

**GOVERNMENT OF INDIA  
POWER  
LOK SABHA**

UNSTARRED QUESTION NO:3393  
ANSWERED ON:13.12.2012  
USE OF LED IN PLACE OF CFL  
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**Will the Minister of POWER be pleased to state:**

- (a) whether the Central Government has decided to have Light Emitting Diode (LED) system in place of Compact Fluorescent Lamps (CFL) for rural homes in the country;
- (b) if so, the details of its advantages in respect of cost and availability;
- (c) details of estimated expenditure involved and number of rural homes to be benefited, State-wise; and
- (d) the time by which it likely to come into effect?

**Answer**

THE MINISTER OF STATE (INDEPENDENT CHARGE) OF THE MINISTRY OF POWER ( SHRI JYOTIRADITYA M. SCINDIA )

(a) : No, Madam. However, the Ministry of Power proposes to provide LED bulbs to BPL families under its Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) in the XII Plan. The LED is also promoted by Bureau of Energy Efficiency (BEE) under its LED Village Campaign program where a few villages are adopted for demonstration projects and LED bulbs are provided free of cost.

(b) : Advantages of an LED bulb are as follows:-

# Reduced power consumption LEDs are available with an efficiency of 110 Lumens per watt vis a vis 65-80 Lumens/Watt for CFL.

# Operational life of current white LED lamps is 50,000-80,000 burning hours as compared to 1000 burning hours for incandescent bulbs and 6000-10,000 burning hours for CFL.

# LEDs emit light but hardly any UV (Ultra Violet) or IR (Infra-Red) radiation.

# As LEDs have no filaments, shock and vibration does not affect them as they affect other lamps. LEDs are not just the modern technology, but they have such outstanding properties that they offer a whole series of practical benefits.

# LEDs do not use mercury.

# The following Table shows comparative cost advantage of LEDs over CFLs and ICLs

Parameters	Unit	LED	CFL	ICL
Projected Lifespan	Hours	50000	6000	1000
Watt per bulb	watt	9	12	60
Cost per bulb	INR	650	120	15
KWh of Electricity used over 50000 hrs	kwh	450	600	3000

Availability: LED bulbs of various ratings are available in the market. There are around 12 large, 15 Medium and about 600 small manufacturers in LED business in India.

(c) : Under the LED Village Campaign, LED was used for promotion through pilot projects in the area of household lighting in villages. For household lighting, the existing incandescent bulbs in the households of a village were replaced by LED lights with the State Designated Agencies (SDAs) identifying villages comprising 200 to 250 households. The SDAs were provided financial support to implement the pilot project by Bureau of Energy Efficiency under the scheme.

During the 11th Plan, the household incandescent bulbs were replaced by LED bulbs benefiting one village each in 27 States incurring a total expenditure of Rs.405 lakhs. The State-wise detail is given below:

Sl. No.	State	Name of Village Lakh	Rs.
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1	West Bengal	Village Dandirhat, Dist. 24 Parganas (North)	15
2	Jharkhand	Village Jamchuan, Dist. Ranchi	15
3	Bihar	Village Nepura, Silao Block, Dist. Nalanda	15
4	Orissa	Villages. RaghurajPur, Dist. Puri&Satyabhamapur, Dist. Cuttack	15
5	Arunachal Pradesh	Villages. Darka&Kabu, Dist. West Siang	15
6	Assam	Village MakumPathar No. 4, Dist. Tinsukia	15
7	Nagaland	Village Rotomi, Dist. Mokokchung	15
8	Mizoram	Villages Ailawng, Buangpui&Neihloh	15
9	Meghalaya	Village Tynring, Dist. East Khasi Hill	15
10	Tripura	Village ChaturdasDebotabari, Old Agartala	15
11	Sikkim	Villages Ramam, Shipgyer, SalimPakyal,Saffolliching	15
12	Uttarakhand	Village Ramgad, Dist. Nainital	15
13	Haryana	Village Shimla Molana, Block Panipat	15
14	Punjab	Village ChuniKhurd, Dist. Fatehgarh Sahib	15
15	Himachal Pradesh	Village MakhnuMajra, Dist. Solan, HP	15
16	Rajasthan	Village Jetwara, Dist. Sirohi	15
17	Uttar Pradesh	Village Anapur, Dist. Allahabad	15
18	Kerala	Village PerungottukurushiPanchayat, Ayakkurushi Colony	15
19	Andhra Pradesh	Village Pagidipally, Dist. Nalgonda	15
20	Tamil Nadu	Villages Vadakkalur, Kudanur&Kallukadu, Dist. Coimbatore	15
21	Karnataka	Village Mattur, Dist. Shimoga	15
22	Puducherry	Village Valavil, Mahe	15
23	Andaman & Nicobar	Village Caddlegunj, Andaman Trunk Road	15
24	Gujarat	Village Amarpura (Khana), Mansa Taluka, Dist.Gandhinagar	15
25	Maharashtra	Village HivareBajar, Ahmednagar	15
26	Chhattisgarh	Village Rawan, Dist. Raipur	15
27	Madhya Pradesh	Village Jait, Budhani Tehsil, Dist. Sehore	15

Total 405

(d) : LEDs distributed under BEE's Village Lighting Campaign has been given in Reply to part (c) of the question. RGGVY Scheme proposes LED Distribution to be undertaken in the XII Plan period once the scheme is approved.