Research Unit
Press Information Bureau
Government of India

UJALA: 10 Years of Energy-Efficient Lighting

36.87 crore LED bulbs distributed, saving ₹19,153 crore annually

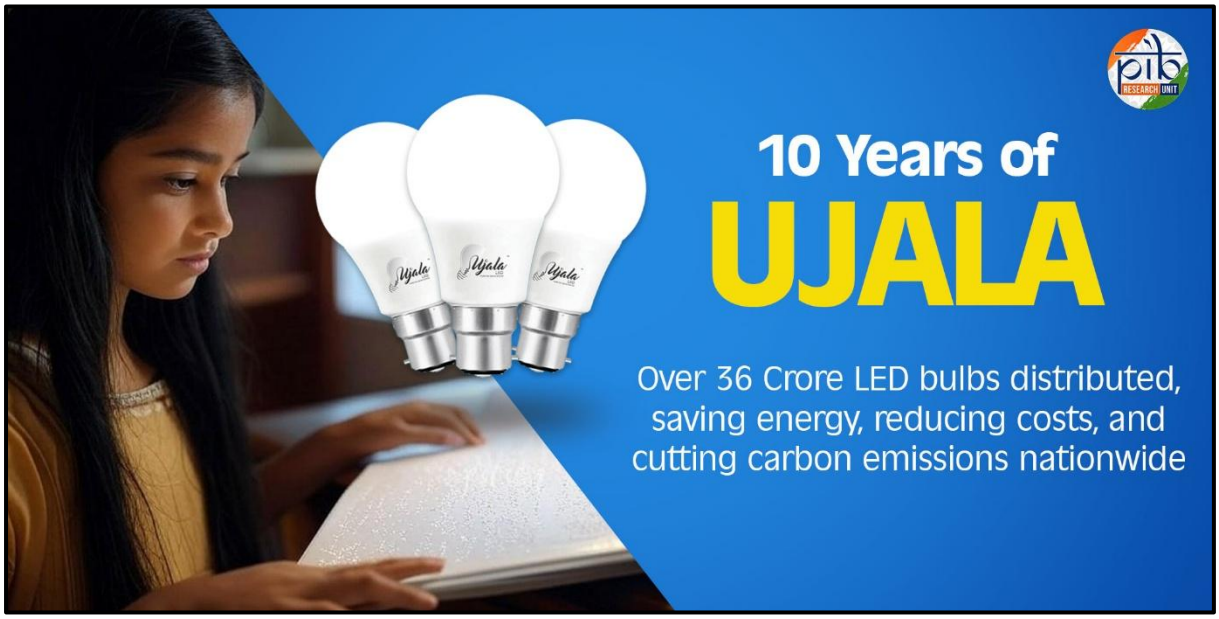
(Ministry of Power)

January 6, 2025

Introduction

The UJALA scheme, launched on 5th January 2015 by Prime Minister Narendra Modi, marked its 10th anniversary as a groundbreaking initiative in energy efficiency. Introduced as the Domestic Efficient Lighting Programme (DELP) and later rebranded, UJALA set out to revolutionise household lighting by providing affordable energy-efficient LED bulbs, tube lights, and fans to millions of Indian homes. Over the past decade, more than **36 crore LED bulbs** have been distributed across the country, making energy-saving technologies accessible to households while addressing challenges such as high electrification costs and carbon emissions. This effort, jointly undertaken by the Energy Efficiency Services Limited (EESL) and DISCOMs under the Ministry of Power, sought to make energy-saving technologies accessible while addressing challenges such as high electrification costs and carbon emissions.

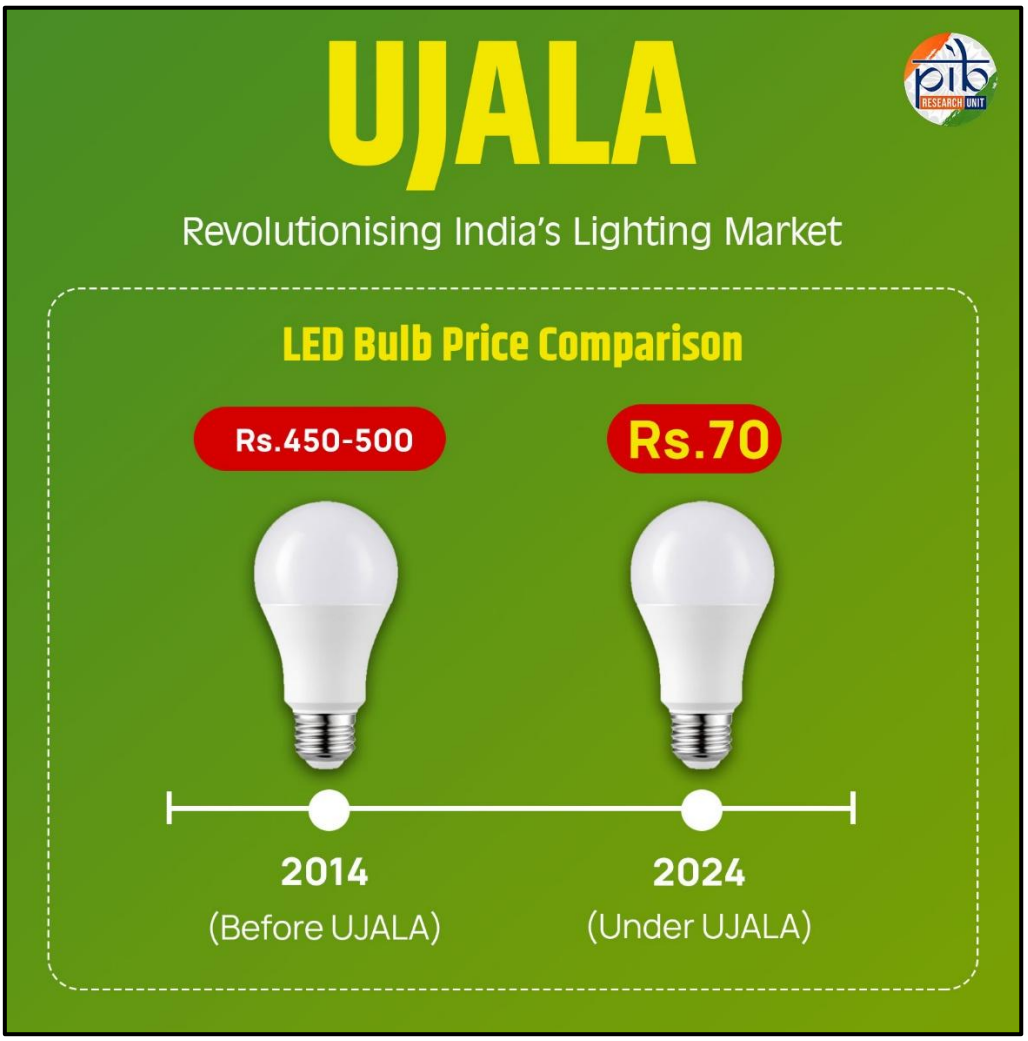
Over the past decade, UJALA has evolved into the world's largest zero-subsidy domestic lighting programme, exemplifying India's commitment to reducing energy consumption, enhancing environmental awareness, and fostering economic efficiency. As the initiative reaches this significant milestone, it stands as a testament to the power of collective effort in building a brighter, more sustainable future for the nation.



Illuminating Efficiency: The Need for UJALA

The UJALA scheme was conceived to address the pressing need for energy efficiency in India's households, where traditional lighting systems consumed significant electricity and imposed high costs on consumers. A 7W LED bulb provides the same amount of light as a 14W Compact Fluorescent Lamp (CFL) and a 60W Incandescent Lamp (ICL), thereby saving nearly 90% energy compared to ICLs and 50% in the case of CFLs.

In 2014, the retail price of an LED bulb was approximately Rs 450–500, significantly higher than a CFL at Rs 100–150 and an ICL at Rs 10–15. Consequently, the share of LEDs in the lighting market was less than one per cent in 2013–14. This high initial cost served as a major barrier to adoption, highlighting the need for an intervention to make LEDs affordable and accessible.



The UJALA scheme enables consumers to purchase LED appliances at significantly reduced rates: Rs 70 per LED bulb, Rs 220 per LED tube light, and Rs 1110 per energy-efficient fan. These prices were determined through competitive bidding and included components such as the cost of the appliance, distribution, awareness campaigns, Annual Maintenance Cost (AMC), cost of capital, and administrative expenses.

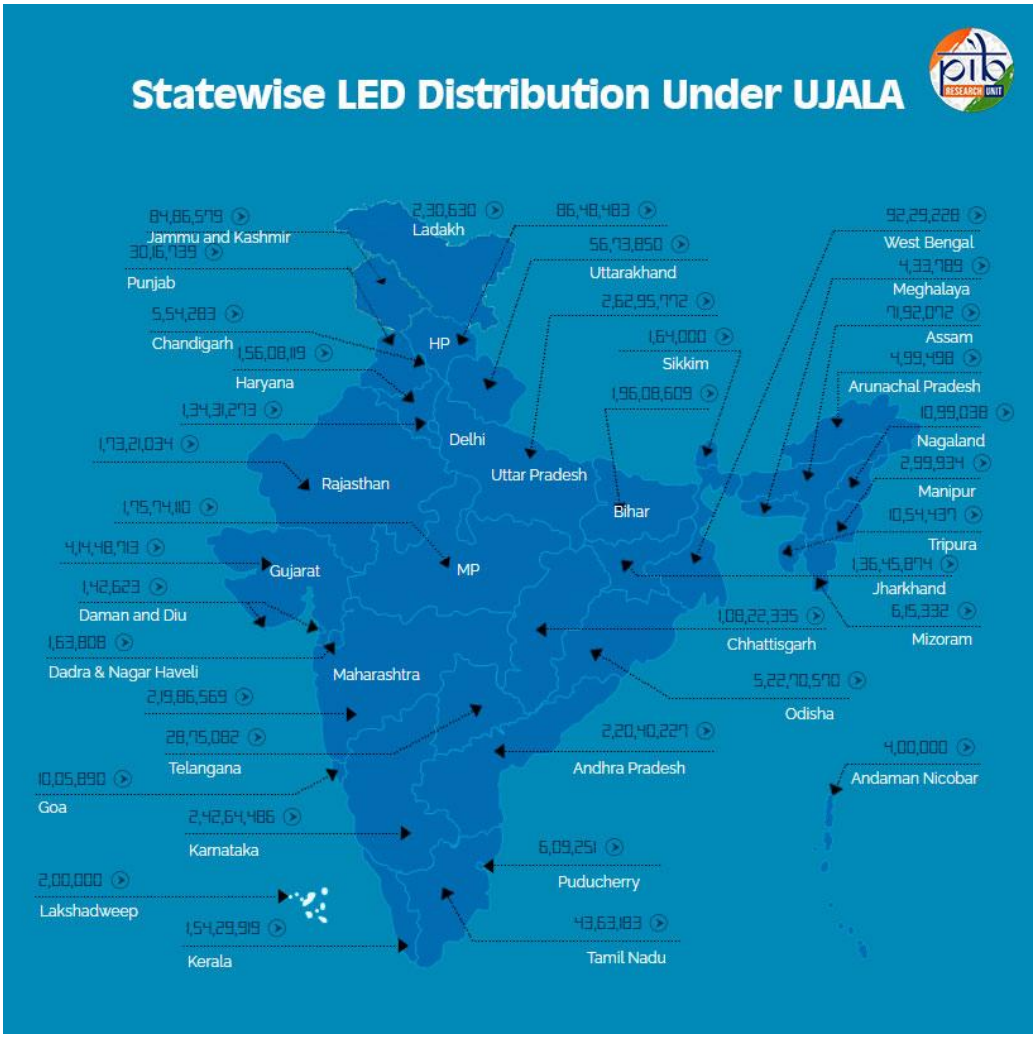
In terms of energy consumption, an LED bulb uses only 1 unit of electricity when operated for 140 hours, whereas a CFL and an ICL consume 2 units and 9 units respectively over the same

period. This translates into substantial cost savings, as the operating cost of an LED bulb is just Rs 4 for 140 hours, compared to Rs 8 for CFL and Rs 36 for ICLs.

The annual cost of ownership further underscores the economic advantage of LEDs, standing at Rs 12, which is less than one-third of a CFL (Rs 40) and merely one-tenth of an ICL (Rs 108). These stark differences in energy efficiency, affordability, and economic viability demonstrate the need for the UJALA scheme in transforming India's lighting market into one that is sustainable, cost-effective, and energy-efficient.

UJALA's Decade of Impact

As of 6th January 2025, the UJALA scheme has distributed **36.87 crore LED bulbs**, making it one of the most widely adopted initiatives in the country. Its implementation across all states has brought about transformative changes, reduced annual household electricity bills, and enabled consumers to save money while improving their quality of life. By ensuring transparency through e-procurement and fostering competition, the programme has significantly reduced transaction costs and time, leading to enhanced process efficiency. Transforming the market, so far, the UJALA scheme has germinated the sale of **407.92 crore LED bulbs** in the Indian market.



Beyond economic benefits, the scheme has made notable contributions to environmental sustainability by reducing the nation's carbon footprint. These efforts have aligned with India's larger goals of energy conservation and climate change mitigation.

Key outcomes of the UJALA scheme include:

- **Cost savings per year:** ₹19,153 crore
- **Avoided peak demand:** 9,586 MW
- **Reduction in CO_2 emissions per year:** 3,87,84,952 tonnes
- **Energy saved per year:** 47,883 million kWh

These achievements underscore the scheme's dual impact on economic development and environmental preservation, positioning it as a cornerstone of India's energy efficiency journey.

Street Lighting National Programme (SLNP)

Launched on 5th January 2015, the Street Lighting National Programme (SLNP) was introduced alongside the UJALA scheme as part of the Government of India's commitment to environmental protection and sustainable development. Prime Minister Narendra Modi envisioned this initiative, called "Prakash Path," to replace conventional streetlights with smart, energy-efficient LED streetlights across the country, contributing to significant energy conservation and cost reduction in public lighting.

The aim of SLNP is to reduce energy consumption and operational costs for public lighting by replacing outdated street lamps with LED lights in urban and rural areas. This initiative, which operates under the broader push for energy efficiency in India, was designed to bring about a market transformation for energy-efficient appliances.

Energy Efficiency Services Limited (EESL) was designated as the implementing agency for the programme. Collaborating with Urban Local Bodies (ULBs), Municipal Bodies, Gram Panchayats (GPs), and both Central and State Governments, EESL has been at the forefront of executing SLNP across India.

The programme introduced a unique business model, relieving municipalities of the burden of upfront investments. EESL handles the initial costs and recoups the investment through monthly or quarterly annuities paid by the municipalities throughout the project duration. Additionally, EESL ensures the maintenance of the LED streetlights, providing over 95% uptime, which significantly enhances public safety and ensures reliable municipal services without burdening local budgets.

(As of January 6, 2025)

As of 6th January 2025, EESL has successfully installed over 1.34 crore LED streetlights across Urban Local Bodies (ULBs) and Gram Panchayats, leading to significant energy savings of over 9,001 million units (MUs) of electricity annually. This achievement has also contributed to a reduction in peak demand by more than 1,500 MW and a decrease in CO_2 emissions by 6.2 million tonnes per year, highlighting the programme's positive impact on both energy efficiency and environmental sustainability.

The Street Lighting National Programme has emerged as a model for efficient public lighting, making a meaningful contribution to India's energy efficiency efforts while helping municipalities save costs and reduce environmental impact.

Conclusion

As the UJALA scheme celebrates its 10th anniversary, it has become a cornerstone of India's energy efficiency efforts, revolutionising the domestic lighting sector by providing affordable, energy-efficient LED bulbs, tube lights, and fans. With more than 36 crore LED bulbs distributed, UJALA has not only led to significant savings on electricity bills for millions of households but also contributed to a substantial reduction in carbon emissions. Alongside UJALA, the Street Lighting National Programme (SLNP), launched in the same year, has furthered the country's commitment to sustainable development by replacing conventional streetlights with energy-efficient LEDs. Together, these initiatives have brought about transformative changes, reducing energy consumption, cutting operational costs, and driving environmental sustainability. UJALA and SLNP exemplify the power of government-led initiatives in fostering both economic growth and environmental preservation, lighting the path to a brighter, more energy-efficient future for India.

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