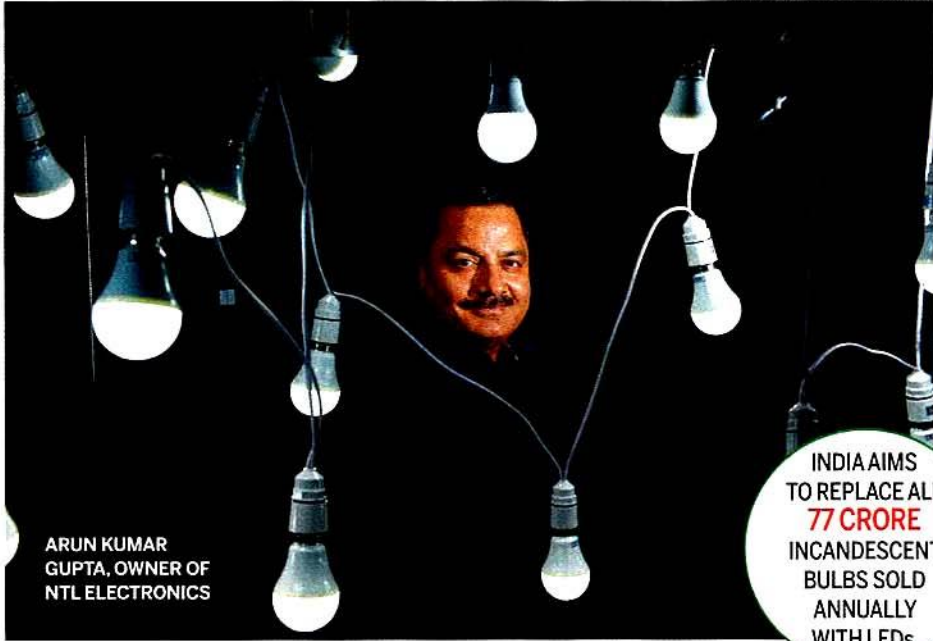


2 LED Revolution

THE BIG SWITCH

CHANDRADEEP KUMAR



ARUN KUMAR GUPTA, OWNER OF NTL ELECTRONICS

INDIA AIMS TO REPLACE ALL **77 CRORE** INCANDESCENT BULBS SOLD ANNUALLY WITH LEDs.



LEDs are efficient sources of artificial light. An 8-watt LED bulb can replace a 60-watt incandescent bulb or a 15-watt CFL.



Why

- They produce less heat and contain no mercury.
- LEDs last as much as 20 times longer than other lighting sources. This reduces impact of manufacturing, packaging and shipping.
- LEDs don't need maintenance for at least a decade. Less servicing also reduces their environmental impact.
- They could prevent a cumulative total of 16 billion tonnes of carbon from being added to the atmosphere over the next 25 years.



Cost

- In India, the manufacturing cost of an LED bulb has now come down to under Rs 100. Bulbs can also be procured in some places for Rs 73 now, down from Rs 310 last February.



Challenge

- Although the manufacturing cost is falling sharply, they are still more expensive than other traditional bulbs and CFLs.
- Because they are electronic products, they add to the growing problem of e-waste.

LED lights, or light-emitting diodes, are semiconductor devices that produce visible light when electric current passes through them. They have been around for years—lighting digital clocks, computer screens and traffic signals—but were not seen as a traditional source of light until Netherlands-based Lemnis Lighting became the first company in the world to commercially manufacture LED bulbs in 2006. Most developed countries such as the US and Britain have made a big switch to LED bulbs. According to the US Department of Energy, “Widespread use of LED lighting has the greatest potential impact on energy savings in the US. By 2027, use of LEDs could save about 348 terawatt hours (compared to no-LED use) of electricity: This is the equivalent annual electrical output of 44 large electric power plants (1,000 megawatts each), and a total savings of more than \$30 billion.”

In India, the first LED bulb was manufactured by NTL Electronics in 2009 based on the technology from Lemnis. In 2014, NLT acquired Lemnis and is one of the largest manufacturers of LED bulbs in the world. More than a dozen companies are also indigenously manufacturing LED bulbs in India today. This move is supported by the Centre. The aim is to replace all 77 crore incandescent bulbs sold in India with LEDs. —Kaushik Deka

HOW IT WORKS

