

# LED Push Not Only Brightening Homes But Also Cutting Electricity Bills

The govt's ambitious LED distribution programme is already showing results with reduced power consumption, increase in domestic savings and cut in carbon emission

## Lighting India

► **The LED push**, under the **DELP**, was launched across Maharashtra, Rajasthan, Delhi, Uttar Pradesh and Himachal Pradesh in January

► **Energy Efficiency Services Ltd (EESL)**, a PSU under the power ministry is driving the **LED** distribution initiative

► **Two crore LED bulbs** have been distributed in these states



**68 lakh kilowatts of energy is saved every day**

► **Cut in 645 megawatts of power** during peak hours

► **5,520-tonne drop** in daily carbon emission

► **₹2.71 crore** of domestic savings every day

► **EESL plans to cover** Jharkhand, Madhya Pradesh, Kerala, Chhattisgarh, Jammu & Kashmir, Assam, Chandigarh and Karnataka in the next phase



● **The purpose of this project is to replace 77 crore regular bulbs and 40 crore CFLs (bought by Indians every year) with more energy-efficient LED lamps**

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**Mumbai:** In recent months, cottage industries in Puducherry that make incense sticks, mats and perfumed candles have been staying open late into the night with their electricity costs intact. Nearly 600 km away in Guntur district of Andhra Pradesh, farmers living in mud houses along the Krishna River no longer fret about shooting power bills while switching on lights at dusk.

This is all thanks to a government-sponsored LED distribution programme, which outlines the replacement of incandescent bulbs and CFLs with energy-efficient LED lamps.

Saurabh Kumar, managing director of Energy Efficiency Services Ltd (EESL), a PSU under the power ministry that is driving the LED distribution initiative, said the pilot programme has been ex-

panded to all districts in Andhra Pradesh since its launch in April 2014 (Puducherry pilot phase).

"Today, almost 90% of all households in AP and Puducherry have replaced incandescent bulbs with LED lamps and the electricity bills of a household have reduced by up to ₹200 every month."

The LED push, under the Domestic Efficient Lighting Programme, was launched full swing across Maharashtra, Rajasthan, Delhi, Uttar Pradesh and Himachal Pradesh in January. Nearly two crore LED bulbs have been distributed in these states and the project's ambition to reduce power consumption, increase domestic savings and trim carbon emission is already seeing results.

A staggering 68 lakh kilowatts of energy is saved every day. This includes a cut in 645 megawatts of power during peak hours, a 5,520-tonne drop in daily carbon emission and domestic savings of ₹2.71

## ECONOMIES OF SCALE

**LED bulbs cost ₹300-350 apiece in the market – the govt offers cheaper bulbs because it procures in bulk, around 7.5 crore bulbs so far**

crore every day.

"The purpose of this project is to replace 77 crore regular bulbs and 40 crore CFLs (bought by Indians every year) with more energy-efficient LED lamps," said Kumar, adding that the poor are able to make significant savings.

According to EESL, an incandescent bulb requires 60 watts of power to emit 350–400 lumen of light (unit of light) while CFLs with its hazardous mercury coat-

ing emit 450–550 lumen of light on 14–16 watts. In sharp contrast, LEDs cast 600–700 lumen, consuming just 6 watts of power and saving 90% more energy than regular bulbs. LED bulbs also have a life of 15,000–20,000 hours.

The LED project is financed by consumers themselves through two plans. The first one is an 'on-bill EMI' model under which consumers have to pay ₹105 for an LED bulb across 10 months, which is added to the monthly power bill.

The second plan allows the consumer to buy bulbs in one go — every consumer is entitled to four LED bulbs — by paying ₹100 apiece. (The bulbs come with a three-year replacement warranty.)

LED bulbs actually cost ₹300-350 apiece in the market — the government offers cheaper bulbs because it procures in bulk, around 7.5 crore bulbs so far. The government effort has already halved market prices from ₹650-700 apiece

a year ago.

For the project, LED lamps are procured at ₹78 apiece. The additional ₹27 that consumers must pay are due to the interest charges on financing, database maintenance and distribution cost.

Deepak Gupta, an analyst at Shakti Foundation, a think-tank specialising in sustainable energy, said aggregate savings are significant in this project. "The numbers reflect the scale the project is achieving; in terms of cost, we may see more economies of scale once the project area is widened."

"The project has expanded our volumes for sure," said Sandeep Singh, CMO of NTL Lemnis, a LED maker that has supplied over 6 million pieces to the government. "From a marketing point of view, the project has disrupted our pricing strategy. We'll never be able to sell LEDs at ₹105 considering the long distribution line we've to cover."