of wattage of replaced and original bulb
- Daily operating hours of bulbs fixed at 3.5
- Total number of days in a year taken as 300
- Energy saving = $(\text{Wattage of original bulb} - \text{Wattage of replaced bulb}) \times 3.5 \times 300 \text{ Wh}$
- Periodic monitoring of actual number of bulbs functional after implementation by a third party

6.6 Period of Contract:

Based on the estimated cost of LEDs, the reduction of energy and allowing reasonable return on investment the project period and a base annuity and project period needs to be determined.

7. DELP – Selection of Implementing Partner

DISCOM, after having finalized the programme design, must proceed to select the implementing partner. The selection of the partner must be through open competitive bidding so as to get the best value for money. Bidding could be on the basis of capital cost and/or annuity for the pre-determined. A model bidding document is at section 4.

8. Approval of the SERC

As indicated earlier, there is a need to secure approval of the SERC for the scheme. This would require finalization of the petition, based on the programme design and selection of the implementing partner. A template of the petition is at section 5.

9. Branding of LEDs

Under the programme, quality LEDs would be distributed to grid-connected residential households in exchange of an incandescent lamp (ICL). LEDs shall be adequately stamped OR unique identification number may be given, to forbid them to enter into market for re-sale. The LED distribution under a programme is restricted to the project boundary which is the identified DISCOM's project distribution area e.g. DISCOM Circle, Division. The households under the defined project area can be identified by their unique utility consumer number. Branding will reduce the possibility of leakage of these bulbs as it will enhance traceability.

10. Awareness and Outreach

Awareness campaign to educate the recipient to install the LED in high-usage areas, through posters, printed hand-outs, using mass media etc. A competitive media strategy, media plan, media scheduling plan and messaging content has to be finalized. A template of TOR for appointing the media consultant is at section 6. A database of each household provided with LEDs need to be maintained.

11. Collection & Destruction of ICLs

It is recommended that collected ICLs must be destroyed so that they are not reused.

12. LED Distribution Database

During distribution, the following measures need to be finalized:

- (i) Consumer database to whom distribution is completed.
- (ii) Mechanism to do so can be decided from time to time.

FAQs for DELP SOP is at Section – 7.

Section - 1

TECHNICAL SPECIFICATIONS

Technical Specification

Parameters	Requirements	Requirements	Applicable IS
Light Source	SMD LED Chip	SMD LED Chip	LM80/ 16106
Make	Nichia , Cree, Osram, Lumileds	Nichia , Cree, Osram, Lumileds	LM80/16106
Lamp Wattage	Up-to 8 W (Suitable to replace 60 W ICL)	Up-to 8 W (Suitable to replace 60 W ICL)	16102-1 and 16102-2
CCT	Warm white (, 2700K)	Cool white (5700k,)	16102-2 CCT range as per standard or ANSI.
LED Chip Wattage	< 1w	< 1w	Recommended. At actual driving condition
Base Cap	B22d (Bayonet Cap)	B22d (Bayonet Cap)	16102-1
Ingress Protection	IP20	IP20	
Rated Luminous flux	500 Lumens Minimum	600 Lumens Minimum	16102-2 and 16106
Lamp Efficacy (lm/w)	Minimum 70	Minimum 80	16102-2 and 16106
CRI	Minimum 80	Minimum 80	16102-2 and 16106
Beam angle (Typical Value)	120°	120°	16102-2
Junction temp	Maximum 85°C	Maximum 85°C	16102-1
LED Chip Efficacy	Minimum 115 Lm/W	Minimum 120Lm/W.	Value is Recommendatory. Efficacy at actual LED driving condition.
Harmonics	Maximum 20%	Maximum 20%	Method of Test as per IS 16102-2
EMC	Table 6 and 7	Table 6 and 7	16102-2 and 6873 part 5
Lumen Maintenance @ 85°C	Minimum 70% upto 25000 hrs(Indoor application)	Minimum 70% upto 25000 hrs (Indoor application)	16102-2 and 16105.
PF	Minimum 0.9	Minimum 0.9	16102-2
Life Hrs	Minimum 25,000	Minimum 25,000	16102-2 and 16106
Rated Voltage	100 V – 300 V	100 V – 300 V	16102-2
Surge Voltage	> 2.5 kV	> 2.5 kV	> 2.5 kV
Working Temp	-10 to 50 deg C	-10 to 50 deg C	
Working Humidity	10% - 90% RH	10% - 90% RH	

Marking	Table 1	Table 1	16102-2
Safety Requirement	All Test	All Test	16102-1
Driver Efficiency	>85%	>85%	
Temperature Cycling test and supply voltage switching test	(1)Product shall be subjected to - 10 °C for 1 hrs , then switch to 50 °C for 1 hrs.. Total 5 cycles (2)30 Sec On and 30sec Off. At the end of test as per (1) and (2) , no visual damage shall be observed and lamp shall alight for more than 15 min after test.	(1) Product shall be subjected to - 10 °C for 1 hrs , then switch to 50 °C for 1 hrs.. Total 5 cycles (2)30 Sec On and 30 sec Off. At the end of test as per (1) and (2) , no visual damage shall be observed and lamp shall alight for more than 15 min after test.	IS 16102 (Part 2)
Accelerated operational life test.	Product shall be operated continuous for 6000hours. Test has to conduct at 45°C At the end of test , no visual damage shall be observed and lamp shall alight for more than 15 min after test.	Product shall be operated continuous for 6000hours. Test has to conduct at 45°C At the end of test , no visual damage shall be observed and lamp shall alight for more than 15 min after test.	

REFERRED STANDARDS

IS: 513	Cold-rolled low carbon steel sheets and strips
IS 12063	Classification of degree of protections provided by enclosures.
IS 6873(Part 5)	Limits and methods of measurement of radio disturbance characteristic of electrical lighting and similar equipment.
IS 16002-1	Self Ballasted LED lamp for General lighting Services Part-1 Safety requirement
IS 16002-2	Self Ballasted LED lamp for General lighting Services Part-1 Performance requirement
IS 6873 (Part 5)	Equipment for General lighting purposes – EMC immunity requirement.
IS 13021 (Part 2)	Performance, AC supplied electronics ballast for tubular fluorescent lamps performance requirement.
IS 10322 (Part 5/sec 1)	Fixed general purpose luminaries
IS 10322 (Part 1)	Luminaires - General requirement and tests
IS 14700 (Part 3/sec2)	Electro Magnetic compatibility (EMC) -Limits for Harmonic current emission –THD < 15% (equipment input current ≤ 16 Amps. per phase.
IS 9000 (Part 6)	Environmental Testing :Test Z- AD: composite temperature/ humidity cyclic test
IS 15885 (Part 2/Sec13) IS 16004 – 1 and 2	Lamp control gear: particular requirements for DC or AC supplied electronic control gear for LED modules.
IS 10322	Specification for the luminaries
IS 4905	Method for random sampling
IS 16006	LED luminaire photometry measurement.
IS 16005/LM-80.	Lumen Maintenance >90% @ 105 degree C. as per LM-80 measurement.
IS 16008/IEC62471	Photo biological safety

Section - 2

QUESTIONNAIRE FOR DELP SAMPLE SURVEY

Questionnaire for DELP – SOP Assessment

ELECTRICITY CONSUMPTION PATTERN OF LT-DOMESTIC CONSUMERS

A. GENERAL INFORMATION

1. House address _____
2. Consumer R.R No. _____
3. Name of the respondent _____ Age _____
4. Family size : Adults _____, Children _____
5. Total number of earning members _____
6. No. of people at home during week days : Adults _____ Children _____
7. Floor area (Square Feet) _____
8. Accommodation (Nos.) Rooms _____, Kitchen _____, Bathrooms _____
9. Annual Income Rs. _____

B. ELECTRICAL APPLIANCES USE PATTERN

Device	Month/ season in use	Total No.	Capacity/ Rating	Total No. in Use*							Total time used
				0.00-5.00	5.00- 7.00	7.00- 9.00	9.00- 13.00	13.00- 18.00	18.00- 21.00	21.00- 24.00	
Lights - Tube Light - CFL - Bulbs											
Geysers											
Air-Conditioner											
Iron											
Fans											
Television											
Refrigerator											
Rod Heater											
Water pump											
Other Electrical											

C. Monthly Electricity Bill: _____ kWh, Rs. _____

Investigators Name: _____ Date of Survey (dd/mm/yyyy): _____

Note: * In the time slot mentioned indicate duration in hours (h) or minutes (m)

Section – 3

ENERGY SAVINGS AGREEMENT

Energy Savings Agreement

THIS AGREEMENT is entered into on this the _____ day of _____ 2014

BETWEEN

....., having its Corporate Office at _____ and Registered Office: _____ acting through its _____ (hereinafter referred to as the “The Company” or “Seller” which expression shall, unless the context otherwise requires, include its administrators, successors and assigns) of ONE PART;

AND

The DISCOM, represented by the and having his office at (here in after referred to as the “.....” or “Buyer” which expression shall, unless the context otherwise requires, include its successors / successors in business and permitted assigns and substitutes) of the OTHER PART.

WHEREAS, the Seller has submitted a Project Proposal No. _____ dated _____ to hereinafter referred to as the “DELP Scheme” and which has been accepted pursuant to the DSM Plan by on _____ (Date), and further approved by the Electricity Regulatory Commission for by Order dated _____.

Definitions:

“LED” means a light-emitting-diode lamp is a solid-state lamp that uses light-emitting diodes (LEDs) as the source of light.

“ICL” means an electric light which produces light with a filament wire heated to a high temperature by an electric current passing through it, until it glows.

“DELP (DSM based Efficient Lighting Programme) scheme” is a mechanism for acquiring demand-side resources (energy efficiency and load management) under which a utility purchases energy savings using a pre-determined rate.

“DELP Price” is a price per unit of Energy Savings that agrees to pay to the Company over the Contract Period as mentioned under clause 1.8 of the agreement.

“Contract Period” means a period of 10 Years starting from the date when distribution of LEDs is completed.

“Energy Savings” and “Annual Energy savings per LED” means savings as agreed and determined under clause 1.7 of the agreement.

“Annual SOP Payments” means the annual payments that will be made by ED. to the Company over the contract period as per clause 1.9 of the agreement.

“Baseline Data” means number of Incandescent Lamps being proposed to be replaced with LED under this Agreement.

1. In pursuant to this Agreement, it is hereby agreed between the Company and DISCOM

1.1 The Company has conducted a sample survey for the selected customers, based on the list of consumers provided by the, in the four regions of to establish the Baseline Data for the DELP-SOP Scheme.

1.2 As per report of Sample Survey, the number of incandescent bulbs used per household are _____ for _____ hours every day totaling to _____ ICLs for the entire area having _____ households.

1.3 Accordingly, The Company is expecting to coverhouseholds under this scheme and at an average of LED per Households, expected distribution of LEDs would be

1.4 The Sample Survey was conducted through an agency and the cost, if any, of the same will be borne by the Company.

1.5 Based on the Baseline Data, the Company will undertake the distribution of 8W LEDs at a subsidized price of Rs 10/- per LED in theProject area and collect a 60W ICLs against each LED distributed. LEDs proposed to be distributed will confirm to the mandatory minimum technical specifications stipulated by Bureau of Indian Standards.

1.6 The cost of LEDs and its distribution will be borne by The Company.

1.7 Collected 60 W ICL will be destroyed under the supervision of ED so as to preclude their use forever.

1.8 The Company will take sufficient care to ensure that LEDs distributed under this Scheme are not rolled out in the re-sale market.

1.9 The Energy Savings per LED that will be generated through distribution of LEDs will be determined in the following manner:

(i) Energy Savings= CL(W) – LED(W)

(ii) Annual Energy Savings (KWH) = ((Energy Savings*Run Time per day*Operating days per year/1000) / (1-T&D Losses %)) / (1-External Losses %)

The parameters in the formula are agreed as under

Particulars	Unit	Value
Existing Lamp (ICL)	W	60
New Lamp (LED)	W	8
Power Saving	W	52
Run time per day	Hrs /day	3.50
Operating days per year	Days/yr	300
Energy Saved per LED per day	kWh	0.1820
Energy Saved per LED per year	kWh	54.60
Energy Demand Saved per year	Units	54.60
T& D Loss @ X%	Units	
Energy Requirement	Units	54.60/(1-%T&D loss)
External Loss @ Y%	Units	
Energy Savings (per LED Per Annum)	Units	

1.10 The Annual Energy Savings through DELP-SOP will be deemed as a Energy Purchase by Electricity Department (ED) over the Contract Period at a pre-determined DELP-SOP Price as approved by Hon'ble JERC.

1.11 The Annual SOP Payments due to the Company will be determined as per below mentioned formula:

$$\text{Annual SOP Payments} = \text{Number of LED distributed} * \text{Energy Savings (per LED per Annum)} * \text{DELP-SOP Price for the corresponding Financial Year.}$$

Number of LED distributed: It will be determined based on the Baseline Data collected during Sample Survey as per clause 1.3 of the agreement.

Energy Savings (per LED per Annum): It will be considered as per clause 1.9 of the agreement.

DELP-SOP Price: It will be considered as per Clause 1.10 for the corresponding Financial Year.

- 1.12 The Annual SOP Payments due to the Company will be split into twelve (12) equal installments and will be paid to the Company on monthly basis by 10th day of every month till the end of Contract Period. The schedule of monthly payments from _____ (FY) to _____ (FY) is as per Annexure-1.
- 1.13 Apart from the SOP payments, Tax liabilities such as Income Tax, Service Tax, VAT, CST, or any other taxes that may be applicable to the Company during the period of the contract and arising out this transaction will be reimbursed on actual basis by DISCOM to the Company.
- 1.14 The Company will undertake the monitoring of Energy Savings through any Independent Party.
- 1.15, if so desires, may associate itself during the process of Sample Survey and / or Distribution.
- 1.16 Within [60] days of the date of execution of this Agreement, DISCOM shall fulfill the following condition, if not already satisfied on or before the date of execution of this Agreement:
- (a) Appoint a scheduled bank as the escrow agent for the Project ("Escrow Agent"); and
 - (b) Execute the Escrow Agreement with the Escrow Agent and the company in the form acceptable to the company. The Escrow Agreement, shall inter-alia provide for:-
 - (i) The appointment of the Escrow Agent for the Term;
 - (ii) The obligation of DISCOM to deposit amounts in accordance with Clause 1.12 and 1.13, with the Escrow Agent simultaneously with the execution of the Escrow Agreement and otherwise in accordance with the terms of this Agreement;
 - (iii) The release of amounts deposited by DISCOM to the Company in accordance with the procedure set out in Clause 1.18; and
 - (iv) Other specific rights and obligations of the parties to the Escrow Agreement, including a mechanism for provision of documents and issuance and receipt of instructions for release of payments.
- 1.17 If DISCOM fails to make payment of any invoiced Eligible Monthly Payment within the 30 days from the date of submission of the invoice, the company shall have the right to serve a notice to the Escrow Agent along with a copy of the invoice and the Escrow Agent shall release the invoiced amount to the Company within 24 hours of such notice.

2. SETTLEMENT OF DISPUTES

2.1 Dispute Resolution

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 be subject to the dispute resolution procedure set out in this Article. 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.

2.2 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 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 for the discussion to be meaningful. At the discussion proceedings, the Party that has given the Notice of Dispute shall present an offer of a settlement, which may form the starting point of discussions between the two Parties during the discussion proceedings.

2.3 Arbitration or Adjudication

- a. In the event that the parties are unable to resolve the Dispute through Direct Discussion under Article 2.2, 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 ".....", 1 (one) shall be appointed by the "The Company" and the third shall be appointed by the 2 (two) arbitrators appointed as aforesaid.
- b. The arbitration proceedings shall be conducted in the English language only.
- c. 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 a result of any Dispute under this Article.

2.4 Performance during Dispute

Performance of this Agreement shall continue during the settlement of any Dispute under this Article. The provisions for dispute settlement shall be binding upon the successors, assigns and any trustee or receiver of either the “the Company ” or the “.....”.

3. CONFIDENTIALITY

3.1 Neither of the Parties shall, at any time, before the expiry or termination of this Agreement, without the consent of the other Party, divulge or suffer or permit its officers, employees, or agents to divulge to any person (other than to any of its or their respective officers or employees who require the same to enable them to properly carry out their duties), any information relating to the negotiations concerning the operations, contracts, commercial or financial arrangements or affairs of the other Party or any proprietary information of the other Party.

4. MISCELLANEOUS PROVISIONS

4.1 Governing Law and Jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the Courts of Delhi shall have jurisdiction over all matters arising out of or relating to this Agreement.

4.2 Sever ability

If for any reason whatever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other legal and valid instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing upon one or more provisions, which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable. Provided failure to agree upon any such provisions shall not be a subject matter to dispute resolution under this Agreement or otherwise.

4.3 Entire Agreement

This Agreement and the Annexure referred therein together constitute a complete and exclusive statement of the terms and conditions of the agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties.

4.4 Compliance with Laws and Directives

“The Company” and “.....” shall comply with all the laws as applicable to them.

4.5 Notifications

- a. Wherever provision is made for the giving or issuance of any notice, instruction, consent, approval, certificate or determination by any Person, unless otherwise specified, such communication shall be in writing and shall not be unreasonably withheld or delayed. Wherever provision is made for a communication to be “written” or “in writing”, this means any hand-written, typewritten or printed communication, including the agreed systems of electronic transmission.
- b. All certificates, notices or written orders between the Parties shall either be delivered by hand against written acknowledgement of receipt, or be sent by registered acknowledgement due through post or courier or one of the agreed systems of electronic transmission. In the event of any dispute, unless such acknowledgement of receipt is provided, the communication shall be treated as not given.
- c. In the case of “.....” all communication shall be marked for the attention of the person and to the address provided below, or to such other person or address as may be intimated to the “The Company” by the “.....” from time to time.

Name of the Representative _____

Address for Communication _____

- d. In the case of “The Company” all communication shall be marked for the attention of the person and to the address provided below, or to such other person or address as may be intimated to the “.....” by the “The Company” from time to time.

Name of the Representative _____

Address for Communication _____

4.6 Language

The language of this Agreement is the English language. All correspondence, drawings, designs, design data, Tests reports, certificates, specifications and information shall be in the English language. All other written and printed matter required for Implementation, operation

and maintenance shall be executed in the English language. Instructions and notices to the public and staff and all other signs and information notices shall be in English.

IN WITNESS whereof the Parties have executed and delivered this Agreement as of the date first above written.

SIGNED SEALED AND DELIVERED

for and on behalf of

Name of the company

SIGNED SEALED AND DELIVERED

for and on behalf of President of India

Electricity Department, Government of

Witness: 1.

2.

Annexure-1: Schedule of Monthly Payments

FY	Number of LED functional in project area	Energy Savings (Units per LED per Annum)	DELP-SOP Price	Annual SOP Payment	Monthly Payment to the Company
	(a)	(b)	(c)	(d)= (a)*(b)*(c)	(d) / 12
Year 1					
Year 2					
Year 3					
Year 4					
Year 5					
Year 6					
Year 7					
Year 8					
Year 9					
Year 10					

*Note: Number of LED distribution will be determined based on Baseline Data.

Yearly, there will be a monitoring survey to determine the population of working LEDs

Section - 4

INVITATION FOR BIDS (IFB)

FOR

**DESIGN, MANUFACTURE, SUPPLY, DISTRIBUTION,
INSTALLATION, COMMISSIONING, WARRANTY OF LED
BULBS AND OTHER RELATED WORKS AT**

SECTION 1

DETAILED IFB

(Contracts DEPARTMENT)

INVITATION FOR BIDS (IFB)

FOR

**DESIGN, MANUFACTURE, SUPPLY, DISTRIBUTION,
INSTALLATION, COMMISSIONING, WARRANTY OF LED
BULBS AND OTHER RELATED WORKS AT**

NIT/Bid Document No.:

Dated:

(Name of the Company) invites sealed bids from eligible bidders for "DESIGN, MANUFACTURE, SUPPLY, DISTRIBUTION, INSTALLATION, COMMISSIONING, WARRANTY OF LED BULBS AND OTHER RELATED WORKS AT" under **Single Stage Three Envelope Bidding Process**.

For details about the Invitation for bids, please refer to subsequent details.

Thanking you,

On behalf of the Company

Officer

BID DETAILS

Bidding Document No.	
Cost of Bidding Document Or Bid document fees	
Bid Security Deposit/ EMD	
Performance Security Deposit	
Document Sale Date & Timing i.e. Last Date for downloading RfP from website/or in person from the Company's office	
Bid Receipt Date & Time	
Bid Opening Date & Time	
Pre-Bid Conference	
Contact Person for Technical queries	
Contact Person for queries	
RfP to be Addressed to	

On behalf of the Company Officer

SECTION 2

INSTRUCTIONS TO THE BIDDER/CONSORTIUM OF BIDDERS

Name of Work: DESIGN, MANUFACTURE, SUPPLY, DISTRIBUTION, INSTALLATION, COMMISSIONING, WARRANTY OF LED BULBS AND OTHER RELATED WORKS AT

NIT/Bid Document No.:

Dated:

A. The Bidding Documents

1.1 The bidding documents includes the following

Section 1	Invitation for Bids (IFB)
Section 2	Instructions to Bidders
Section 3	Techno commercial offer including technical specifications, drawings, documents in support of bidder's qualifications, special conditions of contract and Price Bid.
Section 4	Forms & Procedure <ul style="list-style-type: none"> i. Bid Form ii. BG format in lieu of EMD iii. Power of Attorney iv. Certificate regarding acceptance of important terms and conditions v. Deviations Statement vi. Format for submission of Contract Performance Guarantee (CPG) vii. Form of acceptance of Fraud Prevention Policy viii. Format for submitting BG in lieu of advance, wherever applicable

The bidder is expected to examine all the instructions, forms, terms, specifications and other information in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the bidder's risk and may result in rejection of bid.

Definitions

In the "Bid / Tender / Contract Document" as herein defined where the context so admits, the following words and expression will have the following meaning:

1. "Affiliate" shall mean a Company that either directly or indirectly
 - i) controls or
 - ii) is controlled by or
 - iii) is under common control with
a Bidding Company (in the case of a single Company) and "control" means ownership by one Company
2. "B.I.S" shall mean specifications of Bureau of Indian Standards (BIS);
3. "Bid / Tender" shall mean the Techno Commercial and the Price Bid submitted by the Bidder along with all documents/credentials/attachments, formats, etc., in response to this Bid Document, in accordance with the terms and conditions hereof.
4. "Bidder / Tenderer" shall mean Bidding Company submitting the Bid. Any reference to the Bidder includes Bidding Company including its successors, executors and permitted assigns jointly and severally, as the context may require";
5. "Bid Security" shall mean the unconditional and irrevocable bank guarantee/ demand draft to be submitted along with the Bid by the Bidder under ITB Clause 2.4 of this Bid, as attachment 2 of section - 4, Forms& Procedure;
6. "Bidding Company" shall refer to such single/consortium Company that has submitted the Bid in accordance with the provisions of this Bid;
7. "Bid Deadline" shall mean the last date and time for submission of Bid in response to this Bid as specified in Bid information Sheet and as specified in ITB Clause 3.2 of this Bid document including all amendments thereto ;
8. "Bid Document" shall mean all Definitions, Sections, Layouts, Drawings, Photographs, Formats & Annexures etc as provided in this Bid including all the terms and conditions hereof.
9. "Chartered Accountant" shall mean a person practicing in India or a firm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949;

10. "Competent Authority" shall mean Managing Director (MD) of the Company himself and/or a person or group of persons nominated by MD for the mentioned purpose herein;
11. "Company" shall mean a body incorporated in India under the Companies Act,1956;
12. "Contract" means the agreement entered into between the Employer and the Contractor, as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein;
13. "Contract Price / Contract Value" shall mean the sum accepted or the sum calculated in accordance with the prices accepted in Bid and/or the Contract rates as payable to the Contractor for the entire execution and full completion of the Work (Design, Manufacture, Supply, Distribution, Installation, Commissioning, Warranty of Led Bulbs and other related works at), including change order;
14. "Completion of Work" means that the Project/Works have been completed operationally and structurally and Commissioning has been attained as per Technical Specifications.
15. "Commissioning" means successful operation of the Project/Works by the Contractor, for the purpose of carrying out Guarantee Test(s).
16. "Contract Document" shall mean collectively the Bid Document, Design, Drawings, and Specifications, Annexures, agreed variations, if any, and such other documents consisting the bid and acceptance thereof;
17. "Contractor's Equipment" means all plant, Works, equipment, machinery, tools, apparatus, appliances or things of every kind required in or for installation, completion and maintenance of Works that are to be provided by the Contractor, but does not include plant and equipment, or other things intended to form or forming part of the Works.
18. "Day" means calendar day;
19. "Defect Liability Period" means the period of validity of the warranties given by the Contractor (commencing at Completion of the Project/Works, during which the Contractor is responsible for defects with respect to the Project/Works.
20. "Employer" or "....." shall mean,(Name of the Company)
21. "Qualification Criteria" shall mean the Qualification Criteria as set forth in Section 3: Technical & Special Conditions of Contract of this BID;

22. "Engineer-in-Charge" shall mean the person designated from time to time by the Employer and shall include those who are expressly authorized by him to act for and on his behalf for operation of this Contract;
23. "Effective Date" means the date from which the Time for Completion shall be determined;
24. "GCC" means the General Conditions of Contract contained in this section;
25. "GHI" shall mean Global Horizontal Irradiation
26. "Goods" means permanent plant, equipment, machinery, apparatus, articles and things of all kinds to be provided and incorporated in the Works by the Contractor under the Contract but does not include Contractor's Equipment;
27. "Guarantee Test(s)" means the test(s) specified in the Technical Specification to be carried out to ascertain whether the Project/Works is able to attain the functional requirements specified in the Technical Specifications.
28. "The Government" means the Government of India.
29. "IEC" shall mean specifications of International Electro-technical Commission;
30. "The Company" shall mean
31. "Mobilization" shall mean establishment of adequate infrastructure by the Contractor at Site comprising of construction equipment's, aids, tools tackles, offices with facilities such as power, water, communication etc. including manpower comprising of Engineers, Supervising personnel and an adequate strength of skilled, semi-skilled and un-skilled workers, who with the so established infrastructure shall be in a position to commence execution of Work at site(s), in accordance with the agreed Time Schedule of Completion of Work.
32. "O&M/ AMC" shall mean Operation & Maintenance(O & M)/ Annual Maintenance Contract (AMC) of the supplied equipment;
33. "Parent Company" shall mean a Company that holds paid-up equity capital directly or indirectly in the Bidding Company, as the case may be;
34. "Price Bid" shall mean separate Envelope, containing the Bidder's Quoted Price as per the format prescribed in Section 3: Technical & Special Conditions of Contract of this BID;
35. "Qualified Bidder" shall mean the Bidder(s) who, after evaluation of their Techno Commercial Bid as per Eligibility Criteria set forth in Section 3: Technical & Special Conditions of Contract of this BID stand qualified for opening and evaluation of their Price Bid;
36. "SNA" shall mean State Nodal Agency.

37. "SCC" means the Special Conditions of Contract.
38. "Statutory Auditor" shall mean the auditor of a Company appointed under the provisions of the Companies Act, 1956 or under the provisions of any other applicable governing law;
39. "Services" means all those services ancillary to the supply of the Works, to be provided by the Contractor under the Contract; e.g. transportation(including loading, unloading and transfer to Site) and provision of marine or other similar insurance, inspection, expediting, Site preparation works (including the provision and use of Contractor's Equipment and the supply of all civil, structural and construction materials required), installation, /Pre-commissioning, commissioning, carrying out guarantee tests, operations, maintenance, the provision of operations and maintenance manuals, training of Employer's personnel and one or two persons from the beneficiaries groups are imparted trainings etc.
40. "Successful Bidder(s) / Contractor(s)" shall mean the Bidder(s) selected by Employer pursuant to this Bid.
41. "Site" means the Land and other places upon which the Works are to be installed, and such other land or places as may be specified in the Contract as forming part of the Site. The details of the Site are as contained in Section 3: Technical & Special Conditions of Contract of this BID.
42. "Sub-Contractor" means any person or firm or Company (other than the Contractor) to whom any part of the Work has been entrusted by the Contractor, with the written consent of the Engineer-in-Charge, and the legal representatives, successors and permitted assigns of such person, firm or Company.
43. "Standards" shall mean the standards mentioned in the technical specification of the goods and equipment utilized for the Work or such other standard which ensure equal or higher quality and such standards shall be latest issued by the concerned institution like Bureau of Indian standards(BIS), MNRE, etc.,
44. "Time for Completion" means the time within which Completion of the Project/Works is to be attained in accordance with the stipulations in the SCC and the relevant provisions of the Contract;
45. "Work" means the "Goods" to be supplied and installed, as well as all the "Services" to be carried out by the Contractor under the Contract;
46. "WP" shall mean Watt Peak.

INTERPRETATIONS

1. Words comprising the singular shall include the plural & vice versa
2. An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.
3. A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.
4. Different parts of this contract are to be taken as mutually explanatory and supplementary to each other and if there is any differentiation between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.
5. The table of contents and any headings or sub headings in the contract has been inserted for case of reference only & shall not affect the interpretation of this agreement.

1.2 Clarification on Bidding Documents

A prospective Bidder requiring any clarification to the bidding documents may notify the Company in writing or by cable (hereinafter, the term cable is deemed to include Electronic Data Interchange (EDI), telex or telefax) at the Company's mailing address indicated below. The Company will respond in writing to any request for clarification or modification of the bidding documents that it receives no later than ten (10) days prior to the deadline for submission of bids prescribed by the Company. Written copies of the Company's response (including an explanation of the query but not identification of its source) will be sent to all prospective Bidders that have received the bidding documents.

The address of the Company, for communication:

The Bidder is advised to visit and examine the site where the facilities are to be installed and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for supply and installation of the facilities. The costs of visiting the site shall be at the Bidder's own expense.

The Company will also facilitate the bidder and any of its personnel or agents for getting permission from the authorities, where actual work is to be executed, to enter upon its premises and lands for the purpose of such inspection, but only upon the express condition that the Bidder, its personnel and agents will release and indemnify the Company and also the authorities, where work is to be executed, and its personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of the inspection.

Whenever the bidder is silent about the acceptance of RfP/IFB conditions such as bank guarantee, warranty period, liquidated damages, certification of relation clause no.2.13 [Conflict of Interest] etc. it shall be presumed that the bidder has accepted and certified RfP/IFB conditions and no further correspondence seeking specific confirmation about acceptance of these conditions shall be made.

1.3 Amendment to bidding documents

At any time prior to the deadline for submission of bids, the COMPANY may, for any reason, whether at its own initiative, or in response to a clarification requested by a prospective Bidder, amend the bidding documents.

The amendment will be notified in writing or by cable to all prospective bidders who have purchased the bidding documents and will be binding on them. Bidders are required to immediately acknowledge receipt of any such amendment, and it will be assumed that the information contained therein have been taken into account by the Bidder in its bid.

In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bid, the Company may, at its discretion, extend the deadline for the submission of bids.

1.4 Cost of tender Documents:

Interested bidder/consortium of bidders may download the RfP/ tender documents from the website of the Company or may be purchased from the Company's office, situated at between 10:00 hrs and 15:00 hrs on working days from to on payment of Rs.25,000/- (Rupees Twenty Five Thousand only). The payment would be accepted in the form of crossed demand draft/pay order drawn from any scheduled bank, payable at par in New Delhi in favour of "name of the Company".

While submitting the bid (in case tender documents are downloaded from the Company website), bidder shall submit bid document fee i.e. cost of tender documents of Rs.25,000/- (Rupees Twenty Five Thousand only) in the form of DD/Pay order or Banker's Cheque in favour of The Company payable at New Delhi along with the bid. However bidders who directly purchase the tender documents from the Company can do so by payment of requisite bid document fee at the Company office in the form of DD/Pay order or Banker's Cheque.

B. Preparation of Bids

2.1 Procedure for Submission of Bid/RfP.

Single Stage Single Envelope Bidding Process: Not Applicable for this tender

The Bidder or Consortium of bidders should submit hard copy of the offer, i.e. Techno Commercial and Price Bid together in a single sealed envelope superscripted with Bid/RfP number and

date, content of envelope, name of work and Bid opening date. Bid-Form, Power of Attorney, Certificate regarding acceptance of important terms and conditions, Deviations Statement, Form of acceptance of Fraud Prevention Policy, etc. as per format defined in Section-4, Forms and Procedure shall also be submitted in the same envelope.

Single Stage Two Envelope Bidding Process: Not Applicable for this tender

The Bidder shall seal the proposal in one outer and two inner envelopes labeled as Envelope I and Envelope II. Two Envelopes should contain the details of the offer as follows:

Envelope I should contain

- i. Bid document fee/cost of tender documents inform of DD/Pay order or banker's cheque [wherever applicable].
- ii. Bid Security fees/Earnest Money Deposit in form of Banker's Cheque/Demand Draft/Pay order in favor of "Name of the Company" or in the form of Bank Guarantee as prescribed format as attachment 2 of section - 4, Forms & Procedure.
- iii. Power of attorney to sign the bid as attachment 3 of section - 4, Forms & Procedure. Bidders to use their own format.
- iv. Certificate regarding acceptance of important terms and conditions as per ITB clause 4.9 as attachment 4 of section - 4, Forms & Procedures.
- v. Letter of the bidder submitting the bid in the form as stipulated in the bid document i.e., as per Bid Form as attachment 1 of section - 4, Forms & Procedure.
- vi. Deviation statement as per attachment 5 of section - 4, Forms & Procedure.
- vii. Form of acceptance of the Company's fraud prevention policy as per attachment 7 of section - 4, Forms & Procedure.
- viii. Techno-commercial bid as indicated in bid document. Documentary evidence regarding bidder's qualifications to perform the contract as required in qualifying Requirement.

Envelope II should contain Price Bid, to be submitted in 2nd inner sealed envelope, shall comprise of:

- i. Price Bid in the format prescribed in the tender document.

The entire two separately sealed envelopes will then be placed in one outer envelope, sealed and marked properly and submitted to the Company office on or before the deadline for submission of the bid. Every envelope (2 inner and 1 outer) should be superscripted with Bid/RfP number and date, content of envelope i.e. bid security/price bid etc., name of work and Bid opening date.

Single Stage Three Envelope Bidding Process:

The Bidder shall seal the proposal in one outer and three inner envelopes labeled as Envelope I, Envelope II and Envelope III. Three Envelopes should contain the details of the offer as follows:

Envelope I should contain

- i. Bid document fee/cost of tender documents inform of DD/Pay order or banker's cheque [wherever applicable].
- ii. Bid Security fees/Earnest Money Deposit in form of Banker's Cheque/Demand Draft/Pay order in favor of "Name of the Company" or in the form of Bank Guarantee as prescribed format [attachment 2 of section - 4, Forms& Procedure].
- iii. Letter of the bidder submitting the bid in the form as stipulated in the bid document i.e., as per Bid Form as attachment 1 of section - 4, Forms& Procedure.
- iv. Power of attorney to sign the bid as attachment 3 of section - 4, Forms& Procedure. Bidders to use their own format.
- v. Certificate regarding acceptance of important terms and conditions as per ITB clause 4.9 as attachment 4 of section - 4, Forms& Procedures.
- vi. Form of acceptance of The Company's fraud prevention policy as per attachment 7 of section - 4, Forms& Procedure.

Envelope II i.e. Techno commercial Proposal of the bid, to be submitted in 2nd inner sealed envelope, shall comprise of:

- i. Deviation statement as per attachment 5 of section - 4, Forms& Procedure.
- ii. Techno-commercial bid as indicated in bid document. Documentary evidence regarding bidder's qualifications to perform the contract as required in qualifying Requirement.

Envelope III should contain Price Bid, to be submitted in 3rd inner sealed envelope, shall comprise of:

- i. Price Bid in the format prescribed in the tender document.

The entire three separately sealed envelopes will then be placed in one outer envelope, sealed and marked properly and submitted to the Company's office on or before the deadline for submission of the bid. Every envelope (3 inner and 1 outer) should be superscripted with Bid/RfP number and date, content of envelope i.e. bid security/price bid etc , name of work and Bid opening date.

Copy of Bid/RfP should be a complete document and should be bound as a volume separately.

The document should be page numbered and appropriately flagged and contain the list of contents with page numbers. The deficiency in documentation may result in the rejection of the Bid. All pages of the bid are to be signed by the authorized signatory (authorized through power of attorney) and must be having official seal of the bidder.

Bids not accompanied by cost of tender documents/ Bid Security Fees or EMD etc. shall be out-rightly rejected and treated as non-responsive. Further, their price-bid will be returned in unopened condition.

For tenders received in unsealed/unstapled/open condition or without any superscription, resulting in opening of tender before due date, the risk and responsibility of losing confidentiality shall rest with the tenderer.

In case you do not want to quote against this NIT/RfP/IFB, please send regret letter quoting our ref. no.

2.2 Cost of Bid/ RfP

The Bidder or Consortium of bidders shall bear all costs associated with the preparation and submission of its Bid/RfP, including cost of presentation for the purposes of clarification of the bid, if so desired by the Company. The Company will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

2.3 Language of Bids

The proposal prepared by the bidder/consortium of bidders and all correspondence and documents relating to the Bid/RfP exchanged by the bidder/consortium of bidders and the Company, shall be written in English language, provided that any printed literature furnished by the bidder/consortium of bidders may be written in another language so long the same is accompanied by an English translation in which case, for purposes of interpretation of the bid, the English translation shall govern.

2.4 Bid Security/Earnest Money Deposit (EMD) as attachment 2 in First Envelope:

Amount of Bid Security: Bid Security/Earnest Money deposit of Rs..... (Rupees only) is to be submitted.

The bidder shall furnish, as part of its bid, a bid security in a separate envelope (ITB Clause 2.1). The bid security shall, at the bidder's option, be in the form of a Banker's cheque, Demand Draft in favor of "Name of the Company" or a bank guarantee as per format in section-4. Bid security/EMD shall remain valid for a period of forty five (45 days) beyond the original bid validity period of 90 days i.e. 135 days from date of bid opening. If there is any extension in bid validity period, then Company may ask the bidder to extend the validity of bid security.

Bid security shall be furnished in part labeled as envelope I. Any bid not accompanied by an acceptable bid security, shall be rejected by the Company as being non-responsive and returned to the bidder without being opened. The bid security of a consortium must be in the name of all the partners in the consortium submitting the bid. If lead partner is mentioned in case of consortium, then bid security can be in the name of lead partner.

The bid securities of unsuccessful bidders will be returned as promptly as possible after the award is made to lowest evaluated technically acceptable bidder.

The bid security of the successful bidder will be returned when the bidder has signed the contract agreement, and has furnished the required performance security.

Only NSIC Single Point Registered firms who are covered for supplying above mentioned item/ providing the services asked in the RfP may be exempted from submitting Tender Fee, EMD against formal approach in techno-commercial bid along with a valid relevant NSIC single point registration certificate up to its monetary limit.

The bid security may be forfeited if:

- (a) If the bidder withdraws its bid during the period of bid validity as specified in the bid.
- (b) If the bidder does not accept computational/arithmetical error correction made by the Company and as explained in "Financial Evaluation" section of the Bid/ RfP document.
- (c) If the bidder does not accept assumptions, estimations etc. used for evaluation of bids as specified by the Company in tender documents and revision of his bid accordingly, in case other assumptions are used. If the bidder does not accept the sharing as specified in the bid.
- (d) If the Bidder refuses to withdraw, without any cost to the Company, any deviation not listed in Attachment 5 but found elsewhere in the bid; or
- (e) In the case of successful bidder, if the bidder fails within the specified time limit:
 - To sign the contract agreement within 15 days of placement of Lol/Award letter.
 - To furnish the required performance guarantee, in accordance with the tender document.

2.5 Power of Attorney as attachment 3 in first envelope: A power of attorney duly authorized by a notary public, indicating that the person(s) signing the bid has/have the authority to sign the bid and thus the bid is binding upon the bidder during the full period of its validity in accordance with ITB clause 2.10.

2.6 Certificate Regarding Acceptance of Important Conditions as attachment 4 is to be submitted in first envelope.

No deviation, whatsoever, is permitted by the Company, to the provisions of the bidding documents listed in ITB sub-clause 4.9. The Bidders are advised that while making their bid proposals and quoting prices, these conditions may appropriately be taken into consideration. Bidders are required to furnish a certificate indicating their compliance to the provisions relating to the clauses listed in ITB sub-clause 4.9 in Attachment 4. Attachment 4 for acceptance of important conditions duly signed and stamped by the bidder is to be furnished in a separate sealed first envelope. Any bid not accompanied by such certificate in a separate sealed first envelope shall be rejected by the Company and returned to the Bidder without being opened.

2.7 Deviations, if any, from the terms and conditions of bidding documents or technical specifications shall be listed only in Attachment 5 to the bid. The Bidder shall also provide the additional price, if any, for withdrawal of the deviations. However, the attention of the bidders is drawn to the provisions of ITB sub-clause 4.9 regarding the rejection of bids that are not substantially responsive to the requirements of the bidding documents.

Bidders may further note that except for the deviations listed in Attachment 5, the bid shall be deemed to comply with all the requirement in the bidding documents and the bidders shall be required to comply with all such requirements of bidding documents and technical specifications without any extra cost to the Company irrespective of any mention to the contrary, anywhere else in the bid, failing which the bid security of the bidder may be forfeited.

At the time of award of contract, if so desired by the Company, the bidder shall withdraw these deviations listed in Attachment-5 at the cost of withdrawal stated by him in his bid. In case the bidder does not withdraw the deviations proposed by him, if any, at the cost of withdrawal stated in the bid, his bid will be rejected and bid security forfeited.

2.8 Bid prices

Unless otherwise specified in the technical specifications, bidders shall quote for the entire facilities on a "single responsibility" basis such that the total bid price covers all the contractor's obligations mentioned in or to be reasonably inferred from the bidding documents in respect of the design, manufacture, including procurement and subcontracting (if any), delivery, construction, installation, survey cost, monitoring and verification cost and completion of the facilities including supply of mandatory spares or spares to be supplied during warranty (if any). This includes all requirements under the contractor's responsibilities for testing, pre -commissioning and commissioning of the facilities and, where so required by the bidding documents, the acquisition of all permits, approvals and licenses, etc.; the operation, maintenance and training services and such other items and services as may be specified in the bidding documents, all in accordance with the requirements of the General Conditions of Contract and Technical Specification.

Bidders are required to quote the price for the commercial, contractual and technical obligations outlined in the bidding documents. If a Bidder wishes to make a deviation to the provisions of the bidding documents save those listed in ITB sub-clause 4.9, such deviations shall be listed in Attachment 5 of its bid. The bidder shall also provide the additional price, if any, for withdrawal of the deviations, pursuant to ITB sub-clause 2.7.

Bidders shall give a breakdown of the prices in the manner and detail called for in the price schedules. The bidders shall present their prices in the following manner:

2.9 Price Basis

Price basis of the price quoted shall be on F.O.R (Free on Road) destination basis for site. Price mentioned in the quotation must be firm. Hence prices in Letter of Award shall be firm and not subject to escalation till the execution of the complete order and its subsequent amendments accepted by the bidder even though the completion / execution of the order may take longer time than the delivery period specified and accepted in the Letter of Award.

Statutory variation in applicable taxes & duties (other than excise duty) shall only be on account of Employer in case bidder has shown the rates of present taxes in their bid and other prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account.

2.10 Period of Validity of Bid

Bids shall remain valid for a period of 90 days after the closing date prescribed by the Company for the receipt of bids. A bid valid for a shorter period may be rejected by the Company as being non responsive. In exceptional circumstances, the Company may solicit the bidder's consent to an extension of the bid validity period. The request and response thereto shall be made in writing through letters/ e-mails. If the bidder accepts to prolong the period of validity, the bid security/EMD shall also be suitably extended. A bidder may refuse the request for Bid Validity Extension without forfeiting its bid security. A bidder granting the request will not be required nor permitted to modify its bid.

2.11 Format and Signing of Bid

The original copy of the bid, consisting of the documents listed in ITB sub-clause 1.1 shall be typed or written in indelible ink and shall be signed by the bidder or a person or persons duly authorized to bind the bidder to the contract. The authorization shall be indicated by written power of attorney accompanying the bid and submitted as Attachment 3 to the bid under ITB sub-clause 2.5. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.

Any interlineations, erasures or overwriting shall only be valid if they are initialed by the signatory (ies) to the bid.

2.12 Contents of the RfP/Bid

The Bidder or consortium of bidders is expected to examine all instructions, forms, terms & conditions and scope of work in the RfP/bid documents. Failure to furnish all information required or submission of an RfP/bid document not substantially responsive to the RfP/bid document in every respect will be at the bidder's risk and may result in the rejection of the RfP/bid.

2.13 Conflict of Interest

The Company's policy requires that a bidder participating in a procurement/contract process under COMPANY financed projects shall not have a conflict of interest. All bidders found to have a conflict of interest shall be ineligible for award of contract.

A. Bidder may be considered to have a conflict of interest in a bidding process if:

- a) it, or any of its affiliates, has been engaged by the Company to provide consulting services for the preparation or implementation of a project, and participates in a bidding to provide goods, works, or non-consulting services resulting from or directly related to such consulting services. or
- b) it submits more than one bid in a bidding process, either individually or as a partner in a joint venture, except for permitted alternative bids. This will result in the disqualification of all bids in which the bidder is involved. However, this does not limit the inclusion of a firm as a subcontractor in more than one bid and the participation of a bidder as a subcontractor in another bid in certain types of procurement/contract, if permitted by the Company's bidding documents; or
- c) it (including its personnel or sub-contractors) has a business or family relationship with a member of a the Company's staff (or of the project implementing staff, or of a recipient of a part of the loan) who: are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or would be involved in the implementation or supervision of such contract unless the authority inviting tenders shall be informed of the fact/ such relationship at the time of submission of the tender and the conflict stemming from such relationship has been resolved in a manner acceptable to the Company throughout the procurement process and execution of the contract. The Company may in its discretion reject the tender or rescind the contract.; or
- d) it does not comply with any other conditions that may be specified in the Company's Standard Bidding Documents relevant to the specific procurement process.

2.14 Disclaimer

The Company and/or its officers, employees disclaim all liability from any loss or damage,

whether foreseeable or not, suffered by any person acting on or refraining from acting because of any information including statements, information, forecasts, estimates or projections contained in this document or conduct ancillary to it whether or not the loss or damage arises in connection with any omission, negligence, default, lack of care or misrepresentation on the part of the Company and/or any of its officers, employees.

2.15 Authorized Signatory (Bidder or Consortium of bidders)

The bidder or consortium of bidders as used in the RfP/ bid document shall mean the one who has signed the bid/RfP document forms. The bidder or consortium of bidders should be the duly authorized representative of the bidder/consortium of bidders, for which a certificate of authority/power of attorney will be submitted along with the offer. This should clearly define the authority provided to the authorized representative. Complete offer, all certificates and documents (including reply to any clarifications sought and any subsequent correspondences) shall be furnished and signed on all pages by the authorized representative.

The power of attorney or authorization, or any other document consisting of adequate proof of the ability of the signatory to bind the bidder or consortium of bidders shall be annexed to the bid as attachment 3 in envelope 1. The Company may reject outright any proposal not supported by adequate proof of the signatory's authority.

2.16 Consortium related conditions

The bidder shall have the option to submit the proposal either alone or along with other partner companies. Prerequisites for bidder have been specified in qualifying requirement and other parts of the tender document. The lead partner shall be the sole point of contact for all purposes of the Contract. The lead partner will have the prime and sole responsibility for the execution of the scope of work. Any information/clarification submitted to the lead partner by the Company will mean that the same has been conveyed to all partners. However, the partner companies should not be involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this contract. The bidder or any of the partner companies should not have been black-listed by any Central / State Government or Public Sector Undertakings. If at any stage of tendering process or during the currency of the contract, any suppression / falsification of such information is brought to the knowledge, the Company shall have the right to reject the proposal or terminate the contract, as the case may be, without any compensation to the tenderer & forfeiture of bid security/ EMD/CPG.

2.17 Contact details of the Bidder or Consortium of bidders

Bidder or Consortium of bidders who wants to receive COMPANY's response to queries should give their contact details to COMPANY. The Bidder or Consortium of bidders should send their contact details in writing at the COMPANY's contact address.

2.18 Inspection / Checking / Testing

All materials / equipments manufactured by the bidder/consortium of bidders against the Letter of Award shall be subject to inspection, check and/or test by the Company or his authorized representative at all stages and place, before, during and after the manufacture. All these tests shall be carried out in the as per technical specifications and bidder shall submit the relevant test reports. If upon delivery the material / equipment does not meet the specification, the materials / equipment shall be rejected and returned to the bidder for repairs / modification etc. or for replacement. In such cases all expenses including the to-and-fro freight, repacking charges, any other costs etc. shall be to the account of the bidder.

2.19 Removal of Rejected Goods and Replacement

If upon delivery, whether inspected and approved earlier or otherwise, the material/equipment is not in conformity with the specification, the same shall be rejected by the Company or duly authorized representative and notification to this effect will be issued to the bidder normally within 7 days from the date of receipt of the material at the work/site/office.

The bidder shall arrange removal of the rejected items within 15 days from the date of notification. In the event, the bidder fails to lift the materials within the said 15 days, the Company shall be at liberty to dispose off such rejected items in any manner as it may deemed fit. All expenses incurred on storage, disposal etc. shall be recoverable from the bidder.

2.20 Access to Bidders Premises

The Company and/or its authorized representative shall be provided access to bidder and/or his sub- bidder's premises, at any time during the pendency of the Order, for expediting, inspection, checking, etc. of work, if it is felt by the Company.

2.21 Taxes, Levies and Duties

Prices of items quoted shall be inclusive of sales tax, transportation, insurance, levies , service tax and any other duties payable including entry tax/octroi etc, (wherever applicable) on FOR destination/ site basis. Bidder is to arrange on its own to deliver the material at site. No road permit is provided by the Company. No concessional sales tax form is issued by the Company. Hence, bidder/consortium of bidders shall quote inclusive of full taxes and duties. However, rates of such taxes consider while preparing the offer should invariably be mention in the offer so that any variation in taxes (except excise duty) can be paid as actual.

2.22 Terms of Payment

The payment will be made by the Company to the bidder in accordance with the terms and conditions specified in section 3 of special conditions of contract of tender document and reproduced in Letter of Award.

2.23 Delivery Schedule

Time will be the essence of order and no variation shall be permitted in the delivery time/delivery schedule mentioned in the order unless agreed by the Company. Tentative time schedule is enclosed in the RfP/ bid document. Delivery of the equipment/material described shall be deemed to constitute acceptance of this order and terms and conditions by the bidder at the price specified.

2.24 Source of Supply

The bidder shall ensure that the indigenous capacity is utilized to the fullest extent possible in execution of this order. Where the imports are unavoidable, all such items shall be imported by the bidder in time against his own import license without affecting the contractual delivery schedule.

2.25 Patent Indemnity

Royalties and fees for patents covering material/equipment or processes used in executing the work shall be to the account of the bidder. The bidder shall satisfy all demands that may be made at any time for such royalties and fees and he alone shall be liable for damages, infringement and shall keep the Company indemnified in that regard in the event of any equipment/ material or part there of supplied by the bidder is involved in any suit or other proceedings held to constitute infringement and its used is enjoyed, the bidder shall, at his own expenses, either procure for the Company the right to continue the use of such equipment/material replace it with a non-infringing material / equipment or modify it so it become non- infringing.

Tenderer shall agree to indemnify the Company or/and hold it/them harmless from against all claims, liability, loss, damage or expense including counsel fees arising from or by reasons of an action or claimed trade mark patent or copyright infringement or any litigation based thereon with respect to any part of the quoted items and such obligation shall survive acceptance of and payment for the items.

2.26. Force Majeure

Bidder shall not be considered in default if delay in delivery occurs due to causes beyond his control such as acts of God, natural calamities, civil wars, strikes, fire, frost, floods, riot. Only those causes which have duration of more than 7 days shall be considered cause of force/ calendar majeure. A notification to this effect duly certified by local chamber of commerce/ statutory authorities shall be given by the bidder to the Company by registered/speed post letter. In the event of delay due to such causes, the delivery schedule will be extended for a length of time equal to the period of force majeure or at the option of the Company, the order may be cancelled. Such cancellation, would be without any liability whatsoever on the part of the Company. In the event of such cancellation, the bidder shall refund any amount advanced or paid to the bidder by the Company and deliver back any materials issued to him by the Purchaser and release facilities, if any provided by the Purchaser.

C. Submission of Bids

3.1 Sealing and Marking of Bids

The Bidder shall seal the original copy of the bid in envelope duly marking the envelopes as "ORIGINAL BID". All envelopes must be super-scribed with name of work, RfP No., envelope no., content of envelope and date and bid opening date. The envelopes shall then the sealed in an outer envelope which should also be super scribed with name of work, RfP/ bid document no./package no. and date and bid opening date.

3.2 Deadline for submission of bids

Bids must be received by the Company at the address specified as under and the bids will be opened at the same address as per timings stated in IFB and as repeated below.

Date of submission of bids: up to up to 15.00 hrs. as stated in IFB

Date of bid opening: on (i.e. same day) at 15.30 Hrs.

Bids must be received at the address specified above but no later than the time and date stated as above. In the event of the specified date for submission of bids being declared a holiday for the Company, the bids will be received up to the appointed time on the next working day.

The Company may, at its discretion, extend this deadline for submission of bids by amending the bidding documents in accordance with ITB Sub-Clause 1.3, in which case all rights and obligations of the Company and bidders will thereafter be subject to the deadline as extended.

No bid may be withdrawn in the interval between the bid submission deadline and the expiration of the bid validity period specified in ITB Clause 2.10. Withdrawal of a bid during this interval may result in the bidder's forfeiture of its bid security, pursuant to ITB Sub-Clause 2.4.

3.3 Late Bids : Any bid received by the Company after the bid submission deadline prescribed by the Company, pursuant to ITB Clause 3.1& 3.2, will be rejected and returned in unopened condition.

D Bid Opening and Evaluation

4.1 The Company will open all bids in the presence of bidders' representatives who choose to attend the opening at the time, on the date and at the place specified in the NIT. Bidders' representatives shall sign a format as proof of their attendance. In the event of the specified date for the opening of bids being declared a holiday for the Company, the bids will be opened at the appointed time on the next working day.

4.2 Bidders' names, bid prices, discounts, the presence or absence of requisite bid security and other such details as the Company, at its discretion, may consider appropriate, will be announced at

the opening. Late bids pursuant to ITB clause 3.2, and/or bids not accompanied by the “Certificate regarding acceptance of important conditions” as per Attachment-4 in a separate sealed envelope pursuant to ITB sub-clause 2.6, and/or bids not accompanied by requisite bid security in a separate sealed envelope pursuant to ITB clause 2.4, will be rejected and returned unopened to the bidder.

4.3 Bids that are not opened and read out at bid opening will not be considered for further evaluation, regardless of the circumstances.

The Company will prepare minutes of the bid opening.

4.4 Clarification on bids

During bid evaluation, the Company may, at its discretion, ask the bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered or permitted. The address for communication will be same as ITB clause 1.2.

4.5 Preliminary Examination of Bids

The Company will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

4.6 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between sub totals and the total price, the unit or subtotal price shall prevail, and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the Bidder does not accept the correction of errors, its bid will be rejected and the bid security will be forfeited in accordance with ITB Sub-Clause 2.4.

4.7 The Company may waive any minor informality, nonconformity or irregularity in a bid that does not constitute a material deviation, whether or not identified by the bidder in Attachment 4 to its bid, and that does not prejudice or affect the relative ranking of any bidder as a result of the technical and commercial evaluation, pursuant to ITB clauses 4.12 and 4.13.

4.8 Prior to the detailed evaluation, the Company will determine whether each bid is of acceptable quality, is generally complete and is substantially responsive to the bidding documents. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and specifications of the bidding documents without material deviations, objections, conditionality’s or reservations. A material deviation, objection, conditionality or reservation is one (i) that affects in any substantial way the scope, quality or performance of the contract; (ii) that limits in any substantial way, inconsistent with the bidding documents, the Company COMPANY’s rights or the successful bidder’s

obligations under the contract; or (iii) whose rectification would unfairly affect the competitive position of other bidders who are presenting substantially responsive bids.

4.9 No deviation, whatsoever, is permitted by the Company to the provisions relating to the following clauses (Important Conditions). Party is to submit the following as attachment 4 in envelope 1:

Governing Laws	-	Clause 7 of ITB
Settlement of Disputes	-	Clause 12 of ITB
Terms of payment	-	Clause 1.0 of SCC
Performance Security	-	Clause 5.13 of ITB
Taxes and Duties	-	Clause 8 of ITB
Completion Time Guarantee	-	Clause 9 of ITB
Defects Liability	-	Clause 10 of ITB
Functional Guarantee	-	Clause 11 of ITB
Patent Indemnity	-	Clause 2.25 of ITB

Bidders are required to furnish a certificate as per Attachment 4, indicating their compliance to the provisions of the above clauses in a separate sealed envelope. In case the certificate as per Attachment-4 duly signed and stamped by the bidder, is not furnished along with the bid in a separate sealed envelope, the bid shall be rejected and returned to the bidder without being opened

4.10 At the time of award of contract, if so desired by the Company the bidder shall withdraw the deviations listed in attachment 5 at the cost of withdrawal stated by him, in his bid. In case the bidder does not withdraw the deviations proposed by him in attachment 5 to his bid, if any; at the cost of withdrawal stated in his bid, his bid will be rejected and security will be forfeited.

4.11 The Company’s determination of a bid’s responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence. If a bid is not substantially responsive, it will be rejected by the Company, and may not subsequently be made responsive by the bidder by correction of the nonconformity.

4.12 Technical Evaluation

The COMPANY will carry out a detailed evaluation of the bids previously determined to be substantially responsive in order to determine whether the technical aspects are in accordance with the requirements set forth in the bidding documents. In order to reach such a determination, the

COMPANY will examine and compare the technical aspects of the bids on the basis of the information supplied by the bidders, taking into account the following factors:

- (a) Overall completeness and compliance with the technical specifications and drawings; deviations from the technical specifications as identified in Attachment 5 to the bid; suitability of the facilities offered in relation to the environmental and climatic conditions prevailing at the site; and quality, function and operation of any process control concept included in the bid. The bid that does not meet minimum acceptable standards of completeness, consistency and detail will be rejected for non-responsiveness.
- (b) Achievement of specified performance criteria by the facilities
- (c) Type, quantity and long-term availability warranty spare parts and also mandatory and recommended spare parts and maintenance services
- (d) Any other relevant factors, if any, listed in the tender document, or that the COMPANY deems necessary or prudent to take into consideration.

4.13 Commercial Evaluation

The comparison shall be of the FOR site price of domestically manufactured plant and equipment including type test charges, if any and mandatory spares, warranty spares plus applicable sales tax & duties as well duties and taxes paid/payable on components and raw materials incorporated or to be incorporated in the plant and equipment including mandatory spares/warranty spares plus the cost of loading, unloading, local transportation, insurance covers, installation and commissioning, civil work other services required under the contract including service tax and surcharge, if any plus any survey cost, monitoring and verification cost, distribution cost, scrap disposal cost, annual maintenance cost, administrative charges and statutory agencies cost including service tax and surcharge, if any. The COMPANY's comparison will also include the costs resulting from application of the evaluation procedures described in ITB sub-clause 4.14. However, the price of recommended spare parts, if asked in the bid, shall not be considered for evaluation of bids.

The COMPANY's evaluation of a bid will take into account, in addition to the bid prices indicated in price schedules in section 4 along with the corrections pursuant to ITB sub-clause 4.5, the following costs and factors that will be added to each bidder's bid price in the evaluation using pricing information available to the COMPANY, in the manner and to the extent indicated in ITB sub-clause 4.14 and in the technical specifications:

- (a) The cost of all quantifiable deviations and omissions from the contractual and commercial conditions and the technical specifications as identified in Attachment 5 to the Bid.
- (b) Compliance with the time schedule called for and evidenced as needed in a milestone schedule provided in the bid.

- (c) The functional guarantees of the facilities offered.
- (d) The extra cost of work, services, facilities etc, required to be provided by the COMPANY of third parties.

4.14 Pursuant to ITB Sub-Clause 4.13, the following evaluation methods will be followed:

a) Technical and Commercial Deviations

The evaluation shall be based on the evaluated cost of fulfilling the contract in compliance with all commercial, contractual and technical obligations under this bidding document. In arriving at the evaluated cost, the price for withdrawal of deviations shown in Attachment 5 to the bid will be used if necessary. If such a price is not given in Attachment-5, the COMPANY will make its own assessment of the cost of such a deviation for the purpose of ensuring fair comparison of bids.

b) Time schedule (program of performance)

The plant and equipment covered by this bidding are required to be transported/ shipped and installed, and the facilities are to be completed within the period as mentioned below.

Completion of all facilities/work: As per year/months in SSC.

The above date will be the effective date specified in the contract agreement. Bidders are required to base their prices on the time schedule or, where no time schedule is given, on the completion date(s) given above. No credit will be given for earlier completion.

The master network and the key milestone dates will be discussed with the successful bidder and agreed upon in pre-award discussion before issuance of Letter of Award. Engineering drawing and data submission schedule shall also be discussed and finalized before the issuance of Letter of Award.

After the Letter of Award, the contractor shall plan the sequence of work manufacture, supply, installation to meet the above stated dates of successful completion of facilities and shall ensure all work, manufacture, shop testing, inspection and shipment of the equipment in accordance with the required sequence.

c) Functional Guarantees of the facilities

Bidders shall state the functional guarantees (e.g. performance, efficiency, consumption) of the proposed facilities in response to the technical specifications. In case a minimum (or a maximum, as the case may be) level of functional guarantees is specified in the technical specifications for the bids to be considered responsive, bids offering plant and equipment with such functional guarantees less (or more) than the minimum (or maximum) specified shall be rejected.

d) Work, services, facilities etc., to be provided by the COMPANY

Where bids include the undertaking of work or the provision of services or facilities by the COMPANY in excess of the provisions allowed for in the bidding documents, the COMPANY shall assess the costs of such additional work, services and/or facilities during the duration of the contract. Such costs shall be added to the bid price for evaluation.

E Award of Contract

5.1 Post qualification

In the absence of pre-qualification, the COMPANY will determine to its satisfaction whether the bidder selected as having submitted the lowest evaluated responsive bid/or bidder giving highest return to COMPANY, as the case may be, as mentioned in special condition of contract is qualified to satisfactorily perform the contract in terms of the qualifying requirements stipulated in IFB/NIT and section 3.

5.2 The determination will take into account the bidder's financial, technical and production capabilities, in particular its contract, work in hand, future commitments and current litigation. It will be based upon an examination of the documentary evidence of the bidder's qualifications submitted by the bidder in RfP forms in section IV to the bid, as well as such other information as the COMPANY deems necessary and appropriate.

5.3 An affirmative determination will be a prerequisite for award of the contract to the bidder. A negative determination will result in rejection of the bidder's bid, in which event the COMPANY will proceed to the next lowest evaluated bid/next bid giving highest return to COMPANY to make a similar determination of that bidder's capabilities to perform satisfactorily.

5.4 The capabilities of the vendors and subcontractors proposed in section 3, if permitted, to the bid to be used by the lowest evaluated bidder or bidder giving highest return to COMPANY as per SCC will also be evaluated for acceptability. Their participation should be confirmed with a letter of intent between the parties, as needed. Should a vendor or subcontractor be determined to be unacceptable, the bid will not be rejected, but the Bidder will be required to substitute an acceptable vendor or subcontractor without any change to the bid price.

5.5 Award criteria.

Subject to ITB Clause 5.9, the COMPANY will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and to be the lowest evaluated technically acceptable bid or bid offering highest return to COMPANY as the case may be as per tender documents and special conditions of contract, further provided that the Bidder is determined to be qualified to perform the contract satisfactorily

5.6 Except for the deviations listed in Attachment-5, the bidder would be required to comply with all the requirements of bidding documents without any extra cost to COMPANY failing which his bid security will be forfeited. Further, the COMPANY may request the bidder to withdraw any or all of the deviations listed in Attachment – 5 to the winning bid, at the price shown for the deviation in Attachment 5 to the bid. In case the bidder does not withdraw the deviations proposed by him, if any, at the cost of withdrawal stated in the bid, his bid will be rejected and bid security forfeited.

The mode of contracting with the Successful Bidder will be as per stipulation briefly indicated below:

- (i) First Contract: For supply of plant and equipment.
- (ii) Second Contract: For providing all services i.e. inland transportation for delivery at site, inland transit insurance, unloading, storage, handling at site, installation (including civil. Structural steel work & allied work, if applicable) insurance covers other than inland transit insurance, erection, testing & commissioning, conducting Guarantee tests in respect of all the Goods supplied under the 'First Contract' and all other
- (iii) Services as specified in the Contract Documents.

The above Contracts will contain a cross-fall breach clause specifying that breach of one Contract will constitute breach of the other Contract which will confer a right on the Employer to terminate the other Contract also at the risk and the cost of the Contractor

5.7 The COMPANY reserves the right to vary the quantity of any of the spares and maintenance equipment and/or delete any items of spares altogether at the time of Award of Contract.

5.8 Additions / Alterations / Modifications

COMPANY reserves the right to make additions/alterations/modifications to the quantity of the items in the Letter of Award. The bidder shall supply such quantities also at the same rate as originally agreed to and incorporated in the Letter of Award.

5.9 COMPANY's right to accept any bid and to reject any or all bids

The COMPANY reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the COMPANY's action.

5.10 Letter of Intent / Letter of Award

Prior to the expiration of the period of bid validity, the COMPANY will notify the successful bidder in writing by issuing Letter of Intent or Letter of Award either through telefax/ scanned e-mail or through registered/speed post/couriered letter, that its bid has been accepted. The letter of award will constitute the formation of the contract.

The bidder shall return duplicate copy of the Lol/LoA/contract and the other enclosed documents duly signed as a token of acceptance, within 15 days from the date of receipt of this order.

Upon the successful bidder's furnishing of the performance security pursuant to ITB Clause 5.13, the COMPANY will promptly notify each unsuccessful bidder and will discharge its bid security.

5.11 Cancellation

COMPANY reserves the rights to cancel the order in the part or in full by giving one week advance notice thereby if-

- The bidder fails to comply with any of the terms of the order.
- The bidder becomes bankrupt or goes in to liquidation.
- The bidder makes general assignment for the benefit of the creditors and any receiver is appointed for the property owned by the bidder.

5.12 Modifications

This order constitutes an entire agreement between the parties hereto. Any modifications to this Order shall become binding only upon the same being confirmed in writing duly signed by both the parties.

Signing the Contract Agreement

At the same time as the COMPANY notifies the successful Bidder that its bid has been accepted, the COMPANY will send the bidder the contract agreement provided in the bidding documents, incorporating all agreements between the parties.

Within twenty-one (21) days of receipt of the contract agreement, the successful bidder shall sign and date the contract agreement and return it to the COMPANY. Contract agreement will contain agreement on stamp paper, bid documents and bidder's offer etc.

5.13 Performance security

Within twenty-eight (28) days after receipt of the letter of award, the successful bidder shall furnish the performance security for ten percent (10%) of the contract price or as specified in tender

documents and in the form provided in the section "Forms and Procedures" of the bidding documents or in another form acceptable to the COMPANY.

In case Joint Deed(s) of Undertaking by the Contractor along with his associate(s)/collaborator(s) form part of the Contract, then, unconditional Bank Guarantee(s) from such associate(s)/collaborator(s) for amount(s) specified in Bid

Failure of the successful Bidder to comply with the requirements of ITB Clause 5.11 or Clause 5.12 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the COMPANY may make the award to the next lowest evaluated bidder or call for new bids.

5.14 Corrupt or Fraudulent practices: The COMPANY requires that bidders observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the COMPANY: defines, for the purposes of this provision, the terms set forth below as follows:

- (a) "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution ; and
- (b) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the COMPANY, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the COMPANY of the benefits of free and open competition;
- (c) will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
- (d) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract of the COMPANY.

5.15 Ineligibility for Future Tenders

Notwithstanding the provisions specified in ITB sub clause 2.4 and ITB sub clause 5.11 and 5.12, if a bidder after having been issued and letter of award, either does not sign the contract agreement pursuant to ITB clause 5.11 or does not submit a acceptable performance security pursuant to ITB clause 5.13, such bidder may be considered ineligible for participating in future tenders of COMPANY for a period as may be decided by the COMPANY.

Note: Special Terms and Conditions will prevail upon the instruction to Bidders.

6.0 Liquidated Damages

In case of any delay in the execution of the order beyond the stipulated time schedule including any extension permitted in writing, COMPANY reserves the right to recover from the bidder a sum equivalent to 0.5% of the value of the delayed equipment installation/unexecuted portion of work for each week of delay and part thereof subject to a maximum of 10% of the total value of the contract.

Alternatively, COMPANY reserves the right to purchase and distribute equipment/ material from elsewhere at the sole risk at the cost of successful bidder/contractor and recover all such extra cost incurred by COMPANY in procuring the material from resources available including EMD/Bid Security/encashment of Bank Guarantee or any other sources etc.

Alternatively, COMPANY may cancel the order completely or partly without prejudice to his right under the alternatives mentioned above.

7.0 Governing Law

The Contract shall be governed by and interpreted in accordance with laws in force in India. The Courts of Delhi shall have exclusive jurisdiction in all matters arising under the Contract.

8.0 Tax and Duties

8.1 Except as otherwise specifically provided in the Contract, the Implementing Partner shall bear and pay all taxes, duties, levies and charges assessed on the Implementing Partner, its Sub Implementing Partners or their employees by all municipal, state or national government authorities in connection with the Facilities in and outside of the country where the Site is located.

8.2 Notwithstanding above Sub-Clause 8.1 above, the COMPANY shall bear and promptly reimburse all customs and import duties, if imposed in future, on the Plant and Equipment including Type Test and mandatory spares supplied from abroad and specified in Price Schedule (and on spare parts to be supplied from abroad and specified in Schedule, when awarded) and that are to be incorporated into the Facilities, by the law of the country where the Site is located. However, if the plant and equipment are shipped in Shipper's containers, then the custom duty levied on the cost of empty containers shall be borne and paid/ reimbursed by the Implementing Partner. The COMPANY shall also bear and pay/ reimburse to the Implementing Partner/Assignee of Foreign Implementing Partner (if applicable) Sales Tax (but not the surcharge in lieu of Sales Tax), Local Tax including Entry Tax / Octroi (if applicable) in respect of direct transactions between the COMPANY and the Implementing Partner, if imposed on the Plant and Equipment including Type Test and Mandatory Spares manufactured within the COMPANY's country and specified in Price (and also on locally supplied spares quoted when awarded) to be incorporated in the Facilities, by the law of country where the site is located. For this purpose, the Ex-works price if quoted in foreign currency and so incorporated in the contract, shall be converted to Indian Rupees as per the TT buying exchange rates established by State Bank of India prevailing on the actual date of Ex-works (India) dispatch.

All taxes, duties and levies on works contract, if any, shall be to the Implementing Partner's account and no separate claim in this regard will be entertained by the COMPANY.

8.3 If any tax exemptions, reductions, allowances or privileges are available to the Implementing Partner in the country where the Site is located, the COMPANY shall use its best endeavors to enable the Implementing Partner to benefit from any such tax savings to the maximum allowable extent.

8.4 For the purpose of the Contract, it is agreed that the Contract Price specified in Contract Price and Terms of Payment of the Contract Agreement is based on the taxes, duties, levies and charges prevailing at the date seven (7) days prior to the last date of bid submission in the country where the Site is located (hereinafter called "Tax" in this Sub-Clause 8.4). If any rates of Tax are increased or de-created, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of Contract, which was or will be assessed on the Implementing Partner in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction there-from. However, these adjustments would be restricted to direct transactions between the COMPANY and the Contractor/assignee of Foreign Implementing Partner (if applicable). These adjustments shall not be applicable on procurement of raw materials, intermediary components etc. by the Implementing Partner/assignee and also not applicable on the bought out items dispatched directly from sub-vendor's works to site.

9.0 Completion Time Guarantee:

9.1 If the Implementing Partner fails to attain Completion of the Facilities or any part thereof within the Time for Completion or any extension thereof under ITB Clause 2.23, the Implementing Partner shall pay to the COMPANY liquidated damages in the amount computed at the rates specified in the SCC. The aggregate amount of such liquidated damages shall in no event exceed the amount specified as "Maximum" in the SCC. Once the "Maximum" is reached, the COMPANY may consider termination of the Contract.

Such payment shall completely satisfy the Implementing Partner's obligation to attain Completion of the Facilities or the relevant part thereof within the Time for Completion or any extension thereof under ITB Clause 2.23. The Implementing Partner shall have no further liability whatsoever to the COMPANY in respect thereof.

However, the payment of liquidated damages shall not in any way relieve the Implementing Partner from any of its obligations to complete the Facilities or from any other obligations and liabilities of the Implementing Partner under the Contract.

10.0 Defect Liability

10.1 The Implementing Partner warrants that the Facilities or any part thereof shall be free from

defects in the design, engineering, materials and workmanship of the Plant and Equipment supplied and of the work executed.

10.2 The Defect Liability Period shall be eighteen (18) months from the date of Completion of the Facilities (or any part thereof) or twelve (12) months from the date of Operational Acceptance of the Facilities (or any part thereof), whichever first occurs, unless specified otherwise in the SCC.

If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Plant and Equipment supplied or of the work executed by the Implementing Partner, the Implementing Partner shall promptly, in consultation and agreement with the COMPANY regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Implementing Partner shall, at its discretion, determine) such defect as well as any damage to the Facilities caused by such defect. The Implementing Partner shall not be responsible for the repair, replacement or making good of any defect or of any damage to the Facilities arising out of or resulting from any of the following causes:

- Improper operation or maintenance of the Facilities by the COMPANY
- Operation of the Facilities outside specifications provided in the Contract.
- Normal wear and tear.

10.3 The COMPANY shall give the Implementing Partner a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof. The COMPANY shall afford all reasonable opportunity for the Implementing Partner to inspect any such defect.

10.4 The COMPANY shall afford the Implementing Partner all necessary access to the Facilities and the Site to enable the Implementing Partner to perform its obligations.

The Implementing Partner may, with the consent of the COMPANY, remove from the Site any Plant and Equipment or any part of the Facilities that are defective if the nature of the defect, and/or any damage to the Facilities caused by the defect, is such that repairs cannot be expeditiously carried out at the Site.

10.5 If the repair, replacement or making good is of such a character that it may affect the efficiency of the Facilities or any part thereof, the COMPANY may give to the Implementing Partner a notice requiring that tests of the defective part of the Facilities shall be made by the Implementing Partner immediately upon completion of such remedial work, whereupon the Implementing Partner shall carry out such tests.

If such part fails the tests, the Implementing Partner shall carry out further repair, replacement or making good (as the case may be) until that part of the Facilities passes such tests. The tests in character shall in any case be not less than what has already been agreed by the COMPANY and the

Implementing Partner for the original equipment/part of the Facilities.

10.6 If the Implementing Partner fails to commence the work necessary to remedy such defect or any damage to the Facilities caused by such defect within a reasonable time (which shall in no event be considered to be less than fifteen (15) days), the COMPANY may, following notice to the Implementing Partner, proceed to do such work, and the reasonable costs incurred by the COMPANY in connection therewith shall be paid to the COMPANY by the Implementing Partner or may be deducted by the COMPANY from any monies due to the Implementing Partner or claimed under the Performance Security.

10.7 If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the COMPANY because of any of the aforesaid reasons. Upon correction of the defects in the Facilities or any part thereof by repair/ replacement, such repair/replacement shall have the Defect Liability Period extended by a period of twelve (12) month from the time such replacement/ repair of the Facilities or any part thereof.

10.8 In addition, the Implementing Partner shall also provide an extended warranty for any such component of the Facilities and during the period of time as may be specified in the SCC. Such obligation shall be in addition to the defect liability specified under ITB Clause 10.2 or as specified in SCC.

11.0 Functional Guarantees

11.1 The Implementing Partner guarantees that during the Guarantee Test, the Facilities and all parts thereof shall attain the Functional Guarantees as specified in the Contract Agreement, subject to and upon the conditions therein specified.

11.2 If, for reasons attributable to the Implementing Partner, the guaranteed level of the Functional Guarantees specified in the Contract Agreement are not met either in whole or in part, the Implementing Partner shall, within a mutually agreed time, at its cost and expense make such changes, modifications and/or additions to the Plant or any part thereof as may be necessary to meet such Guarantees. The Implementing Partner shall notify the COMPANY upon completion of the necessary changes, modifications and/or additions, and shall seek the COMPANY's consent to repeat the Guarantee Test. If the specified Functional Guarantees are not established even during the repeat of the Guarantee Test, the COMPANY may at its option, either

- Reject the Equipment and recover the payments already made, or
- Terminate the Contract and recover the payments already made, or
- Accept the equipment after levy of liquidated damages in accordance with the provisions specified in the Contract Agreement.

12.0 Inspections and Tests

12.1 Inspection of Goods: The Employer or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Employer. (SCC and the Technical Specifications shall specify what inspections and tests the Employer requires and where they are to be conducted). The Employer shall notify the Contractor in writing in a timely manner of the identity of any representatives retained for these purposes.

12.2 The inspections and tests may be conducted on the premises of the Contractor or its subcontractor(s), at point of delivery and/or at the Goods final destination. If conducted on the premises of the Contractor or its subcontractor(s), all reasonable Works and assistance, including access to drawings and production data shall be furnished to the inspectors at no cost to the Employer.

12.3 Should any inspected or tested Goods fail to conform to the specifications, the Employer may reject and the Contractor shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Employer.

12.4 The Employer's right to inspect, test and, where necessary, reject the Goods after the arrival at Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Employer or its Representative prior to the Goods shipment.

12.5 Nothing in GCC Clause 6 shall in any way release the Contractor from any warranty or other obligations under this Contract.

12.5 Manuals and Drawings

12.6 Before the Goods and Services are taken over by the Employer, the Contractor shall supply operation and maintenance manuals together with drawings of the goods and equipment. These shall be in such detail as will enable the Employer to operate, maintain, adjust and repair all parts of the equipment as stated in the specifications.

12.7 The manuals and drawings shall be in the English ruling language and in such form and numbers as stated in the contract.

12.8 Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purpose of taking over until such manuals and drawings have been supplied to the Employer.

12.9 It shall be the obligation of the Contractor to train and familiarise the designated person by the Employer in regard to the operation manual and drawings.

13.0 Insurance

13.1 The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. For delivery

of goods at site, the insurance shall be obtained by the Contractor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes.

14.0 Transportation, Demurrage Wharf age, Etc.

14.1 Contractor is required under the Contract to transport the Goods to place of destination defined as Site. Transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Contractor, and the related cost shall be included in the Contract Price.

15.0 Warranty

15.1 The Contractor warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Contractor further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Employer's Specifications) or from any act or omission of the Contractor, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

15.2 This warranty of all the Works shall remain valid for 1 year after the Commissioning. The Contractor shall, in addition, comply with the performance and/or guarantees specified under the Contract. If for reasons attributable to the Contractor, these guarantees are not attained in whole or in part, the Contractor shall:

15.3 Make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC Clause 2;

OR

15.4 Pay liquidated damages to the Employer with respect to the failure to meet the contractual guarantees.

15.5 The Employer shall notify the Contractor in writing of any claims arising under this warranty.

15.6 Upon receipt of such notice, the Contractor shall, within the period of 15 days and with all reasonable speed, repair or replace the defective Goods or parts thereof, free of cost at the ultimate destination. The Contractor shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Employer for the replaced parts/goods thereafter. In the event of any correction of defects or replacement of defective material during the Warranty period, the Warranty for the corrected or replaced material shall be extended to a further period.

15.7 If the Contractor, having been notified, fails to remedy the defect(s) within 15 days, the Employer may proceed to take such remedial action as may be necessary, at the Contractor's risk and expense and without prejudice to any other rights which the Employer may have against the Contractor under the Contract. The performance guarantee and liquidated damages be entitled to be recovered without prejudice to other rights of the Employer.

16.0 Termination for Default

16.1 The Employer may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Contractor, terminate the Contract in whole or part:

16.2 if the Contractor fails to deliver any or all of the Goods and complete the Work within the period(s) specified in the Contract within any extension thereof granted by the Employer pursuant to GCC Clause 20; or

16.3 if the Contractor fails to perform any other obligation(s)/duties under the Contract.

16.4 if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

16.5 in the event the Employer terminates the Contract in whole or in part, pursuant to GCC Clause 22.1, the Employer may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Contractor shall be liable to the Employer for any excess costs for such similar Goods or Services. However, the Contractor shall continue the performance of the Contract to the extent not terminated

17.0 Settlement of Disputes

17.1 Adjudicator

17.1.1 If any dispute of any kind whatsoever shall arise between the COMPANY and the Implementing Partner in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the Facilities—whether during the progress of the Facilities or after their completion and whether before or after the termination, abandonment or breach of the Contract—the parties shall seek to resolve any such dispute or difference by mutual consultation. If the parties fail to resolve such a dispute or difference by mutual consultation, then the dispute shall be referred in writing by either party to the Adjudicator, with a copy to the other party.

17.1.2 The Adjudicator shall give its decision in writing to both parties within twenty-eight (28) days of a dispute being referred to it. If the Adjudicator has done so, and no notice of intention to commence arbitration has been given by either the COMPANY or the Implementing Partner within fifty-six (56) days of such reference, the decision shall become final and binding upon the COMPANY and the

Implementing Partner. Any decision that has become final and binding shall be implemented by the parties forthwith.

17.1.3 Should the Adjudicator resign or die, or should the COMPANY and the Implementing Partner agree that the Adjudicator is not fulfilling its functions in accordance with the provisions of the Contract; another retired Judge of High Court/Supreme Court of India shall be jointly appointed by the COMPANY and the Implementing Partner as adjudicator under the Contract. Failing agreement between the two within twenty eight (28) days, the new retired judge of High Court/Supreme Court of India shall be appointed as the Adjudicator under the Contract at the request of either party by the Appointing Authority specified in the SCC. The adjudicator shall be paid fee plus reasonable expenditures incurred in the execution of its duties as adjudicator under the contract. This cost shall be divided equally between the COMPANY and the Implementing Partner.

17.2 Arbitration

17.2.1 If either the COMPANY or the Implementing Partner is dissatisfied with the Adjudicator's decision, or if the Adjudicator fails to give a decision within twenty-eight (28) days of a dispute being referred to it, then either the COMPANY or the Implementing Partner may, within fifty-six (56) days of such reference, give notice to the other party, with a copy for information to the Adjudicator, of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

17.2.2 Any dispute in respect of which a notice of intention to commence arbitration has been given, in accordance with Sub-Clause 12.2.1, shall be finally settled by arbitration. Arbitration may be commenced prior to or after completion of the Facilities.

17.2.3 Any dispute submitted by a party to arbitration shall be heard by an arbitration panel composed of three arbitrators, in accordance with the provisions set forth below.

17.2.4 The COMPANY and the Implementing Partner shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the two arbitrators do not succeed in appointing a third arbitrator within twenty-eight (28) days after the latter of the two arbitrators has been appointed, the third arbitrator shall, at the request of either party, be appointed by the Appointing Authority for arbitrator designated in the SCC.

17.2.5 If one party fails to appoint its arbitrator within forty-two (42) days after the other party has named its arbitrator, the party which has named an arbitrator may request the Appointing Authority to appoint the second arbitrator.

17.2.6 If for any reason an arbitrator is unable to perform its function, the mandate of the Arbitrator shall terminate in accordance with the provisions of applicable laws as mentioned in ITB Clause 7 (Governing Law) and a substitute shall be appointed in the same manner as the original arbitrator.

17.2.7 Arbitration proceedings shall be conducted (i) in accordance with the rules of procedure designated in the SCC, (ii) in the place designated in the SCC, and (iii) in the language in which this Contract has been executed.

17.2.8 The decision of a majority of the arbitrators (or of the third arbitrator chairing the arbitration, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement.

17.2.9 The arbitrator(s) shall give reasoned award.

17.3 Notwithstanding any reference to the Adjudicator or arbitration herein,

- The parties shall continue to perform their respective obligations under the Contract unless they otherwise agree
- The COMPANY shall pay the Implementing Partner any monies due to the Implementing Partner.

18.0 Are you registered as MICRO, SMALL or MEDIUM Enterprise under MSMED Act 2006?

If YES,

A) Please indicate relevant category with copy of documentary proof issued by the concerned authorities :

B) Does your firm fall under MSE's owned by SC/ST Entrepreneurs? If so, enclose a copy of documentary evidence:

LIST OF ACRONYMS

EMD: Earnest Money Deposit
 EoI: Expression of Interest
 SCC: Special Conditions of Contract
 INR: Indian Rupees
 IST: Indian Standard Time
 LED: Light Emitting Diodes
 LoI: Letter of Intent
 LoA: Letter of Acceptance
 MoU: Memorandum of Understanding
 MoP: Ministry of Power

COMPANY:

O&M: Operation & Maintenance
 RfP: Request for Proposal
 R&M: Repair & Maintenance
 SD: Security Deposit
 JERC: Joint Regulatory Commission
 ED: Electricity Department
 DELP: DSM Based Efficient Lighting Program

SECTION 3

Technical & Special Conditions of Contract

Name of Work: DESIGN, MANUFACTURE, SUPPLY, DISTRIBUTION, INSTALLATION, COMMISSIONING, WARRANTY OF LED BULBS AND OTHER RELATED WORKS AT

NIT/Bid Document No.:

Dated:

BIDS ARE TO BE SUBMITTED AS FOLLOWS:-

Envelope I should contain

- i. Bid document fee/cost of tender documents inform of DD/Pay order or banker's cheque (Non Refundable)
- ii. Bid Security fees/Earnest Money Deposit in form of Banker's Cheque/Demand Draft/Pay order in favor of "Name of the Company " or in the form of Bank Guarantee as prescribed format [attachment 2 of section - 4, Forms& Procedure].
- iii. Letter of the bidder submitting the bid in the form as stipulated in the bid document i.e., as per Bid Form as attachment 1 of section - 4, Forms& Procedure.
- iv. Power of attorney to sign the bid as attachment 3 of section - 4, Forms& Procedure. Bidders to use their own format.
- v. Certificate regarding acceptance of important terms and conditions as per ITB clause 4.9 as attachment 4 of section - 4, Forms& Procedures.
- vi. Form of acceptance of COMPANY fraud prevention policy as per attachment 7 of section - 4, Forms& Procedure.

Envelope II i.e. Techno commercial Proposal of the bid, to be submitted in 2nd inner sealed envelope, shall comprise of:

- i. Deviation statement as per attachment 5 of section - 4, Forms& Procedure.

ii. Techno-commercial bid as indicated in bid document. Documentary evidence regarding bidder's qualifications to perform the contract as required in qualifying Requirement.

iii. Signed copy of RfP/Bid Document.

Envelope III should contain Price Bid, to be submitted in 3rd inner sealed envelope, shall comprise of:

ii. Price Bid in the format prescribed in the tender document.

Initially, Envelope – I containing documents as stated above will be opened. Envelope-II will be opened on the same day of only those bidders who have submitted EMD and requisite documents in Envelope-I.

Envelope-III (Price Bid) shall be opened subsequently subject to acceptance of Techno-Commercial Bid. Opening date will be intimated to all those bidders, who are found technically & commercially acceptable to COMPANY.

Price-Bid of the technically disqualified bidders will be returned in unopened condition to the respective bidders.

1. INTRODUCTION

Name of the Company (The COMPANY) is a Joint Venture of NTPC Limited, Power Grid Corporation of India Limited (PGCIL), Power Finance Corporation Limited (PFC) and Rural Electrification Corporation Limited (REC) to facilitate implementation of energy efficiency projects. COMPANY will work as ESCO, as Consultancy Organization for CDM, Energy Efficiency, etc.; as a Resource Centre for capacity building of SDAs, Utilities, financial institutions, etc. COMPANY will also lead the market-related actions of the NMEEE. It is first such Company exclusively for implementation of energy efficiency in South Asia and amongst a very few such instances in the world.

Objectives

- To facilitate preparation of energy efficiency projects for Demand Side Measures including municipal functions, agriculture, public building, lighting etc.
- To implement schemes, programmes and policies of central and state governments or its agencies.
- Partner with private ESCO's and other companies to promote energy efficiency.
- To provide consultancy services in the field of energy efficiency, CDM projects, and other related areas.
- To identify and impart training to build the capacity of stakeholders.

2. QUALIFYING REQUIREMENT:

S.No.	Criteria	Documents to submit
1	Bidder should be a manufacturer of LED Lamps.	The Bidder should furnish a Excise Registration Documents to support that they are manufacturers of LED Lamps
2	The LED Bulb offered by bidder for supply against this tender must meet the specifications as indicated in the attached Technical Specifications.	The bidder must provide all relevant documents in evidence of compliance of technical specifications as required in the Technical Specifications.
3	Bidder must have manufacturing facility in India having in-house electronics manufacturing and fixture assembly process. He should have in-house SMT and wave soldering setup. Bidder should have adequate testing facilities to conduct electrical, optical, thermal and environmental tests.	The bidder must provide all relevant documents in evidence of compliance of the same.
4	Party must have supplied indoor LED Lights to the cumulative order value of Rs.15 Crores in last three financial years. However, party should submit maximum 10 number of orders to meet order value of Rs.15 Crores.	Documentary proof – Letter of Award / Work Order Copy / Supply and Completion Certificate/ Challan Copies to be submitted.
5	The respondent should be profitable in at least two years of the last 3 three completed financial years. In case of consortium profit of Lead Member shall be consider.	Duly authorized copy of audited annual report is to be submitted along with its auditor's certificate.
6	A Manufacturer of LED Lamps is allowed to form a consortium with any of their authorized dealer / licensed suppliers to supply and distribute LEDs in any of the four regions of UT. However in such cases, only the manufacturer will act as a lead member and the qualifying requirements will be considered in respect to lead member only.	In case of consortium, bidder must indicate the name of the lead partner and consortium agreement to be submitted

7	The authorized dealer or licensed suppliers are allowed to enter into consortium with more than one manufacturer.	Valid/ Latest authorization certificate to be submitted from your principals
8	The Bidder should presently have a minimum installed capacity of 3000000 LED bulbs (30 Lac LED Bulbs) per annum to manufacture LED lamps in India.	Proof of Installed capacity Is your Firm/Factory registered under: Indian Factories Act, 1948. If yes, please provide the relevant copies.
9	For the purpose of meeting the financial qualification requirements, the Bidders may use the credentials of its Holding Company having 100% stake in the Bidder. However, the technical requirements are to be met by the Bidder.	Vendor to give its acceptance and indicate the name of Holding Company
10	Bidder can be any entity registered under any Act prevailing for the time being in India.	Copy of Registration with statutory authorities (Registrar of Companies, Copy of certificate of incorporation/Memorandum of Association/Article of Association/ Partnership Deed or any other relevant document(s) may be furnished along with the bid.)
11	The Bidder should have an average annual turnover of minimum INR 50 Crores based on the Audited Financial Statements for the last 3 three completed financial years	Duly authorized copy of audited annual report is to be submitted by respondent along with its auditor's certificate.
12	The Bidder should have a minimum Net worth of INR 25 Crores as on the date of close of the preceding financial year. Net Worth= Equity Capital Plus Reserves & Surplus Less Revaluation Reserves Less Intangible Assets Less Miscellaneous expenditures to the extent not written off and carry forward losses	Duly authorized copy of audited annual report is to be submitted by respondent along with its auditor's certificate.

SPECIFIC CONFIRMATION BY VENDOR

Note: Please submit the below table duly filled, signed and stamped along with your Unpriced Techno-Commercial bid

Sl.No	Description	Remarks
1	In case more than one bidder gets qualified based on Technical Bid then the Bidder quoting the lowest total price for LED Lamp will qualify as the successful bidder.	Agreed
2	Offer of LED Bulb having Wattage more than 8 Watts will not be accepted and bidder shall be disqualified.	Agreed
3	Offer of Warranty less than 8 Years will not be accepted and bidder shall be disqualified.	Agreed
4	Payment Terms - 5% Advance against submission of Bank Guarantee, 85% against Distribution as per supply schedule & 10 % on completion of Warranty Period of 8 years. Any other payment terms will not be accepted and bidder is liable to be rejected.	Agreed
5	Bidders should have financial and technical capabilities to execute the Scope of Work as specified in the RFP.	Vendor to give its acceptance along with supporting documents

Parameters	Requirements	Requirements	Applicable IS
Light Source	COB/ SMD LED Chip	COB/ SMD LED Chip	LM80/ 16106
Lamp Wattage	Up-to 8 W (Suitable to replace 60 W ICL)	Up-to 8 W (Suitable to replace 60 W ICL)	16102-1 and 16102-2
CCT	Warm white (2700, 3000K)	Cool white (5700k,6500K)	16102-2
LED Chip Wattage	< 1w	< 1w	Recommended
Base Cap	B22d (Bayonet Cap)	B22d (Bayonet Cap)	16102-1
Ingress Protection	IP54	IP54	
Rated Luminous flux	600 Lumens Minimum	600 Lumens Minimum	16102-2 and 16106

Lamp Efficacy (lm/w)	Minimum 80	Minimum 80	16102-2 and 16106
CRI (Typical)	Minimum 70	Minimum 70	16102-2 and 16106
Beam angle	> 120°	> 120°	16102-2
Junction temp	Maximum 85°C	Maximum 85°C	16102-1
LED Chip Efficacy	Minimum 120 Lm/W	Minimum 120 Lm/W	Value is Recommendatory.
Harmonics	Maximum 15%	Maximum 15%	16102-2
EMC	Table 6 and 7	Table 6 and 7	16102-2 and 6873 part 5
Lumen Maintenance @ 85°C	Minimum 70% upto 25000 hrs(Indoor application)	Minimum 70% upto 25000 hrs (Indoor application)	16102-2 and 16105.
PF	Minimum 0.9	Minimum 0.9	16102-2
Life Hrs	Minimum 25,000	Minimum 25,000	16102-2 and 16106
Rated Voltage	100 V – 300 V	100 V – 300 V	16102-2
Surge Voltage	Up-to 2 kV	Up-to 2 kV	
Working Temp	-10 to 50 deg C	-10 to 50 deg C	
Working Humidity	10% - 90% RH	10% - 90% RH	
Marking	Table 1	Table 1	16102-2
Safety Requirement	All Test	All Test	16102-1
Driver Efficiency	>85%	>85%	
Temperature Cycling test and supply voltage switching test	(1)Product shall be subjected to - 10 °C for 1 hrs , then switch to 50 °C for 1 hrs.. Total 5 cycles (2)30 Sec On and 30sec Off. At the end of test as per (1) and (2) , no visual damage shall be observed and lamp shall alight for more than 15 min after test.	(1) Product shall be subjected to - 10 °C for 1 hrs , then switch to 50 °C for 1 hrs.. Total 5 cycles (2)30 Sec On and 30 sec Off. At the end of test as per (1) and (2) , no visual damage shall be observed and lamp shall alight for more than 15 min after test.	IS 16102 (Part 2)

Accelerated operational life test.	Product shall be operated continuous for 6000hours. Test has to conduct at 45°C At the end of test , no visual damage shall be observed and lamp shall alight for more than 15 min after test.	Product shall be operated continuous for 6000hours. Test has to conduct at 45°C At the end of test , no visual damage shall be observed and lamp shall alight for more than 15 min after test.	
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6	For the purpose of this tender, successful bidder needs to provide name, address, mobile no., email addresses, designations of at least 2 Senior Nodal Officers (Regular Employees of their organization) who are reachable through any means of modern communication and who shall be accountable to deliver the product and associated services as per the tender.	To be indicated
7	Any entity which has been barred by the Central/ State Government, or any entity controlled by it, from participating in any bid, and the bar subsists as on the Bid Due date, would not be eligible to submit a Bid. Necessary declaration to this effect has to be given by the bidder as per format in the tender form.	Vendor to give a declaration to its letter head pad.

Project Background

DSM Based Efficient Lighting Programme (DELDP)

General operating and implementing framework

Distribution Utilities may launch innovative mechanism called demand side management (DSM) bidding by inviting COMPANY to implement DSM projects through COMPANY and link payment made to them for the resultant energy and load reductions. COMPANY will recover the investment over a period as specified in the DSM project from the payment made to them by DISCOMs for the resultant energy and load reductions.

Whereas, the benefit to the household is reduced electricity cost. In addition, the households save on replacement costs as LEDs would have life that is 20-30 times more than that of the incandescent bulb which is being given. It would also lead to cost saving of Rs. 500-800 per year because of savings in power consumption and longevity of fixture.

Under the DELP programme, 3 LEDs per residential house will be distributed to 2.45 lakhs residential households in exchange of an incandescent lamp (ICL) aggregating to the distribution of 7.35 lakhs LEDs. The reduction in connected load as a result of replacement will be 52W/lamp considering 60W to be replaced by 8W of LED.

The LEDs are distributed to grid-connected households in each project area as under:-

- Distribution of LEDs and replacement of previously used ICLs directly at each household; and/or
- Distribution of LEDs at dedicated distribution/ collection points advertised in the local press etc.

The COMPANY ensures that the returned ICLs are destroyed. The ICLs are collected directly from households or from the dedicated distribution/collection points and stored at a centralized or multiple storage sites provided by the related DISCOM. These ICLs are therefore destroyed in the presence of DISCOM.

DSM based Efficient Lighting Programme (DELP)

1. COMPANY has conducted a sample survey for the selected customers, based on the list of consumers provided by the DISCOM, in the four regions of to establish the Baseline Data for the DELP Scheme.
2. As per report of Sample Survey, on an average 3 Incandescent Lamps (ICLs) per Household are used in aggregating to bulbs. Therefore, resulting into potential for replacement by energy efficient LED bulbs in
3. Accordingly, COMPANY is expecting to cover households under this scheme and at an average of LED per Households, expected distribution of LEDs would be
4. The Sample Survey was conducted through International Institute for Energy Conservation (IIEC).

5. Based on the Baseline Data, the COMPANY will undertake the distribution of 8 W (Or of Lower Wattage) LEDs at a subsidized price of/- per LED in the four regions of and collect a 60W ICLs against each LED distributed. LEDs proposed to be distributed will confirm to the mandatory minimum technical specifications stipulated by Bureau of Indian Standards and the additional requirements mentioned in the attached Technical Specifications Sheet (Annexure H).
6. The cost of LEDs and its distribution will be borne by COMPANY.
7. Collected 60 W ICL will be destroyed under the supervision of DISCOM so as to preclude their use forever.

Scope of Work

1. Under this DELP Scheme, Tenders are invited for supply and distribution of LED based 8 W (Or of Lower Wattage) (AC) lamps with minimum 8 years warrantee.
2. Bidder shall carry out necessary site visits and completely comprehend the geographical aspects to carry out the scope of work. Necessary coordination with DISCOM needs to be done by Bidder for an effective distribution campaign.
3. Bidder shall submit a detailed distribution plan at the time of submission of bids in the template provided in the RfP (attached as Annexure A).
4. There shall be Groups for supply of 8 W (Or of Lower Wattage) (AC) LED lamps to cover four regions of UT as per below:

Group A	:, UT	____ (____) nos. of LED lamps
Group B	:	UT	____ (____) nos. of LED lamps
Group C	:	UT	____ (____) nos. of LED lamps
Group D	:	UT	____ (____) nos. of LED lamps

Number of LED Lamps for each Group may vary on actual distribution and the total number of LED Lamps for all Groups may also vary. Bidders shall bid for all the groups.

5. All households within the service area of DISCOM are eligible to participate in the scheme.

6. The Bidder shall be responsible for following activities in the four regions of under this RfP namely:

- a. Supply, Transportation, Storage, Insurance, and Distribution of LED lamps:
 - i. Bidder through DISCOM shall provide a list of customers in its area of operation who have got the meter connection.
 - ii. Bidder shall be provided a Storage Location by DISCOM/ COMPANY in each of the four regions of the UT which will act as a Storage and Distribution Centre (SDC) for that region. This storage facility will be provided without any cost to the Bidder. Bidder needs to coordinate with DISCOM for the same.
 - iii. Bidder shall supply and store the LED Lamps at the SDC as per Delivery Schedule mentioned in the RfP. The Bidder shall provide Batch Test Certificate of each shipment confirming compliance to the technical specifications and other Tender requirements. The Test Certificate needs to be transmitted electronically to COMPANY 24 hours in advance of dispatch date. Alternately, COMPANY, during the currency of the contract, will test the sample for its effectiveness.
 - iv. Bidder shall be responsible to transport and insure the LED Lamps till their distribution. The Bidder shall also give an undertaking that it has met all the Central and State requirements of Taxation, Excise and Levies for each shipment.
 - v. Each SDC shall undertake Distribution of LEDs in association with DISCOM in its respective regions. The mode of Distribution may be either Door to Door or through SDC based on layout of the housing units in the region. The mode may be decided by the bidder in consultation with DISCOM and same needs to be communicated to COMPANY in writing.
 - vi. The bidder shall cover each and every Household in its respective region as per the list provided by the DISCOM and shall carry out the distribution as detailed in the following steps:
 - The Bidder shall ascertain the eligibility of the household on the validity of the electricity bill and on the working condition of the ICL(s).
 - The bidder shall provide LED Bulbs on physically taking working ICLs from the eligible household consumer.

- In exchange of working ICL(s) and a price of Rs ___ per LED, Bidder shall issue equal number of LEDs to the household but limited to only 3 bulbs per household.
 - At the time of the exchange of LEDs the Bidder shall obtain a signature from the participating household on a "Consent Deed" that binds the household to install the LEDs. The template of the "Consent Deed" will be provided to the Bidder at the time of the distribution
- vii. Bidder shall maintain a single electronic database that accurately records all distribution related information for each participating household across four sectors. These records will be countersigned by the DISCOM as well as COMPANY. A database template will be provided to the Bidder at the time of distribution.
 - viii. Bidder shall open a separate bank account for this Project and the cash so collected will be deposited into the Bank on daily basis.
 - ix. An independent Nodal Agency will be set up by DISCOM and COMPANY who will take care of all customers' grievances.
- b. Collection and Disposal of Incandescent Lamps: Bidder shall undertake storage and disposal of ICLs so collected from the Households. These ICLs will be disposed of as per applicable Environment norms in the presence of DISCOM.
 - c. Scrap Value of ICLs: Scrap Value of ICLs so disposed, if any, will be retained by the Bidder.
7. After Distribution of LED based 8 W (Or of Lower Wattage) (AC) lamps, the Bidder shall ensure satisfactory replacement of the defective lamps during the warrantee period, which shall not be less than 8 years from the last date of distribution. The Bidder shall not charge any cost for replacing the defective lamps during warrantee period.
 8. In order to ensure that LED Lamps distributed under DELP Scheme are not misused, Bidder shall put on each LED Lamp a logo of COMPANY and DISCOM with a Unique Identification Number.
 9. The Bulbs shall be distributed to the consumers on production of the bills issued by DISCOM. The consumer has to produce copy of the bill in original/photocopy for receipt of the bulb. The original copy shall be stamped as delivered and the photocopy shall be retained by the bidder as a proof of delivery. The customer will also give undertaking that they will install the LED themselves. The daily delivery report shall be submitted by the bidder for each zone i.e.

10. Bidder shall maintain proper records in relation to Supply, Distribution, Collection and Disposal for inspection by COMPANY, DISCOM and/ or any other Government Agency from the first day of the distribution programme.

11. **COMPANY reserves the right to cancel this tender without prior notice and without assigning any reasons whatsoever.**

Annexure A: Template for Distribution Plan

Delivery Date	Dispatch Date	Dispatch Lot	Planned Daily Distribution	Distribution Dates	Zone / Area Code (Distribution Locality)

Annexure B: Delivery Schedule

Group A :, UT			
S. No.	Duration	Quantity to be supplied in terms of percentage (%)*	Stores Location
1	Within 14 Days from the Date of Award	1%	To be specified later
2	Within 21 Days from Date of Award	24 %	
3	Within 35 days from Date of Award	25 %	
4	Within 49 days from date of Award	25 %	
5	Within 63 Days from the Date of Award	25 %	
Group B :			
S. No.	Duration	Quantity to be supplied in terms of percentage (%)*	Stores Location
1	Within 21 Days from the Date of Award	5%	To be specified later
2	Within 35 Days from the Date of Award	20%	
3	Within 49 Days from the Date of Award	35 %	
4	Within 63 Days from the Date of Award	40 %	
Group C :			
S. No.	Duration	Quantity to be supplied in terms of percentage (%)*	Stores Location
1	Within 21 Days from the Date of Award	5%	To be specified later
2	Within 35 Days from the Date of Award	20%	
3	Within 49 Days from the Date of Award	35 %	
4	Within 63 Days from the Date of Award	40 %	
Group D : Yanam, UT			
S. No.	Duration	Quantity to be supplied in terms of percentage (%)*	Stores Location
1	Within 21 Days from the Date of Award	5%	
2	Within 35 Days from the Date of Award	20%	
3	Within 49 Days from the Date of Award	35 %	
4	Within 63 Days from the Date of Award	40 %	

*Quantity to be supplied may vary as per actual requirement

Annexure G: Checklist of Documents to be attached for the DELP Tender for Domestic LED Lamp

S.No.	Description of Document, Document or certificate	Attached (Yes/ No)
1	Detailed Test certificate for Lamp being offered meeting Technical Specifications as per Annexure H	
2	Distribution Plan for the 4 Groups i.e, Karaikal, Mahe, Yanam	
3	Sample copy of batch test report (specifying which tests will be reported)	
4	Undertaking by authorized signatory that all Central/State taxes, duties, levies have been complied with	
5	Warranty Certificate for performance for a period of 8 years	
6	Single page Price bid giving price break-up of all elements (As per price schedule)	
7	Proof of manufacturing capacity	
8	Proof of consortium/ partnership	
9	Excise Registration documents	
10	Proof of ownership in case of use of Financial Credentials of Holding Company	
11	Declaration that Bidder has not been barred/ banned/ black-listed by any State/ Central government	
12	Audited Financial Statements for the last 3 years	
13	Letter from Top Management of Bidder for declaring contact details of 2 senior Nodal Officers who are accountable to deliver the product and associated services as per tender	
14	Calculation of Net worth (with document reference)	

Annexure H: Technical specifications for Self Ballasted Led Lamp for Domestic Use

1. INTRODUCTION:

LED bulb consists of control gear and LED module in one unit and having lamp cap which can fit in to lamp holder. LED bulb is for replacement of incandescent lamp and CFL. LED bulb emit light from a semi conducting material, whereas traditional lamp emit light from vacuum (Incandescent lamp) or from gas (CFL). The LED bulb is directional source in most of cases whereas traditional lamps are Omni directional causing walls and ceilings also to be illuminated brightly. Majority of LED bulb manufacturers claim replacement for 5 to 60W Incandescent lamps, also few manufacturers have designed LED bulbs working with dimmer similar to incandescent lamp. LED bulb manufacturers life

span of 30,000 or more hours against life span of incandescent lamp of 1000 hrs and CFL of about 8000 hrs. The technology is improving at a fast pace and more energy efficient LED are available as time passes. LED lighting is of greater significance in the context of need for electrical energy conservation, longer life and pollution control for the world over.

2. SCOPE:

The scope of the document species the requirement and test method of energy efficient Self ballasted LED Lamp with Cap according to 16102(Part 1) : 2012. The LED bulb shall be suitable for rugged service under the operational and environmental conditions encountered during service.

3. IMPORTANCE OF PARAMETERS IN DESIGN :

The overall performance of LED bulb depends on LED module , control gear and heat sink. The selection of LED module depend on various parameter like lumen, luminous intensity distribution, color quantities (color temperature , color rendering index), reliability and life of all components. The lumen output is total light coming out form the lighting and luminous distribution is the light distribution in different directions. It is very important to select lighting with proper lumen and luminous intensity distribution depending on application.

Color is the byproduct of the spectrum of light, as it is reflected or absorbed, as received by the human eye and processed by the human brain. It is also an important design element and depending on application. Color is characterized by measuring color quantities (color temperature, chromaticity co-ordinates and color rendering index).

The reliability and life time of LED Lighting depends on reliability and life of all of its components like LEDs, optical system, Control gear and thermal management system. If any single component fails in the LED Light, it will result in failure of LED lighting , hence weakest component will decide the life of LED lighting.

4. TERMINOLOGY

Terms and definitions shall be as specified in IS 16101 : 2012.

TECHNICAL SPECIFICATIONS - SELF-BALLASTED LED LAMP FOR DOMESTIC USE

5. GENERAL REQUIREMENT

- a. The Lamp housing or heat sink shall be made stainless steel or aluminium or any other material made from either extruded or pressure die casted or any manufacturing process to withstand lifetime performance and having high thermal conductivity material.
- b. Suitable diffuser may also be provided to increase the illumination uniformity and distribution.

- c. Design of the thermal management shall be done in such a way that it shall not affect the properties of the diffuser.
- d. Design of the thermal management shall be done in such a way that Junction temperature (T_j) does not increase more than 85 deg C.
- e. Adequate heat sink with proper thermal management shall be provided.
- f. The connecting wires used inside the system, shall be low smoke halogen free, fire retardant PTFE cable and fuse protection shall be provided in input side.
- g. The connecting wires used inside the system, shall be low smoke halogen free, fire retardant PTFE cable and fuse protection shall be provided in input side.
- h. Care shall be taken in the design that there is no water stagnation anywhere. The entire housing shall be dust and water proof protection as per IS 12063.

6. REFERRED STANDARDS

IS: 513	Cold-rolled low carbon steel sheets and strips
IS 12063	Classification of degree of protections provided by enclosures.
IS 6873(Part 5)	Limits and methods of measurement of radio disturbance characteristic of electrical lighting and similar equipment.
IS 16002-1	Self Ballasted LED lamp for General lighting Services Part-1 Safety requirement
IS 16002-2	Self Ballasted LED lamp for General lighting Services Part-1 Performance requirement
IS 6873 (Part 5)	Equipment for General lighting purposes – EMC immunity requirement.
IS 13021 (Part 2)	Performance, AC supplied electronics ballast for tubular fluorescent lamps performance requirement.
IS 10322 (Part 5/sec 1)	Fixed general purpose luminaries
IS 10322 (Part 1)	Luminaires - General requirement and tests
IS 14700 (Part 3/sec2)	Electro Magnetic compatibility (EMC) -Limits for Harmonic current emission –THD < 15% (equipment input current ≤ 16 Amps. per phase.
IS 9000 (Part 6)	Environmental Testing :Test Z- AD: composite temperature/ humidity cyclic test
IS 15885 (Part 2/Sec13) IS 16004 – 1 and 2	Lamp control gear: particular requirements for DC or AC supplied electronic control gear for LED modules.
IS 10322	Specification for the luminaries

IS 4905	Method for random sampling
IS 16006	LED luminaire photometry measurement.
IS 16005	Lumen Maintenance
IS 16008	Photo biological safety

7. TESTING PLAN:

Tests are classified as:

- Type test
- Acceptance test
- Routine rest
- Verification test

1) Type Test

Type tests shall be carried out to prove confirmation with the requirement of specification and general quality/design features of the unit. In case of any change in 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.

IS: 16102-1	IS: 16102-2
a. Marking (see 5)	a) Marking (see 5)
b. Interchangeability (see 6)	b) Dimension (see 6)
c. Protection against electric Shock (see 7)	c) Wattage (see 8)
d. Insulation resistance and electric strength after humidity treatment (see 8)	d) Luminous Flux
e. Mechanical Strength (see 9)	e) Centre beam intensity (see 10)
f. Cap Temperature rise (see 10)	f) Beam angle (see 11)
g. Resistance to heat (see 11)	g) Colour Chromaticity and colour rendering index (CRI) (see 12)
h. Resistance to flame and ignition (see 12)	h) Life (see 13)
i. Fault Condition (see 13)	i) Harmonics (see 15), and
j. Creepage distance and clearances (see 14)	j) Emission (radiated and conducted) of radio frequency disturbances (see 16)

2) Acceptance Tests:

These 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 from the lot on which type tests have already been conducted. Recommended sampling plan is given below.

- Sample size and criteria for conformity
- The luminaries shall be selected from the lot at random. In order to ensure randomness of selection, procedures given in IS 2500 part 1 may be followed.

IS: 16102-1	IS: 16102-2
Acceptance test	Acceptance Test
a. Marking (see 5)	a) Marking (see 5)
b. Interchangeability (see 6)	b) Dimension (see 6)
c. Protection against electric Shock (see 7)	c) Wattage (see 8)
d. Insulation resistance and electric strength after humidity treatment (see 8)	d) Luminous Flux
e. Mechanical Strength (see 9)	e) Centre beam intensity (see 10)
f. Cap Temperature rise (see 10)	f) Beam angle (see 11)
g. Creepage distance and clearances (see 14)	g) Colour Chromaticity and colour rendering index (CRI) (see 12)

3) Routine Tests:

These 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.

IS: 16102-1	IS: 16102-2
Test for Inspection Test Quality	Inspection Test Quantities (ITQ)
a) Marking (see 5)	The Sampling Criteria condition of compliance and tests to be carried out for ITQ shall be given in 16 and 17 of IS 16102 (part-I)
b) Interchangeability (see 6)	
c) Protection against electric Shock (see 7)	
d) Insulation resistance and electric strength after humidity treatment (see 8)	
e) Mechanical Strength (see 9)	

4) Verification:

LED bulb shall be verified for important design parameters as discussed above. There are various specification in place for qualification in India and globally. In India, Bureau of Indian Standards (BIS) has published series of 12 standards for LED based lighting products and following two are applicable for the LED bulb.

8. TEST SCHEDULE:

Sr No.	Description Test	Type Test	Acceptance Test	Routine Test
1	Proof of procurement of LEDs	Y	Y	Y
2	Safety Tests (IS:16102-1)			
	a) Marking	Y	Y	Y
	b) Interchangeability ,	Y	Y	Y
	c) Protection against electric shock	Y	Y	Y
	d) , IR and HV test after Humidity ,	Y	Y	Y
	e) Mechanical Strength	Y	Y	Y
	f) Cap temperature Rise Test	Y	Y	--
	g)Resistance to Heat	Y	Y	Y
	h) Resistance to Flame and Ignition	Y	--	--
	i) Fault Condition	Y	--	--
	j) Creepage distance and Clearance	Y	--	--
3	Performance and reliability tests (IS:16102-2)		--	--
	Marking	Y	Y	Y
	Dimension	Y	Y	--
	Lamp Power	Y	Y	--
	Luminous flux.			
	Centre Beam Intensity	Y	--Y	--
	Beam Angle	Y	-Y-	--
	CCT, Chromaticity Coordinates and CRI	Y	Y--	--
	Lamp Life, Lumen Maintenance and Endurance test for Built-in Electronic Ballast.	Y		
	Harmonics and Power Factor.	Y		
	Test for Emission (Radiated and Conducted)	Y		

Test Procedure:**a. Visual and Dimensional Check:**

The unit shall be checked visually for all dimensions as per approved design and drawing. All the components properly secured and sharp edges shall be rounded off. Marking & rating should be legible. Workmanship should be of good quality.

b. Proof of procurement of LEDs:

Check Document like Purchase order & invoice for the proof of Procurement of LEDs.

9. ELIGIBILITY CRITERIA:

The manufacturer shall have all the requisite testing facilities for the tests mentioned above preferably at their works. However, all the requisite tests may be carried out in any NABL approved labs.

10. WARRANTEE:

The system shall have warranty for satisfactory performance and manufacturing defects for a period of 8 years or more.

11. APPROVAL:

While seeking approval, the manufacturer shall submit the sample along-with the following:

- a. Technical Catalogue of Product
- b. Type Test reports of system.
- c. Lumen Depreciation Curve of LEDs used (supplied by LED manufacturer)

After submission of the above, the system shall be considered for approval.

SPECIAL CONDITIONS OF CONTRACT**SPECIAL CONDITIONS WILL PREVAIL UPON THE INSTRUCTION TO BIDDERS AND OTHER TERMS AND CONDITIONS.****1.0 Terms of Payment:****For Supply Part:**

1. INR 25/- per LED lamp will be collected from the Consumers upfront at the time of distribution of LED Lamps to the Household Consumers.

2. The Bidder shall also give an undertaking that it has met all the Central and State requirements of Taxation, Excise and Levies for each shipment along with each invoice. A copy of the Batch Test Certificate needs to be attached with invoice for payment.
3. Balance amount (i.e. Cost of LED Lamps plus Cost of Transportation, Insurance, Storage & Distribution minus INR 25) will be paid by COMPANY as per Payment Terms given below.
4. Payment Terms
 - a) 5% advance against submission of Bank Guarantee of equivalent amount as per attachment-8 at Section-4 (Forms & Procedures). This is in addition to Contract Performance Guarantee which is 10% of Contract Value. In case bidder do not take any advance payment than this payment will be clubbed with 85% payment, i.e. 90% payment will be made against distribution as per supply schedule on certification of Engineer in Charge.
 - b) 85% against Distribution as per supply schedule and confirmation by Engineer in Charge &
 - c) 10% on completion of Warranty Period of 8 years after certification of satisfactory performance by Engineer in charge.

For Warrantee Period:

Payment for additional warranty for 6 years (after 2 years of standard manufacturer warranty) will be made after completion of each year warranty on certification by Engineer in charge for successful completion of each year warranty.

2.0 Liquidated Damages:

Liquidated damages applicable limited to 10 % of Total Order value in case of delay and applicable at 0.5 % per week or part there off beyond the total delivery period of 63 days (average 11666 bulbs distribution daily) from date of LOA. However the LD will not be applicable for the period if delay is not on bidder's part.

3.0 Price Basis

To be quoted as Firm at FOR Destination Basis i.e. four area as defined in bid document at _____.

4.0 Adjudicator:

Adjudicator under the contract shall be appointed by the Appointing Authority i.e. MD (COMPANY). If the bidder does not accept the Adjudicator proposed by COMPANY, it should so state in its bid form and make a counter proposal of an adjudicator. If on the day the contract agreement is signed, the COMPANY and contractor have not agreed on the appointment of adjudicator, the adjudicator shall be appointed, at the request of either party, by the appointing authority specified.

5.0 Arbitration:

Arbitration shall be carried out as per Arbitration Act 1996 and its subsequent amendment.

The Contract shall be governed by and interpreted in accordance with the laws in force in India. The courts of Delhi shall have exclusive jurisdiction in all matters arising under the contract.

6.0 Completion Time:

Entire material to be delivered, installed, tested and commissioned within 63 days from the date of issue of Purchase Order/Letter of award as per the Annexure B of the section 3.

7.0 Performance Warranty:

Within ten (10) days of the receipt of notification of award (P.O./L.O.A.) from COMPANY, the successful bidder shall furnish the Performance Security in the form of Demand Draft/ Pay Order or Bank Guarantee for 10% of the total contract value as per instructions contained in Section-2 [Instruction to Bidders]. The Bank Guarantee must be valid to cover Delivery Period + Warranty Period + Three Months Claim Period. Bank Guarantee value can be reduced to 75% of order value after three years and 50% of the order value after six years.

Bank guarantee shall be from any Nationalized Banks/other scheduled private banks as per list given in Section 4. COMPANY shall at his discretion have recourse to the said Bank Guarantee for the recovery of any or all amount due from the bidder in connection with the contract including of guarantee obligations.

Failure of the Successful Bidder to comply with the requirements of IFB/RfP/NIT shall constitute sufficient grounds for the annulment of the award and forfeiture of the Contract Performance Guarantee.

8.0 Pre-bid conference

8.1 The official representative of the Bidders may attend the pre-bid conference on _____ at _____, which will take place at the following address:

8.2 The purpose of the meeting will be to clarify any issues regarding the bid process.

8.3 Record notes of the meeting including the text of the questions raised and responses given will be transmitted to all the bidders who were present at the meeting. Based on that amendment can be issued in the tender documents. The clarifications that could not be furnished during pre-bid conference will be separately communicated to all the bidders.

8.4 Non-attendance at the pre-bid meeting will not be a cause for rejection of a Bidder.

8.5 Based on the discussion in pre bid meeting, COMPANY reserved the right for modification in RFP.

9.0 WARRANTY: 08 years from date of installation/As defined in the document.

10.0 The Bidder shall be deemed to have examined the Bid document, to have obtained his own information in all matters whatsoever that might affect carrying out the Works in line with the Technical specifications and Scope of Work specified in the document at the offered rates and to have satisfied himself to the sufficiency of his Bid. The bidder shall be deemed to know the scope, nature and magnitude of the work and requirement of materials, equipment, tools and labour involved, wage structures and as to what all works he has to complete in accordance with the Bid documents irrespective of any defects, omissions or errors that may be found in the Bid documents.

11.0 COMPANY reserves the right for quantity variation up to +/-20%.

12.0 Insurance: The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor, for an amount not less than the Contract Price of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War risks and strikes.

13.0 Transportation, Demurrage Wharf age, Etc.:

Contractor is required under the Contract to transport the Goods to place of destination defined as Site. Transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Contractor, and the related cost shall be included in the Contract Price.

Successful bidder, on whom letter of award is placed, is to ensure all safety guidelines, rules and regulations, labour laws etc. Successful bidder indemnify COMPANY for any accident, injury met by its labour, employee or any other person working for him. Any compensation sought by its labour, employee or any other person working for him shall be paid by successful bidder as per settlement solely. COMPANY has no role to play in this matter.

14.0 Successful bidder is to submit interchangeability certificate for its product supplied for replacement during warranty and maintenance period and even when it is purchased from open market. In case due to change in technology, the supplied product is not available during warranty/ maintenance period than the improved version of product can be used in warranty/ maintenance period with same or improved technical parameters or the combination thereof after written communication of Engineer in Charge at same cost & terms and conditions. Successful Bidder, on whom letter of award has been placed, has also to confirm that the prices of improved version of product is not lesser than the original product or its parts in comparison.

On behalf of COMPANY

Officer

PRICE BID**NIT/Bid Document No.:****Dated:****Name of Work: DESIGN, SUPPLY, INSTALLATION, COMMISSIONING, WARRANTY MAINTENANCE OF Self-ballasted 8 W (Or of Lower Wattage) LED Lamp for Domestic Use for**

All values in Indian Rupees

S.No.	Description of Item	Total Quantity (No.)	Unit Price for LED Bulbs including ED, sales tax at (Rs.)	Total Price for bulbs including ED, sales tax at (Rs.)
1	Cost of one 8W (Or of Lower Wattage) LED Lamp with 2 year Manufacturer's standard warranty (Inclusive of all taxes, duties and levies)			
			Per unit price (Rs.) including service tax & duties to	Total Price (Rs.) including service tax & duties to
2	Cost of Transportation, loading/unloading, storage, Insurance, Handling & Distribution (Inclusive of all taxes, duties and levies)			
			Per year price for warranty including service tax & duties	Total Price for 6 years additional warranty including service tax & duties
3	Cost of Additional warranty for supplied self ballast LED bulb for 6 years (Inclusive of all taxes, duties and levies)	6 years (for quantity of LED Bulbs)		
4	Total Cost as per technical specification and scope of work F.O.R. Pudhuchery with 8 years warranty (1+2+3) (Rs.)			

Total Rs. In words:

Note:

- The above prices are inclusive of all applicable taxes & duties including service tax, loading/unloading/installation and commissioning, lodging & boarding, travel expenses etc. The LED bulb, warranty price and cost of transportation will be paid on the basis of actual installed LED bulbs on pro rata basis.
- Bidder's to quote price inclusive of sales tax and service tax. But the present rate of taxes and duties may be indicated separately so that in case of increase or decrease of taxes and duties, the same can be reimbursed or reduced.
- COMPANY does not issue any concessional sales tax form C or D or any other form.
- COMPANY does not issue any Road Permit.
- The bidder shall submit PAN and Service Tax Registration Certificate in support of claim of service tax.
- Please note that evaluation of all the works will be considered combined i.e. package wise. The bidder who quoted combined lowest for complete scope of works i.e. supply, warranty and transportation, distribution etc combined shall be the successful bidder.
- If there is a discrepancy between words and figures, the amount written in words will prevail.
- Prices will remain firm till the execution of the contract.

I/We have read all the terms and conditions of the Rfp/IFB and the Annexure(s) thereto and agree to accept and abide by the same in too. The above quotation has been prepared after taking into account all the terms and conditions and scope of work of the Rfp/IFB.

(SEAL)

Signature of Tenderer or

Their Authorized Representative: _____

Dated: _____

Name & Address of Tenderer:

Phone No: _____

Fax no.: _____

E-Mail: _____

SECTION 4

Forms & Procedures

ATTACHMENT – 1

BID FORM

To

Subject:- IFB/RfP No..... Due for opening onat 3:30 PM.

Dear Sir,

With Reference to your subject IFB/RfP, we are pleased to submit our bid for “.....” in a sealed cover as detailed below:

Envelope I: Bid document fee/cost of tender documents [wherever applicable], Bid Security fees/ Earnest Money Deposit, Bid Form, Power of attorney, Certificate regarding acceptance of important terms and conditions, Form of acceptance of COMPANY fraud prevention policy.

Envelope II: Deviation statement, Techno-commercial bid, Signed copy of RfP.

Envelope III: Price Bid

We confirm that we have quoted as per instructions and terms and conditions of tender documents. We have submitted all the four attachments as stated in “Instructions to Bidders”

We declare that the prices left blank in price schedule/price bid will be deemed to have been included in the prices of other items. We confirm that except as otherwise specifically provided, our bid prices include all applicable taxes including service tax, entry tax(if any) , duties , levies , charges as may be assessed on us.

We further declare that additional conditions, variations, deviations, if any, found in the proposal other than those listed in Attachment-5 save those pertaining to any rebates offered, shall not be given effect to.

We undertake, if our bid is accepted, we shall commence the work immediately upon your Letter of Intent /Letter of Award to us, to achieve completion of work within the time specified in the bidding documents.

If our bid is accepted, we undertake to provide contract performance securities and securities for Deed(s) of Joint Undertaking (as applicable) in the form and amounts and within the times specified in the bidding documents.

We agree to abide by this bid for a period 90 days from the date of opening of bids as stipulated in the bidding documents and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period. Further, the prices of recommended spares, if asked for; contained in our bid shall re-main valid for the entire project period after placement of Lol/LoA.

Until a formal contract is prepared and executed between us, this bid, together with your written acceptance thereof in the form of your Letter of Intent/ Letter of Award shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any other bid you may receive.

We, hereby, declare that only the persons or firms interested in this proposal as principals are named here and that no other persons or firms other than those mentioned herein have any interest in this proposal or in the contract to be entered into, if the award is made on us, that this proposal is made without any connection with any other person, firm or party likewise submitting a proposal, is in all respects for and in good faith, without collusion or fraud.

Dated this -----day of ----- 2013

AUTHORISED SIGNATORIES

ADDRESS :

MOBILE NO. :

LAND LINE NO. :

Our correspondence details are:

- 1 Name of the bidder
- 2 Address of the bidder
- 3 Name of the contact person to whom all references shall be made regarding this tender
- 4 Designation of the person to whom all references shall be made regarding this tender
- 5 Address of the person to whom all references shall be made regarding this tender
- 6 Telephone (with STD code)
- 7 E-Mail of the contact person
- 8 Fax No. (with STD code)

ATTACHMENT – 2

Bid Security Form

Bank Guarantee

(To be stamp in accordance with Stamp Act, if any, of the country of the issuing Bank)

Bank Guarantee No.

Date.....

To:

The Company

Dear Sir(s),

In accordance with invitation for bids under your bidding document/package no.....dated.....M/s.....having its registered/head office at.....(here in after called "Bidder") wish to participate in the said bid for (name of package)

As an irrevocable bank guarantee against Bid Security for an amount of Rs..... valid for 225 days from date of bid opening i.e. fromto required to be submitted by the bidder as a condition precedent for participation in the said bid which amount is liable to be forfeited on the happening of any contingencies mentioned in the bidding documents.

We, the (Name and address of the bank), having our head office atguarantee and undertake to pay immediately on demand by Name of the Company , the amount ofwithout any reservation, protest, recourse. Any such demand made by the employer shall be conclusive and binding on us irrespective of any dispute or difference raised by the bidder.

The Guarantee shall be irrevocable and shall remain valid upto If any further extension of guarantee is required, the same shall be extended to such period (not exceeding one year) on receiving instructions from.....(Bidder's Name)....., on whose behalf guarantee is issued.

In witness whereof the bank, through its authorized officer, has set its hand and stamp on this.....day of20.....at.....

Witness:

Signature:

Signature:

Name:

Name :

Official address: _____ Designation with Bank Stamp

Authorized vide _____

Power of Attorney no. _____

Date _____

NOTE:

- Bid Security amount shall be as specified in the IFB/ITB.

Complete mailing address of the Head Office of the Bank to be given. The bank guarantee validity date shall be forty five (45) days after the last date for which the bid is valid.

- The Stamp Paper of appropriate value shall be purchased in the name of guarantee issuing Bank. The Bank Guarantee shall be issued on a stamp paper of value as applicable in the State of the issuing bank in India or the State of Delhi in India or the State of India from where the BG shall be operated, whichever is higher.

- While getting the Bank Guarantee issued, Bidders are required to ensure compliance to the Bank Guarantee Verification Check List. Further, Bidders are required to fill up this Form 16 and enclose the same with the Bank Guarantee.

BANK GUARANTEE CHECK LIST

- 1 Bank Guarantee No.
- 2 Issuing Bank
- 3 Nature of BG & No. of Pages
- 4 Validity of BG
- 5 Package Description
- 6 Party & Contracts ref. Name, Address, Tel, Fax, E—mail
- 7 Bank Reference

CHECK LIST

- | Sl.No. | Details of Checks | YES / NO |
|--------|---|----------|
| (a) | Is the BG on non-judicial Stamp Paper of appropriate value, as per Stamp Act ? | |
| (b) | Whether date, purpose of purchase of stamp paper and name of the purchaser are indicated on the back of Stamp paper under the Signature of Stamp vendor? (The date of purchase of stamp paper should be not later than the date of execution of BG and the stamp paper should be purchased either in the name of the executing Bank or the party on whose behalf the BG has been issued. Also the Stamp Paper should not be older than six months from the date of execution of BG) | |
| (c) | In case the BG has been executed on Letter Head of the Bank, whether adhesive Stamp of appropriate value has been affixed thereon? | |
| (d) | Has the executing Officer of BG indicated the name, designation and Power of Attorney No. / Signing Power no. etc., on the BG ? | |
| (e) | Is each page of BG duly signed / initiated by executants and whether stamp of Bank is affixed thereon? Whether the last page is signed with full particulars including two witnesses under seal of Bank as required in the prescribed proforma? | |
| (f) | Does the Bank Guarantees compare verbatim with the proforma prescribed in the bid documents ? | |
| (g) | In case of any changes in contents of text, whether changes are of minor/clerical nature (which in no way limits the right of COMPANY in any manner) ? | |
| (h) | Incase of deviations in text of BG, which materially affect the right of COMPANY, whether the changes have been agreed based on the opinion by Legal Department or BG I considered acceptable on the basis of opinion of law Department already available on the similar issue. | |
| (i) | Are the factual details such as Bid Document No. NOA/LOA/Contact No., Contract Price, Percentage of Advance, Amount of BG and Validity of BG correctly mentioned in the BG ? | |
| (j) | Whether overwriting / cutting if any on the BG have been properly authenticated under signature and seal of executants? | |
| (k) | Whether the BG has been issued by a Bank in line with the provisions of Bid /Contract documents? | |
| (l) | In case BG has been issued by a Bank other than those specified of Bid / Contract Documents, is the BG confirmed by a Bank in India acceptable as per Bid / Contract documents? | |

ANNEXURE-I

LIST OF BANKS ACCEPTABLE FOR SUBMISSION OF BANK GUARANTEE FOR BID SECURITY

SCHEDULED COMMERCIAL BANKS

- SBI AND ASSOCIATES**

Sl.No.	Name of Banks	Sl. No.	Name of Banks
1.	State Bank of India	5.	State Bank of Mysore
2.	State Bank of Bikaner and Jaipur	6.	State Bank of Patiala
3.	State Bank of Hyderabad	7.	State Bank of Saurashtra
4.	State Bank of Indore	8.	State Bank of Travancore

- NATIONALISED BANKS**

Sl.No.	Name of Banks	Sl. No.	Name of Banks
9.	Allahabad Bank	13.	Canara Bank
10.	Andhra Bank	14.	Central Bank of India
11.	Bank of India	15.	Corporation Bank
12.	Bank of Maharashtra	16.	Dena Bank
17.	Indian Bank	18.	Indian Overseas Bank
19.	Oriental Bank of Commerce	20.	Punjab National Bank
21.	Punjab & Sind Bank	22.	Syndicate Bank

23.	Union Bank of India	24.	United Bank of India
25.	UCO Bank	26.	Vijaya Bank
27.	Bank of Baroda		

- SCHEDULED PRIVATE BANKS (INDIAN BANKS)**

Sl.No.	Name of Banks	Sl. No.	Name of Banks
27.	Bank of Rajasthan	41.	Sangli Bank Ltd.
28.	Bharat Overseas Bank Ltd.	42.	South Indian Bank Ltd.
29.	Catholic Syrian Bank	43.	Tamilnad Mercantile Bank Ltd.
30.	City Union Bank	44.	United Western Bank Ltd.
31.	Dhanalakshmi Bank	45.	ING Vysya Bank Ltd.
32.	Federal Bank Ltd.	46.	UTI Bank Ltd.
33.	Jammu & Kashmir Bank Ltd.	47.	S.B.I. Commercial & International Bank Ltd.
34.	Karnataka Bank Ltd.	48.	Ganesh Bank of Kurundwad Ltd.
35.	Karur Vysya Bank Ltd.	49.	INDUSIND Bank Ltd.
36.	Lakshmi Vilas Bank Ltd.	50.	ICICI Bank Ltd.
37.	Lord Krishna Bank Ltd.	51.	HDFC Bank Ltd.
38.	Nainital Bank Ltd.	52.	Centurion Bank of Punjab Limited
39.	Kotak Mahindra Bank	53.	Development Credit Bank Ltd.
40.	Ratnakar Bank Ltd.	54.	Yes Bank

- SCHEDULED PRIVATE BANKS (FOREIGN BANKS)**

Sl.No.	Name of Banks	Sl. No.	Name of Banks
55.	Abu Dhabi Commercial Bank Ltd.	71.	Sonali Bank
56.	ABN Amro Bank Ltd.	72.	Standard Chartered Bank
57.	American Express Bank Ltd.	73.	J.P Morgan Chase Bank
58.	Bank of America NA	74.	State Bank of Mauritius
59.	Bank of Bahrain & Kuwait	75.	Development Bank of Singapore
60.	Mashreq Bank	76.	Bank of Ceylon
61.	Bank of Nova Scotia	77.	Bank International Indonesia
62.	The Bank of Tokyo-Mitsubishi UFJ Limited.	78.	Arab Bangladesh Bank
63.	Calyon Bank	79.	Cho Hung Bank
64.	BNP Paribas	80.	China Trust Bank
65.	Barclays Bank	81.	Mizuho Corporate Bank Ltd.
66.	Citi Bank	82.	Krung Thai Bank
67.	Deutsche Bank	83.	Antwerp Diamond Bank N.V. Belgium
68.	The Hong Kong and Shanghai Banking Corporation Ltd.	84.	Internationale Netherlanden Bank N.V. (ING Bank)
69.	Oman International Bank	85.	Bank of China Ltd.
70.	Societe Generale		

- PUBLIC SECTOR BANK**

Sl.No.	Name of Banks
86.	IDBI Ltd.

ATTACHMENT - 3

Tender Document No/Package No:

Dated:

Package Details.....

POWER OF ATTORNEY

BIDDER TO ATTACH THE POWER OF ATTORNEY IN THEIR OWN FORMAT

ATTACHMENT - 4

Tender Document No/Package No:

Dated:

(CERTIFICATE REGARDING ACCEPTANCE OF IMPORTANT CONDITIONS)

Bidder's Name& Address To,

Sub:

1.0 With reference to our bid proposal no.....dated.....for/ Package no. Dated, we hereby confirm that we have read the following provisions of the following clauses and further confirm that notwithstanding anything stated elsewhere to the contrary, the stipulation of these clauses are acceptable to us and we have not taken any deviation to these clauses.

Governing Laws	-	Clause 7 of ITB
Settlement of Disputes	-	Clause 12 of ITB
Terms of payment	-	Clause 1.0 of SCC
Performance Security	-	Clause 5.13 of ITB
Taxes and Duties	-	Clause 8 of ITB
Completion Time Guarantee	-	Clause 9 of ITB
Defects Liability	-	Clause 10 of ITB
Functional Guarantee	-	Clause 11 of ITB
Patent Indemnity	-	Clause 2.25 of ITB

We further confirm that any deviation to the above clauses found anywhere in our bid proposal, implicit or explicit, shall stand unconditionally withdrawn, without any implication to COMPANY.

Date: _____ Signature: _____

Place: _____ Printed Name: _____

Designation: _____

Common Seal

Note: The above certificate is to be submitted in a separate sealed envelope. In the absence of this certificate in a separate sealed envelope, the bid shall be rejected and shall be returned unopened. Bidder can take a print out of it and sign.

ATTACHMENT - 5

NAME OF WORK:.....

BIDDING DOCUMENT NO.....

(Deviations Statement)

Bidder's Name and Address:

To

DISCOMs

Dear Sir,

The following are the deviations and variations from and exceptions to the terms, conditions and specification of the bidding documents for IFB/RfP No._____. These deviations and variations are exhaustive. We are furnishing below the cost of withdrawal for the deviations and variations stated in this Attachment. We shall withdraw the deviations proposed by us in this Attachment at the cost of withdrawal indicated herein, failing which our bid may be rejected and bid security may be forfeited. We confirm that except for these deviations and variations, the entire work shall be performed as per your specifications and conditions of bidding documents. Further, we agree that additional conditions, variations, deviations if any, found in the proposal documents other than those stated in this Attachment, save those pertaining to any rebates offered, shall not be given effect to:

Section/ Part/ Chapter	Clause No.	Page No.	Statement of Deviations/ Variations	Cost of withdrawal
------------------------------	---------------	-------------	---	--------------------

A. COMMERCIAL DEVIATIONS :

B. TECHNICAL DEVIATIONS :

Date : (Signature).....

Place : (Printed Name).....

(Designation).....

(Common Seal)

Note: Continuations sheets of like size and format may be used as per Bidder's requirement.

SECTION 4

Forms & Procedures

ATTACHMENT – 1

BID FORM

To

DISCOMs

Subject:- IFB/RfP No..... Due for opening onat 3:30 PM.

Dear Sir,

With Reference to your subject IFB/RfP, we are pleased to submit our bid for “.....” in a sealed cover as detailed below:

Envelope I: Bid document fee/cost of tender documents [wherever applicable], Bid Security fees/ Earnest Money Deposit, Bid Form, Power of attorney, Certificate regarding acceptance of important terms and conditions, Form of acceptance of EESL fraud prevention policy.

Envelope II: Deviation statement, Techno-commercial bid, Signed copy of RfP.

Envelope III: Price Bid

We confirm that we have quoted as per instructions and terms and conditions of tender documents. We have submitted all the four attachments as stated in “Instructions to Bidders”

We declare that the prices left blank in price schedule/price bid will be deemed to have been included in the prices of other items. We confirm that except as otherwise specifically provided, our bid prices include all applicable taxes including service tax, entry tax(if any) , duties , levies , charges as may be assessed on us.

We further declare that additional conditions, variations, deviations, if any, found in the proposal other than those listed in Attachment-5 save those pertaining to any rebates offered, shall not be given effect to.

We undertake, if our bid is accepted, we shall commence the work immediately upon your Letter of Intent /Letter of Award to us, to achieve completion of work within the time specified in the bidding documents.

If our bid is accepted, we undertake to provide contract performance securities and securities for Deed(s) of Joint Undertaking (as applicable) in the form and amounts and within the times specified in the bidding documents.

We agree to abide by this bid for a period 90 days from the date of opening of bids as stipulated in the bidding documents and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period. Further, the prices of recommended spares, if asked for; contained in our bid shall re-main valid for the entire project period after placement of Lol/LoA.

Until a formal contract is prepared and executed between us, this bid, together with your written acceptance thereof in the form of your Letter of Intent/ Letter of Award shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any other bid you may receive.

We, hereby, declare that only the persons or firms interested in this proposal as principals are named here and that no other persons or firms other than those mentioned herein have any interest in this proposal or in the contract to be entered into, if the award is made on us, that this proposal is made without any connection with any other person, firm or party likewise submitting a proposal, is in all respects for and in good faith, without collusion or fraud.

Dated this -----day of ----- 2013

AUTHORISED SIGNATORIES

ADDRESS :

MOBILE NO. :

LAND LINE NO. :

Our correspondence details are:

1	Name of the bidder	
2	Address of the bidder	
3	Name of the contact person to whom all references shall be made regarding this tender	
4	Designation of the person to whom all references shall be made regarding this tender	
5	Address of the person to whom all references shall be made regarding this tender	
6	Telephone (with STD code)	
7	E-Mail of the contact person	
8	Fax No. (with STD code)	

ATTACHMENT - 4

Tender Document No/Package No:

Dated:

(CERTIFICATE REGARDING ACCEPTANCE OF IMPORTANT CONDITIONS)

Bidder's Name& Address

To,

DISCOMs

Sub:

1.0 With reference to our bid proposal no.....dated.....**for**...../
Package no. **Dated**, we hereby confirm that we have read the following provisions of the following clauses and further confirm that notwithstanding anything stated elsewhere to the contrary, the stipulation of these clauses are acceptable to us and we have not taken any deviation to these clauses.

Governing Laws - Clause 7 of ITB

Settlement of Disputes - Clause 12 of ITB

Terms of payment - Clause 1.0 of SCC

Performance Security - Clause 5.13 of ITB

Taxes and Duties - Clause 8 of ITB

Completion Time Guarantee - Clause 9 of ITB

Defects Liability - Clause 10 of ITB

Functional Guarantee - Clause 11 of ITB

Patent Indemnity - Clause 2.25 of ITB

We further confirm that any deviation to the above clauses found anywhere in our bid proposal, implicit or explicit, shall stand unconditionally withdrawn, without any implication to EESL.

Date:

Signature:

Place:

Printed Name:

Designation:

Common Seal

Note: The above certificate is to be submitted in a separate sealed envelope. In the absence of this certificate in a separate sealed envelope, the bid shall be rejected and shall be returned unopened. Bidder can take a print out of it and sign.

ATTACHMENT - 5

NAME OF WORK:.....

BIDDING DOCUMENT NO.....

(Deviations Statement)

Bidder's Name and Address: To

DISCOMs

Dear Sir,

The following are the deviations and variations from and exceptions to the terms, conditions and specification of the bidding documents for IFB/RfP No. _____
 These deviations and variations are exhaustive. We are furnishing below the cost of withdrawal for the deviations and variations stated in this Attachment. We shall withdraw the deviations proposed by us in this Attachment at the cost of withdrawal indicated herein, failing which our bid may be rejected and bid security may be forfeited. We confirm that except for these deviations and variations, the entire work shall be performed as per your specifications and conditions of bidding documents. Further, we agree that additional conditions, variations, deviations if any, found in the proposal documents other than those stated in this Attachment, save those pertaining to any rebates offered, shall not be given effect to:

Section/ Part/ Chapter	Clause No.	Page No.	Statement of Deviations/ Variations	Cost of withdrawal
------------------------------	---------------	-------------	---	--------------------

A. COMMERCIAL DEVIATIONS :

B. TECHNICAL DEVIATIONS :

Date : (Signature).....

Place : (Printed Name).....

(Designation).....

(Common Seal)

Note: Continuations sheets of like size and format may be used as per Bidder's requirement.

Section -5 PETITION BY DISCOM

PETITION BY DISCOM

BEFORE THE ELECTRICITY REGULATORY COMMISSION FOR THE STATE OF _____

FILE NO:

Petition No.

/2014

IN THE MATTER OF:

Seeking approval of the Hon'ble Commission for implementation of DSM based Efficient lighting Program (DELP) in UT of under Demand Side Management programme.

AND

IN THE MATTER OF:

Electricity Department, - Respondent

Affidavit

I,, Son of aged about, residing atthe deponent named above do hereby solemnly affirm and state on oath as under:

1. That the deponent is the Superintending Engineer-I/Head of the Department, Electricity Department, Government of duly authorised by the Government of to make this affidavit on its behalf and the deponent is acquainted with the facts deposed below,
2. I, the deponent named above do hereby verify that the contents of the affidavit and those of the accompanying petition are true to my personal knowledge and verify that no part of this affidavit is false and nothing material has been concealed.

Enclosures

1. A detailed project Report submitted by M/s. COMPANY.
2. The Excel sheet working for DELP price.

(Deponent)

I, Advocate,, do hereby declare that the person making this affidavit is known to me through the perusal of records and I am satisfied that he is the same person alleging to be deponent himself.

Solemnly affirmed before me on this of January 2014 by the deponent who has been identified by the aforesaid Advocate.

I have satisfied myself by examining the deponent that he understood the contents of the affidavit which has been read over and explained to him. He has also been explained about section 193 of Indian Penal Code that whoever intentionally gives false evidence in any of the proceedings of the Commission or fabricates evidence for purpose of being used in any of the proceedings shall be liable for punishment as per law.

**BEFORE THE
ELECTRICITY REGULATORY COMMISSION FOR THE
STATE OF**

FILE NO:**Petition No.****/2014****IN THE MATTER OF:**

Seeking approval of the Hon'ble Commission for implementation of DSM based Efficient lighting Programme (DELP) in UT of under Demand Side Management programme.

AND**IN THE MATTER OF:**

Electricity Department, - Respondent

MOST RESPECTFULLY SHOWETH:

1. The Humbly submits that under the Demand Side Management program obligation of the Distribution Licensee as required under the provisions in the Draft JERC (DSM) Regulations 2013, the has proposed to implement the DSM based Efficient Lighting Programme (DELP) in the UT of through a performance based contractual agreement with an Energy Service Company (ESCO), M/s. COMPANY, New Delhi.
2. The submits that M/s. COMPANY Ltd, New Delhi, have submitted a standards offer programme (SOP) for implementation of DSM based efficient lighting programme (DELP) in household sector in UT of As per the terms of SOP, the capital investment required for implementation of DELP programme will be made by the ESCO, M/s. COMPANY, New Delhi and the shall make payment to COMPANY to recover the investment made on a periodic basis (monthly) based on the accrued energy efficiency resource benefits. Under this programme M/s. COMPANY shall guarantee the performance of the Project for the entire project period of Ten years.

3.0 DELP Program Detail

Under DELP program, the along with the technical and financial support of M/s. COMPANY

has envisaged to undertake the following tasks.

- (i) It has been envisaged to distribute more energy efficient LED bulbs to Domestic service connections (house holds) in the entire UT of
- (ii) Based on the sample survey conducted by the IIEC on behalf of M/ s. COMPANY, it has been proposed to distribute..... **LED bulbs** to each household in the project area in exchange of good condition GLS lamp for each LED lamps and at subsidized price of Rs.25 per LED lamp.
- (0) Engage the services of third party agencies such as BEE, REAP for physical verification and monitoring of the performance of the LEDs provided under DELP program on annual basis and to certify the working conditions of the LED bulbs in the system.
 - (i) The shall make payment to COMPANY to recover the investment made on a periodic basis (monthly) based on the accrued energy efficiency resource benefits calculated based on the working conditions of the LED bulbs as certified by the third party and the DELP price per unit of energy saved, as determined by the Hon'ble Commission, based on this petition, during the project contract period of ten years.
- (0) M/s. COMPANY agrees to replace the faulty LED bulbs at free of cost throughout the project period of ten years irrespective of the type of fault.
 - (i) Safety Aspects
 - (a) M/s. COMPANY has ensured that the LED lights used under this project complies with the photo biological safety standards specified by BIS.
 - (b) The sample testing procedure may also be carried out in the laboratory of Centre for Green Energy Technology jointly by M/s. COMPANY and ED as part of this programme, before distribution of the LED bulbs to the household consumers, in order to ensure safety compliance.

4.0 Energy Savings

The submits the workings for the deemed energy savings on account of replacement of a 60 W Incandescent bulb by 8 W LED bulb along with the assumptions as below.

Factors Considered

- (i) Number of House holds :
- (ii) Number of LED bulbs distributed per household :

- (iii) Number of LED lamps distributed :
- (iv) Hours of Usage of bulb per day :
- (v) Operating Days Per year :

S.No.	Particulars	Unit	Value
1	Wattage of ICL		
2	Wattage of LED		
3	Power saving		
4	Hours of Usage		
5	Operating days per year		
6	Energy saved per LED per Day		
7	Energy saved per LED per year		
8	Number of LED lamps distributed		
9	Total Energy saved per year (7)x(8)		
10	T& D losses		
11	Energy Requirement at Periphery (9)+(1 1)		
12	Pool loss		
13	Deemed Energy supplied through DELP scheme per Annum. (11)+(13)		

The deemed annual saving of energy under DELP program is around 47.96 Million units.

5.0 Cost Benefit Analysis

The financial payouts / receivable involved in implementation of this scheme, is given in the table below.

S.No.	Description	Amount In Crore Rupees.
1.	Total investment made by M/s.	
2.	Financial Savings deemed to have been accrued to the Utility for the ten years by saving energy sold at subsidized rate.	
3.	Financial Benefits deemed to have been accrued to the Utility for the ten years by selling the saved energy at cross subsidized rate.	

4.	Total Benefits to the Utility (2+3)	
5.	Total Payout to be made to M/s. COMPANY during the project period of Ten Years including O&M charges, but excluding Income Tax.	

Thus, it is submitted that the project is financially viable apart from being benefits the society in achieving Energy security and mitigation of climate changes and protection of environment.

6.0 Other Benefits

The Other accrued benefits upon implementation of this DSM based Efficient Lighting Programme are as given below.

6.1 House Hold Sector

- Helps to reduce their energy consumption and its cost.

The Annual energy savings to a household consumer is estimated to be around 163.80 KWhr.

Thus a house hold consumer is benefited by reducing their annual energy cost to the extent ranging between Rs. 163.80 and Rs. 573.30 at the lower slab of Rs. 1.00 per unit and higher slab of Rs. 3.5 per unit respectively.

6.2 Distribution Utility

- Aids the department in reducing the demand & Supply gap.
- Minimise load shedding during peak hours.
- To meet demands of other cross subsidised consumers like commercial and industrial establishment.
- Generate additional revenue through sale of deemed energy saving to cross subsidised consumers and thereby helps to bridge the gap between the Average Cost of supply and the cross subsidised tariff rates.

6.3 Cross Subsidized Category

- The tariff rates for the cross subsidised categories will progressively reduced due to reduction in cross subsidised costs.

6.4 Society

- Energy security.
- Mitigation of climate changes and protection of environment.

7. Project Financial at a Glance

7.a. Tentative Project Cost:

- (i) Cost of a LED bulbs (In Rupees) :
- (ii) Transportation, Insurance, Storage & Distribution :
- (iii) Total cost per bulb :
- (iv) Less: Consumer contribution :
- (v) Net cost per LED bulb :
- (vi) Total number of LED bulb Distributed under DELP scheme :Nos.
- (vii) Capital cost of the Project :

7.b. DEBT EQUITY Ratio

The debt equity ratio considered for this project is.

- (i) Debt portion(70% of capital cost):
- (0) Interest for debt servicing :
- (i) Equity portion (30%) :
- (ii) Recovery of Equity @ per annum :
- (ii) Return on Equity :
- (iii) Internal Rate of Return on equity :

7.c. Annual Maintenance charges

- (i) Annual maintenance cost : (5% on total cost of LED bulbs)

7.d. Tentative DELP price

The tentative DELP price per unit of energy saved and the annual payout to be made to COMPANY by the under this project is worked out based on the above mentioned parameters and are as detailed in the table below. A detailed working sheet is enclosed along with this petition for consideration of the Hon'ble Commission.

YEAR	I	II	III	IV	V	VI	VII	VIII	IX	X
DELP price per unit in Rupees										
Annual Payout in Crore Rupees										

8.0 PRAYER

Thus, in pursuance of Regulation (12) and Regulation (14.2) of the draft ERC (DSM) Regulations 2013, the humbly prays before the commission to consider this petition and pass necessary orders on the following.

1. Allow to implement the DSM based efficient lighting program as part of DSM measures, with the financial support of M/s. COMPANY, New Delhi.
2. Approve the capital investment made in this project and the DELP prices per unit of energy saved, proposed for recovery of the investment made by M/s. COMPANY and allow the to make monthly/ annual payout to M/s. COMPANY in accordance with DELP price.
3. Allow the to recover the annual payout to be made to M/s. COMPANY through the ARR for the respective year and Pass necessary orders as deem fit by the Hon'ble Commission.
4. Pass necessary orders as deem fit by the Hon'ble Commission.

ELECTRICITY DEPARTMENT

Place:

Date :

Section - 6

TERMS OF REFERENCE FOR MEDIA CONSULTANT FOR DELP

Terms of Reference for Media Consultant for DELP

1. Background Information

1.1 DSM based Efficient Lighting Program (DELP) being implemented by EESL at _____ is to provide energy efficient 8W LED lighting in place of the conventional 60W incandescent lamps (ICLs) for grid connected consumers in the domestic sector at _____. The objective of the project is to:

- To provide households upto LEDs/CFLs as replacement of incandescent bulbs at a price of Rs. each as against the market price of Rs. 400-500. This would reduce power consumption of households and their electricity bill, estimated at Rs.800-1000 per household per year.
- To reduce power procurement cost for Electricity Department due to peak demand reduction.
- To enhance awareness about use of energy efficient products amongst households and have a cascading effect for other products.
- To make energy efficiency as a resource that could be procured by PED through long term contracts. It could reduce the power procurement cost by the same amount as it spends for procuring energy efficiency to make a tariff natural proposition.
- To provide a viable payment security mechanism to incentives large scale investments in energy efficiency.

1.2 The project uses the Standards Offer Programme (SOP) methodology for the first time in India. SOP is a mechanism for acquiring demand-side resources (energy efficiency and load management) under which a utility (or a government agency) purchases energy savings and/or demand reductions using a predetermined rate. Any energy user (utility customer) or energy service company (ESCO) that can deliver energy and/or demand savings is paid the fixed amounts per kWh or kW (the Standard Offer amounts) upon completion of the EE/DSM project and verification and certification of the achieved savings by an authorized measurement and verification (M&V) organization. The amount will be paid periodically based on a long term contract signed between the ESCO and Utility. A Standard Offer Program (SOP) treats energy saving projects in a manner analogous to customer generation of electricity, and considers the energy or demand reductions as resources that the utility will pay for, in lieu of the avoided peak power procurement. SOP is comparable to the feed-in tariffs (FITs) utilized to promote increased implementation of renewable energy resources. The amounts to be paid for the energy savings and/or demand reductions under a SOP are generally based on the value of these reductions to the utility system.

1.3 The Table 1 below summarises the benefits of the SOP program being offered by EESL to PED

Table 1: EXECUTIVE SUMMARY OF THE DPR FOR DSM BASED EFFICIENT LIGHTING PROGRAM AT _____

Project Name	DSM Based Efficient Lighting Program For Domestic Sector
Mode	DSM Enabled EECO Program
Sector	Domestic Household
Type Of Investment	ESCO Investment By EESL On Relevant Debt/Equity Ratio
No. Of Households	
No. Of LEDs To Be Distributed	
Typical Energy Savings Per Bulb	52 W (60w ICL Replaced By 8w Led)
Annual Energy Savings	48 Mn Units Annually
Contract Period For ESCO	
Investment By EESL	

1.4 Benefits to Stakeholders: The benefits to various stakeholders of the scheme are as follows

(a) Consumers

- (i) Reduction in electricity bills
- (ii) Capital cost Benefit

(b) Electricity Department

- (i) Reduction in Power procurement Cost
- (ii) Reduction in T&D Losses.
- (iii) Savings in CAPEX on T&D Network.
- (iv) Reduction in Peak Demand.
- (v) Improvement in Average Revenue Realization as % of Average Cost of Supply.

(c) Society:

Savings in electricity will accommodate the increase electricity demand thereby lead to less consumption of fossil fuels and minimizing the Green House Effects.

2. Objectives of hiring Media Consultant

2.1 Under the programme, quality LEDs would be distributed to grid-connected residential households in exchange of an incandescent lamp (ICL). LEDs shall be adequately stamped OR unique identification number may be given, to forbid them to enter into market for re-sale. ApproximatelyLEDs may be distributed. The LED distribution under a programme is restricted to the project boundary which is the identified DISCOM's project distribution area e.g. DISCOM Circle, Division. The households under the defined project area can be identified by their unique utility consumer number. The distribution of LEDs and replacement of previously used ICLs in households in the DISCOM's project distribution area can take place through dedicated distribution points as advertised by the implementer in the local media e.g. local DISCOM offices, retail outlets, resident association offices, schools etc.

3.2 The programme requires information dissemination about the following targeting the household grid connected consumers:

(a) Programme information:

- Objectives of the programme
- Benefits that will accrue to households in terms of reduced capital cost of bulbs as well as regular electricity bills
- Overall benefit of the programme in reducing energy use, GHG emissions, energy security
- Unique identification provided in the LEDs to distinguish them from others that are sold in the market

(b) Requirements for getting LED bulbs:

- Total number of LEDs per household to be provided – and cost each LED – i.e. LEDs for Rs. in total
- Schedule of distribution with address/ other contact details
- Documents required to be taken to distribution centers – copy of last electricity bill/ ID, etc
- Providing working ICLs to get LEDs

(c) Technical performance of LEDs:

- year warranty of bulbs
- Consumer complaints redressal mechanism
- Procedure for making complaints – call center details to be provided

(d) General Information

- Information about LED technology, specifications of the bulbs, etc
- Contact details of designated EESL, REAP and PED officials

4. Expectations of Media Consultant

4.1 The Media Consultant is expected to aid and advise EESL:

- (i) In developing a media plan that can achieve the objectives outlined in para 3 above. It must clearly delineate the outreach methodology for each of the 4 objectives in the above para and indicate the most appropriate media (print, TV, outdoor, social media, internet, etc) for each one of them. It must prepare a **Media Implementation Plan (MIP)** for this purpose which should be based on the coverage of each media recommended to the target group, which is the grid connected household consumers. The plan must also provide the frequency and timing of insertions in different media segments
- (ii) To develop the messaging content to all different kind of media recommended in MIP. It must prepare a **Media Thematic Plan (MTP)** for this purpose. This must be based on scientific knowledge about the consumer segment being targeted following similar studies/ media campaigns in _____
- (iii) To develop time frame for insertions – time releases / media initiatives for sustained visibility at key centres and liaise with target media to bring out special reports on activities / events. It must prepare a **Media Scheduling Plan (MSP)** for this purpose.

4.2 The media consultant will prepare about 3 plans in consultation with EESL. After that the media consultant is also expected to implement the following:

- a) Development of creatives, television and radio spots, other communication products for different media listed out in the plan
- b) Buying media as per the approved plan.

5. **Duration of the work:** The programme in project area likely to commence in the first week of

month and the entire distribution of lamps will be completed by 2014. The media consultant is expected to provide inputs to EESL formonths between 2014.

6. **Qualification Criteria**

The Consultant interested in being considered for this project must fulfill the following criteria:

- Should be a firm/company registered/incorporated in India
- Should have at least 20 creative consultants/ employees on permanent pay roll in India as on March 31st, 2013.
- Should have an minimum annual turnover of INR One hundred million (INR 1,00,000,000) or its equivalent in foreign currency from Consulting Fees in at least two of the last three (3) years i.e. FY 2010-11, 2011-12 and 2012-13.
- Should have been profitable for at least two (2) of the last three (3) years i.e. FY 2010-11, 2011-12 and 2012-13.
- Should be in active business for a minimum period of 5 years
- Should have a successful track record of advising on the full scope of activities outlined
- Should have experience in working with Governments and Public Sector Undertakings
- Should have adequate capability to deploy adequate personnel
- Experience of sub-contractor including parent company may be stated only if the relevant Memorandum of Understanding (MoU) is submitted.
- Should not be involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this contract
- Should not be black-listed by any Central / State Government / Public Sector Undertaking in India
- Should have worked on energy efficiency media campaign with BEE or any other agency.

7. **Financial Offer:** The media consultant is expected to provide lumpsum amount for 5 months. The duration for delivering services indicated para 4.1. Any other form of price bid will be deemed to be rejected summarily.

8. The bid must be given in 2 sealed envelopes – one providing technical criteria and the other indicating the financial offer as per para 7.

Section - 7

FAQS FOR DELP SCHEME

FREQUENTLY ASKED QUESTIONS ON DELP Scheme

Ques. 1 What is DELP scheme?

Ans. An average of 3 ordinary bulbs are used by household consumers. Ordinary bulb is an extremely energy inefficient form of lighting with just 5% of the electricity input converted to light. There are efficient light bulbs available like LEDs which about consume only one-tenth of energy used by ordinary bulb to provide the same or better light output. However the high cost of LED (INR 400 to 500) is the reason why consumers do not buy LED bulbs. The programme provided 3 high quality LED bulbs to each household at a cost of Rs. 10 which is same as that of ordinary bul. Consumers will have to give back 3 working ordinary bulbs to get the subsidized rate LED bulbs.

Ques. 2 How will the DELP scheme benefit me?

Ans. Consumers electricity bill will reduce by about Rs. 1000 per year. They will get high quality LED bulb at the price of INR 10/-, equal to that of ordinary bulb. This will lead to savings in electricity and lower consumption of fossil fuels thus benefiting the environment. Puducherry is the first state in India to implement this scheme.

Ques. 3 Who is eligible to get subsidized LEDs?

Ans. Every household having a metered connection from DISCOM is eligible to get the LED bulbs under the DELP Scheme.

Ques. 4 Where and when can the LED bulb be procured?

Ans. The bulbs will be distributed door-to-door and also through special counters set up at designated places in the city. These will not be available at any other location including shops etc.

Ques. 5 What is required to be given to get LED bulbs?

Ans. The following must be provided:

- (a) True copy of the latest electricity bill
- (b) Proof of Identity
- (c) Rs. 30 in cash for 3 LED, and
- (d) 3 working ordinary bulbs

Ques. 6 What if the LED bulb fuses?

Ans. LED bulbs have very long life (> 15 years if used of 4-5 hours every day) and are not likely to fuse. However, if the LED bulb stops working due to a technical defect, the same will be replaced free of cost by EESL.

Ques. 7 Where can I register my complaints?

Ans. A Call Centre will be operational to record the complaints of non working LED and a complaint redresal mechanism to rectify the same within a reasonable time will be operationalised.

Ques. 8 How can I replace a fused LED?

Ans. Only those bulbs that fail due to technical fault will be replaced. No replacement for physically damaged, stolen or non working for other non technical reasons will be entertained.

Ques. 9 Under DELP Scheme, maximum of 3 LED will be distributed per household. In case the household has more than 3 light points or the renovation/ expansion of the house is undertaken, does the household pay market price for procuring additional LED?

Ans. Under the current scheme, 3 LED per Household are being distributed at a subsidized cost. It may be noted that the programme is for replacement only. Consumers are encouraged to replace lamps which have high usage and they will be informed suitably through the awareness programme that will be carried out before and during implementation.

Ques. 10 Why LED? What are the advantages?

Ans. LED is the latest technology and are energy efficient replacement for the standard incandescent bulb. LEDs are extremely reliable, and have a much longer lifetime than almost all other types of lighting. LEDs consume only one-tenth of energy used by ICLs to provide the same or better light output.

Ques. 11 Is LED safe?

Ans. Yes. LED does not contain any hazardous material. When compared to CFLs, LED do not have mercury and therefore have minimal negative impact on environment.

Ques. 12 **Whether LED distributed under DELP Scheme has the same lumen intensity as an incandescent bulb?**

Ans. Yes. Incandescent bulb will be replaced with LED as per BIS norms so as to get the same lumen intensity.

Ques. 13 **If the requirement is to buy more than 3 LED bulbs, are they available for same price?**

Ans. No, the programme is to provide only 3 LEDs. It is encouraged that these be used as replacements in places where the use is maximum. This could include bedrooms, living rooms, kitchen, etc where light is used for more than 4-5 hours.

Ques. 14 **As the cost is very high, why use LEDs for lighting requirements?**

Ans. The first cost of LEDs are high almost 25 times that of ordinary bulbs. However, the life of LED is 30 times more than ordinary bulb. So during the life cycle of LED, you will need 30 ordinary bulbs. Also, the electricity bills by using LEDs reduce by 85%. On life cycle cost, the capital and running cost is only 20% of that ordinary bulb.

Ques. 15 **Who is implementing the programme and why?**

Ans. DISCOM and Energy Efficiency Services Limited (EESL) a public sector body of Government of India are implementing the programme. The main objective is to promote efficient lighting, enhance awareness about the fact that use of efficient equipments reduce electricity bills and help preserve environment.

Ques. 16 **Is the LED bulb different from the other such bulbs available in the market?**

Ans. Yes, each LED bulb being distributed has a unique number, logo of DISCOM and EESL and indicated that it is made especially for this programme. The technical performance of the bulb is superior to the LED bulbs available in open market.



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