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सचिव भारत सरकार
Secretary to the Government of India

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D.O.No. N-11025/4/2013-UCD

1st July, 2013

Dear Chief Secretary,

This is in continuation of my D.O. Letter No. N-11025/89/2011-UCD dated 15.3.2013 addressed to your Urban Development Secretary regarding the significance of Street Lighting in the context of economic & social activities as well as its role in the improvement of safety and security of citizens, particularly that of women and the weaker sections. The advisory, which can be accessed at <http://moud.gov.in/>, highlights inter alia the following aspects:-

- (i) The importance of efficient and expanded street lighting system in the context of containing crime against women and the weaker sections of the society and for providing an environment of safety and security for citizenry in general.
- (ii) Adoption of new energy efficient technologies / design for improved operation and maintenance (O&M) practices leading to minimising street lighting costs while reducing energy use.

2. You would agree that the benefits of adequate street lighting are of great importance and require focussed and concerted action. These issues were also discussed in a Meeting of Committee of Secretaries chaired by the Cabinet Secretary on 25.1.2013 and in the conference of Chief Secretaries and DGs of Police of 4.1.2013.

3. The State/UT Governments/Administrators vide aforementioned letter of this Ministry were requested that the Civic Bodies / Municipalities may undertake a thorough review of the existing facilities of street lighting and based on the findings of the review, necessary improvements may be made, wherever required. **A response from your State / UT is still awaited.**

4. The Ministry would like to consult the States/ UTs to review the status w.r.t. adoption of strengthened measures for putting in place energy efficient and expanded street lighting system in order to contain crime against women and the weaker sections and for providing an environment of safety and security for citizenry in general.

5. The concept of Intelligent Street Lighting Management System may also be adopted for reducing Energy Consumption by providing dimmable electronic ballasts – Each lamp can be step less dimmed automatically based on traffic and climatic conditions which will reduce wattage and save energy. Similarly photocells and time aided dimming control systems according to the annual calendar of sunrise and sunset and definite period of time during night hours required for the dimming operations may also be used. The intelligent street lighting management system can be monitored to SCADA System through internet which will give lamp status, %age dimming, fault reports etc.

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6. While retrofitting old installations, LEDs may be provided and the concept of intelligent street light management system as mentioned in para 5 above should also be kept in mind. I would also like to inform that some States such as Gujarat and Madhya Pradesh, have initiated process for augmenting LED based street lighting which has several advantages. The State of Madhya Pradesh is also working on review of baseline design of energy efficient programmes for street lighting using LED and solar technologies to ensure reduction in energy bills and carbon footprint.

7. In the above background, the Ministry would request the State Governments to issue necessary instructions to all Urban Local Bodies for introduction of LED based street lighting by municipal bodies. LEDs have a greater potential to provide highly efficient lighting with little environmental pollution. The advantages offered by LED based lighting include durability and low power consumption leading to very economical life cycle costs, lower heat generation making LEDs the best lighting devices, as their effect on increasing space heat is minimal, much more eco-friendly and energy efficient. An analysis of costs (Capex and Opex), savings and financial viability on the use of LED fittings for a typical office complex and municipalities of different sizes is given at *Annexure*.

8. Therefore, I would suggest that LEDs street lighting may be promoted in all ULBs of your State and request also that an Action Taken Report or a preliminary status report on the revamping street lighting systems of your State be submitted to this Ministry.

9. I would appreciate an early response in the matter.

With regards,

Yours sincerely



(Sudhir Krishna)

Encl: As above

To
Chief Secretaries of all States / UTs

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TENTATIVE ANALYSIS OF COSTS (cap.exp & op.exp) & SAVINGS AND FINANCIAL VIABILITY (Based on a Case-Study)

(i) TYPICAL OFFICE COMPLEX

If in any office complex of about **3000 sqmt. floor area**, conventional luminaries are replaced with LED luminaries for attaining the same lux level, there may be savings of **about Rs. 129/- per sq.mt. of the floor area** based on an assessment made as per the statistics indicated as under:

	No. of fittings	Wattage & type of conventional fittings	Wattage of LED fittings	Annual savings in Rs. Per Luminary	Total savings
(a)	200	2 x 18 W CFL	15 W	Rs. 667/-	Rs. 133400/-
(b)	1000	1x 28 W T5(FTL)	20 W	Rs. 255/-	Rs. 255000/-
				Total	Rs.3,88,000/- say Rs. 3.88 lacs.

Annual savings per sq. mt. floor area – Rs. 129.33

(ii) A MUNICIPALITY OF DIFFERENT SIZES (SMALL, MEDIUM & LARGE)

The length of service roads will depend upon the size of that municipality. By providing 90 W LED Lights instead of conventional 150 W HPSV, same lux level on the roads may be achieved. LED lights are not advisable/feasible for the Metropolitan roads like Ring Roads in Delhi as the same cannot provide the required lux level. The financial viability on account of cost of street lighting on 1 KM length of a service road in any Municipality can be calculated by citing an example – say 40 poles are erected on 1 Km. stretch, (25 meters apart) having one LED Luminary each will result into annual savings of Rs. 2253/- on account of energy and maintenance per luminary. i.e. **Rs. 90120/- per Km. (annual saving).**