

**GOVERNMENT OF PUDUCHERRY
ELECTRICITY DEPARTMENT**

137, Nethaji Subhash Chandra Bose Salai, Puducherry - 605 001
Phone: 0413-2334277 (Per), 0413-2336361/65 (PBX), 0413-2331556 (Fax)

Lr.No. 3370 /ED/SE-I/EE-II/F- DSM/2013-14 Puducherry, dated. 14-02-2014

To

The Secretary,
JERC for Goa & UTs,
II Floor, HSIIDC Office Complex,
Vanijya Nikunj Complex, Udyog Vihar,
Phase - V, Gurgaon - 122016,
HARYANA.

Sir,

Sub: Electricity Department, Puducherry - Seeking approval for implementation of DSM based Efficient lighting Program (DELP) in UT of Puducherry under Demand Side Management programme - Revised cost workings - Affidavit - Submitted - Regarding.

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Six copies of the revised cost workings in the matter of petition seeking approval for implementation of DSM based Efficient lighting Program (DELP) in UT of Puducherry under Demand Side Management programme, along with the affidavit are enclosed for consideration of the Hon'ble Commission.

Yours faithfully,


(K. MATHIVANAN)

Superintending Engineer-I

Encl: As above.

**BEFORE THE
JOINT ELECTRICITY REGULATORY COMMISSION
FOR THE STATE OF GOA AND UNION TERRITORIES**

FILE NO:

Petition No. 128 /2014

IN THE MATTER OF:

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

AND

IN THE MATTER OF:

Electricity Department, Puducherry

- Petitioner

Affidavit

I, **K . Mathivanan**, Son of Thiru A. Kanniah aged about 57 years, residing at No 48, 3rd Cross, Kurunji Nagar, Puducherry 605 008, the 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 Puducherry duly authorised by the Government of Puducherry 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.

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(Deponent)

I, **S. Srinivasaperumal** Advocate, Puducherry, 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.

S. Srinivasaperumal

S. SRINIVASA PERUMAL, BA, LLB,
ADVOCATE & NOTARY PUBLIC
(GOVT. OF INDIA)

Advocate

**6, ANNAI VELANKANNI STREET,
KAMARAJ NAGAR, PUDUCHERRY-11**

Solemnly affirmed before me on this 14th day of February 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
JOINT ELECTRICITY REGULATORY COMMISSION FOR THE
STATE OF GOA AND UNION TERRITORIES**

FILE NO:

Petition No. 128/2014

IN THE MATTER OF:

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

AND

IN THE MATTER OF:

Electricity Department, Puducherry - Petitioner

**MOST RESPECTFULLY SHOWETH THE ADDITIONAL
SUBMISSION:**

- 1.0** At the outset, the EDP humbly submits that in the original affidavit dated 17.01.2014, filed before the Hon'ble JERC on this subject matter, the Status of the Electricity Department has mistakenly quoted as 'Respondent' and the same may be read as 'Petitioner'.
- 2.0** The EDP submits that considering the deliberations held during the hearing proceedings before the Hon'ble Commission on 05.02.2014 on the subject matter and the directions given by the Hon'ble Commission during the proceedings, the project costing and its benefits are reworked. The revised financial and cost benefit analysis for this project is submitted for the consideration of the Hon'ble Commission.


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3.0 The EDP submits that the wattage of the LED bulb to be distributed to the consumer under this DELP scheme has been refixed as 7 W instead of 8 W as proposed in the original petition. These changes would help the department in achieving additional savings without compromising the lighting need of the household consumers.

4.0 Energy Savings

The workings for the deemed energy savings on account of replacement of a 60 W Incandescent bulb by 7 W LED bulb along with the assumptions is submitted below.

Factors Considered

- (i) Number of Households : 2,45,000
- (ii) Number of LED bulbs distributed per household : Three
- (iii) Number of LED bulbs distributed : 7,35,000
- (iv) Hours of Usage of bulb per day : 3.5 Hours
- (v) Operating Days Per year : 300 days

S.No.	Particulars	Unit	Value
1.	Wattage of ICL	Watt	60
2.	Wattage of LED	Watt	7
3.	Power saving	Watt	53
4.	Hours of Usage	Hrs/Day	3.5
5.	Operating days per year	Days / Year	300
6.	Energy saved per LED per Day	KWHR	0.1855
7.	Energy saved per LED per year	KWHR	55.65
8.	Number of LED lamps distributed	Number	735000
9.	Total Energy saved per year (7)x(8)	Million Kwhr	40.90
10.	T& D losses@12.5%	Million Kwhr	5.84
11.	Energy Requirement at Periphery (9)+(11)	Million Kwhr	46.74
12.	Pool loss @ 4.37%	Million Kwhr	2.14
13.	Deemed Energy supplied through DELP-SOP scheme per Annum. 11+13	Million Kwhr	48.88


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The deemed annual saving of energy under DELP program is around 48.88 Million units.

5.0 The EDP submits that through a open competitive bidding process, the cost of the LED bulb is determined as Rs. 310 per bulb and taken advantage of the cost reduction and to make this program more attractive, the Department has proposed to restrict the consumer contribution towards cost of the bulb to Rs. 10/- per bulb instead of Rs. 25/- proposed earlier. Thus, the total capital cost being invested by M/s. EESL under this program has comes down to Rs. 22.785 crores.

6.0 Project Financial at a Glance

6.a. Tentative Project Cost:

- (i) Cost of a LED bulb (In Rupees) : Rs. 310.00
- (ii) Transportation, Insurance,
storage & Distribution : Rs. 10.00
- (iii) Total cost per bulb : Rs. 320.00
- (iv) Less : Consumer contribution : Rs. 10.00
- (v) Net cost per LED Bulb : Rs. 310.00
- (vi) Total number of LED bulb
Distributed under DELP scheme: 7,35,000 Nos.
- (vii) Capital cost of the Project : Rs. 22,78,50,000.00
(Rs. 310 x 735000)

6.b. DEBT EQUITY Ratio

The debt equity ratio considered for this project is 70: 30.

- (i) Debt portion (70% of capital cost) : Rs. 159495000.00
- (ii) Equity portion (30%) : Rs. 68355000.00


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6.c. Rate of interest for servicing the Debt Portion

The EDP submits that the rate of interest considered for working the DELP-SOP price for the purpose of servicing the debt portion is 12.5%. However, M/s. EESL has agreed to reimburse on actual basis and excess recovery on part of EESL would be adjusted in future payouts.

6.d. Return on Equity

The EDP submits that as per the CERC norms for fixation of tariff for generation projects, the normative rate of return on equity is considered as 15.5%. Thus, in line with the CERC norms the same Rate of Return of **15.5%** has been adopted for this project.

6.e. Recovery of Equity

The EDP has considered repaying the equity portion invested by M/s. EESL at the rate of 10% per annum. As such the return on equity is calculated on diminishing value of equity.

6.f. Annual Maintenance Charges (AMC)

The EDP submits that the Annual Maintenance Cost as specified by the CERC for generation projects could not be adopted for this project as the scope of maintenance works varies widely and could not be matched. Given due consideration to the replacement warranty for eight years given by the LED bulb supplier, the EDP has revised and adopted the AMC at the rate of 3% on total cost of LED bulbs.

7.0 DELP-SOP price

The revised DELP-SOP price per unit of energy saved and the annual payout to be made to M/s. EESL by the EDP under

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this project is worked out based on the above mentioned normative parameters and furnished 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	1.23	1.17	1.11	1.04	0.98	0.92	0.86	0.79	0.73	0.67
Annual payout in Crore Rupees	6.02	5.71	5.40	5.10	4.79	4.49	4.18	3.88	3.57	3.27

8.0 Cost Benefit Analysis

The financial payouts / benefits of the Electricity Department, Puducherry upon implementation of this scheme, is illustrated in the table below.

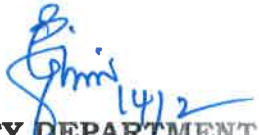
S.No.	Description	Amount In Crore Rupees.
1.	Total investment made by M/s. EESL, New Delhi.	22.785
2.	Financial Savings deemed to have been accrued to the Utility for the ten years by saving energy sold at subsidized rate.(Rs. 4.40-2.55 = 1.85) (Rs. 1.85 x 4.09 x 10)	75.665
3.	Total Payout to be made to M/s. EESL during the project period of Ten Years including O&M charges, but excluding Income Tax.	46.41


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9.0 PRAYER

Thus, in pursuance of Regulation (12) and Regulation (14.2) of the draft JERC (DSM) Regulations 2013, the EDP humbly prays before the commission to consider these additional submissions and pass necessary orders on the following.

1. Allow EDP to implement the DSM based efficient lighting program as part of DSM measures, with the financial support of M/s. EESL, New Delhi.
2. Approve the capital investment made in this project.
3. Approve the DELP-SOP prices per unit of energy saved, proposed for recovery of the investment made by M/s. EESL and allow the EDP to make monthly/ annual payout to M/s. EESL in accordance with DELP-SOP price.
4. Approve the normative parameters as considered by the EDP or as deem fit by the Hon'ble Commission for the purpose of working of the DELP-SOP prices.
5. Allow the EDP to recover the annual payout to be made to M/s. EESL through the ARR for the respective year
6. Approve the draft Energy Saving Agreement and
7. Pass necessary orders as deem fit by the Hon'ble Commission.


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Place : Puducherry
Date : 14-02-2014.