

Shivakumar's 'powerful' statement *Deccan Herald.*

Energy Minister D K Shivakumar on Tuesday said he is ready to face "any punishment" if his department does not keep its promise of supplying seven hours of power to irrigation pumpsets.

Replying to a question raised by N Appaji Gowda (JD-S) in the Legislative Council, Shivakumar said power subsidy to farmers is to the tune of Rs 8,500 crore and seven hours of power is being supplied to irrigation pumpsets across the state. "In

some places, we are providing 10 hours of power," he said.

He said while the present demand for power stood at 9,500 MW, the state is in a position to supply 10,500 MW. Shivakumar said it is for the Karnataka Electricity Regulatory Commission to decide on petitions filed by various es-coms seeking an increase of Rs 1.48 per unit for the next financial year. "However, the quantum of hike sought is less compared to that of previous years," he added.



Power Minister D K Shiva Kumar speaks in the Legislative Council in Bengaluru on Tuesday. DH PHOTO

LESS POWER TO THE PEOPLE

Gross inefficiencies and by inference, corruption in the National Thermal Power Corporation have led to significant increases in power costs which have been passed on to the consumer, says a report by the Comptroller and Auditor General of India. Established in 1975, the NTPC is India's largest power utility with an installed capacity of 48,028 MW, and it plans to become a 1,28,000 MW company by 2032. But coal cost constitutes 60-70 per cent of the total generation tariff of coal-based power stations, and has a significant impact on the cost of supply of power to consumers.

The CAG's Performance Audit Report, which covered fuel management of 13 out of 26 coal-based power stations of NTPC and its joint ventures between April 2010 and March 2016, says the corporation shelled out an additional ₹6,869.95 crore during that period for procuring domestic coal, while losing ₹4,299.80 crore in revenues due to outages at power plants on account of fuel shortage.

To add insult to injury, the power stations paid performance incentives for additional annual supplies even though they suffered generation loss due to shortfalls in coal supply, it added. The report observed that though the company has been importing coal since 2005-06, there is no comprehensive policy for import of coal. Imported coal was stored in the same yard along with domestic coal although the former has higher Gross Calorific Value, which affected the blending ratio of coal. It also said that instead of ascertaining the transit loss of coal (difference between quantity of coal dispatched from the mines and quantity of coal received by stations) by weighing the railway rakes, an indirect method called 'volumetric method' was used. There were also concerns regarding accuracy of the stock reported at the stations, considering that some stations reported bigger stocks than the storage capacity of yard. All this, from a company that is listed as a Maharatna, or a great gem.

76 villages left in the dark in Uttarakhand

These hamlets have been devoid of electricity and basic amenities as government deadlines stay on paper

VIKRAM SHARMA
@ Udhmath (Uttarakhand)

WHEN Atun Jaitley was telling the whole country in his Budget speech that he would achieve 100 per cent rural electrification in the country, he went unheard by the people of Gondar in Uttarakhand. The 90 households of the village, some 30 km from Ukhimath, have no power and therefore no TV. Gondar is one of the 76 villages in Uttarakhand that have not been blessed by grid-supplied electricity since independence. It gets by on unreliable solar power.

Jaitley's promise brings a smile to the face of Gondar's pramukh, Bir Singh. "We have heard it all before. If they were

serious, it would have come by now?" Villages like Gondar are hard to reach for the traveller as well as power supply. To get to Gondar, one has to reach Ransi village in Ukhimath block first and from there trek 7 km. Most of the villagers work as labourers or sell food to tourists going to Madhya Maheshwar temple 9 km from Gondar. Some households rent out rooms to those who want to stay overnight.

Attempts have been made previously to connect Gondar to the state's power grid. In 2013, a tiny substation was built but it was washed away in the Kedarnath floods just months later. It was repaired in 2016, but heavy rains ruined it again.

The fact that 76 villages in Uttarakhand have no electricity came to light when a Dehradun-based activist, Ajay Kumar, filed an RTI application. Most of the unlit villages are in Uttarkashi (31) and Pithoragarh (29) districts apart from a few in Tehri and Rudrapur.

"It is shameful that 70 years after independence, these villagers have to manage with kerosene lamps," said Ajay Kumar. After Ajay Kumar received his RTI response, he wrote to the Prime Minister's Office and got a response. The PMO reminded the Uttarakhand government that funds have been made available for electrification of these villages. But the State government ignored the PMO's direction. "I feel this

was because of politics as it became a BJP vs Congress issue," said Ajay Kumar. However, Uttarakhand Power Corporation (UPCL) officials said some poles were erected in these villages but they got washed away in the 2013 Kedarnath flood and subsequent weather events. Now, it's back to the drawing board. "Estimates for power lines were made long ago. But it's a difficult terrain," said a senior official of UPCL. The deadline: end of 2017. But deadlines have been missed before, even with PM Narendra Modi's time horizon of Dec 3, 2016, to rig up power supply to 18,500 villages. As the poll scene heats up, the village of Gondar is ready to boycott elections as it has done before.

Powerless

Out of the 18,500 dark villages in the PM's ambitious plan, 7,300 are yet to be covered. It is an everyday struggle for the people of Gondar. Struggling for basic needs like electricity, drinking water and road, the village has boycotted elections twice in the past.



It is shameful that 70 years after independence, these villagers have to manage with kerosene lamps

Ajay Kumar, activist

Power segment boosts BHEL profit, provisioning buoys PNB net in Q3

INDIA ECONOMIC BUREAU

STATE-run engineering major BHEL on Tuesday posted a net profit of ₹38.54 crore for the quarter ended December 31, 2016 on the back of higher income from the power segment. The company had reported a net loss of ₹1,684.36 crore for the quarter under review.

The company's total income increased to ₹6,461.22 crore for the quarter ended December 31, 2016 from ₹6,408.07 crore for the same quarter in the year-ago period.

"The consistent growth in the first three quarters of this fiscal comes in the wake of the trend of positive top-line growth prevailing for the last 14 previous quarters. This has been made possible by a slew of strategic initiatives and cost optimisation measures put in place by the management,"

BHEL Chairman and Managing Director Atul Sobti said.

For nine months to December 31, 2016, BHEL posted a net profit of ₹1,215 crore in the same period of previous year. Revenue grew by 18 per cent to ₹18,968 crore in the first nine months of 2016-17 fiscal. "Having achieved the immediate target of regaining growth, the company is now enhancing its focus on maintaining leadership status in the power sector while diversifying in the non-thermal power segment and other new areas," he said.

As part of this, focus is on creating new verticals within the company to capitalise on the massive infrastructure spending by the government, with a special focus on Indian Railways, defence and other industrial products to drive the next wave of growth, he

added. Shares of BHEL soared 4.85 per cent to trade at ₹150.70 after announcement of the financial results.

Meanwhile, Punjab National Bank (PNB) on Tuesday reported a four-fold jump in net profit to ₹27.18 crore for the third quarter, on account of lower provisioning. The bank had reported a net profit of ₹5.1 crore for the October-December quarter of 2015-16.

The public-sector lender's total income increased 4.36 per cent to ₹14,497.86 crore for the quarter under review, from ₹18,991.2 crore in the year-ago period.

The bank's asset quality, however, deteriorated further as gross non-performing assets or bad loans hit 13.70 per cent of the gross advances during third quarter as against 8.47 per cent a year ago.

Tata Steel back in black, logs ₹231 cr net

Driven by the improvement in sales volume and higher prices of steel, Tata Steel got back to the profit mode by posting a net profit of ₹231.40 crore for the December quarter. It had registered a consolidated net loss of ₹2,747.77 crore in the same quarter of the last fiscal.

The company said revenues rose 7 per cent sequentially and 14 per cent on a year-on-year basis. The growth is largely driven by strong performance from Indian operations. Gross sales also increased to ₹29,279 crore from ₹25,662.3 crore in the year-ago period.

Ramco Cements Q3 net up 28.3% to ₹151.88 cr

Ramco Cements on Tuesday reported a 28.35 per cent jump in standalone net profit to ₹151.88 crore for the third quarter on higher sales. Ramco had reported a net profit of ₹118.33 crore in the corresponding period of the previous fiscal. Total income from operations during the quarter under review went up by 16.07 per cent to ₹1,119.29 crore, as against ₹941.20 crore in the corresponding quarter of last fiscal. The company's sales were up 22.26 per cent to 19.88 lakh tonnes in the quarter compared with 16.26 mt in the year-ago period.

Titan third quarter net up 13% at ₹255.75 cr

Tata group firm Titan Co Ltd posted a 13 per cent increase in standalone net profit at ₹255.75 crore for the third quarter. The company had posted a standalone net profit of ₹226.13 crore in the same period last fiscal. It said in a BSE filing. The income from watches was at ₹506.25 crore, up 51 per cent from the year-ago quarter. Jewellery business had recorded a growth of 15.4 per cent with an income of ₹3,255 crore, it said. The precision engineering and accessories business registered a growth of 44.5 per cent at ₹5.37 crore, said Titan.

MRPL Q3 up 92% to ₹566 cr

Mangalore Refinery and Petrochemicals Ltd (MRPL) on Tuesday reported a 92 per cent jump in its third quarter net profit on the back of higher refining margins. Net profit in October-December at ₹566 crore was 91.8 per cent more than ₹295 crore net profit in the same period a year back, the company said. MRPL, a unit of state explorer Oil and Natural Gas Corp (ONGC), earned ₹743 on turning every barrel of crude oil into fuel in Q3 compared to a gross refining margin of \$4.83 per barrel in the same period in the previous fiscal.

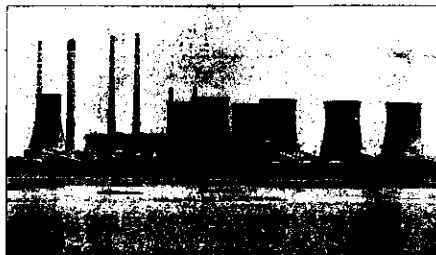
Surplus may free state from summer power cuts

Bosky Khanna

BENGALURU: The Energy department has assured that it has surplus power and there will be no power crisis in the summer. This is despite the fact that there have been unscheduled power cuts in the state.

P Ravi Kumar, additional chief secretary, Energy department, told *DH* that they have shut down a few units of thermal power stations because of a dip in demand.

According to him, two units of Raichur Thermal Power Station (RTPS), one unit of Udipi Power Corporation Limited (UPCL) and one unit of Ballari Thermal Power Station (BTPS) remained shut. "For the first time, the state has excess power," he said, referring



The Raichur Thermal Power Station is among the generating stations that have been shut in view of the decrease in demand. *DH* FILE PHOTO

to the 900-MW purchase. Another 300 MW is coming from Maharashtra, Kumar said.

The power generation from hydel sources per day is 2.63 million units, while 402

MW of solar power has been added to the grid. Another 800 to 1,000 MW solar power will be added soon, he said. The state is using just 57 MW of the 198 MW available from

the central grid. He pointed out that the department was ready to meet the peak demand of 10,500 MW, but the present peak demand was hovering between 9,300 MW and 9,400 MW.

"We have stored sufficient water in the dams for hydro electricity. The demand from the industrial sector has come down, which has saved the power for the people," he said.

The department has chalked out plans to procure 1,200 MW from Kudgi (Vijayapura). Two units of Yeramaru (Raichur district) will start functioning in September and the BTPS will supply 700 MW. Power from the National Thermal Power Corporation in Tamil Nadu will also be available. Work orders have been issued

to start generation of 500 MW of solar power during the summer. The department has signed agreements for expanding the UPCL plant to generate 1,200 MW by 2022. The Karnataka Power Corporation will set up a 300-MW hydel plant in Shivanasamudra and generate 1,600 MW from Chhattisgarh thermal plant.

K G Prabhakar, power expert from FKCCI, said data from the Karnataka Electricity Regulatory Company and their assessment shows agriculture consumes the maximum power of 33%, but there is a decline this time. Industrial power consumption has come down because of less industrial production and unfavourable tariffs offered by the state. *DH News Service*

Power utilities push for tariff hike, KERC to decide by March-end

ESCOMs propose ₹1.48 hike per unit; state needs around 200 to 208 million units of power every day of which B'uru alone requires 45-52 mt units

EXPRESS NEWS SERVICE
Bengaluru

"VARIOUS Electricity Supply Companies (ESCOMs) have approached Karnataka Electricity Regulatory Commission (KERC) for increase in power rate by ₹1.48 per unit," said Power Minister D K Shivakumar. He was addressing the Legislative Council on the second day of the session. JY(S) MLC N Appal Gowda had earlier raised question on power hike proposal.

The state needs around 200 to 208 million units of power of which Bengaluru alone requires 45 to 52 million units every day. The minister said: "KERC will fix the price after holding public consultation meetings at different places across the

state with stakeholders. The new price will come into effect from April 1, 2017. KERC Chairman M K Shankarlinga Gowda said from February 20, Commission will conduct public hearing at their office in Bengaluru. "From February 20 to March 6, public hearings will be held and common public, industrialists and others will be invited for the same. We will come up with a price before March-end. The new rate will be applicable from April 1, 2017," he told Express.

"There is a demand for 1,500 megawatt from public, farmers and industries, but we are geared up to supply 10,500 MW as we have tied up with private and other government agencies for power purchase," he said. "We are even ready to give 24 hours supply to industries if required. There

will be no usual power cuts this summer," he claimed. "This time, with severe drought, dams across Karnataka are not filled. ESCOM is also largely depending on purchase of power from outside. Our priority is to supply power to consumers for reasonable price," he said. Minister further said in 2012-13, 78 paise hike was proposed but the KERC approved only 18 paise hike. Similarly, KERC approved 28 paise, 32 paise, 18 paise and 68 paise hike as against the request for 70 paise, 65 paise, 80 paise and ₹1.02 respectively between 2013-14 and 2016-17.

State has purchased 450 MW power from Hemadhar Valley Corporation, 300 MW from Maharashtra and 900 MW from JPC India Limited (Andhra Pradesh) and JSV Energy limited.

Generation Source	Power generated in January 2017
Hydro	544
Thermal	1,340
UPCL	725
Non conventional	645
DVC	252
State government share	1,783
Purchase from outside state	580
TOTAL	6,080

(All figures in million units)

No power cuts during summer. In a written reply to JY(S) MLC N Appal Gowda, Minister said that there will be no power cut as it is surplus power for district children.

Solar grid at Vidhana Soudha and MS Building. The PWD is planning to install solar grid at Vidhana Soudha and MS Building. Annually power bill from Vidhana Soudha, Vidhana Soudha and MS Building comes up to ₹540 lakh. Solar grid will lessen the burden on dependency on BESCOM for power supply.

Bangalore 8-2-17 page

According to the BBMP, there are over 38,000 businesses in the city without a valid permit. Commissioner N Manjunatha Prasad has now asked Bescom and the commercial taxes department to provide them with data assistance to help the civic agency crack down on those flouting zoning regulations

Commercial Sweep



I Atul Chaturvedi

TWEETS @atulMirror

Although the Bruhat Bengaluru Mahanagara Palike (BBMP) had detailed records of trade licenses issued to run commercial activities in Bengaluru, the civic agency has only now arrived at a whopping figure of 38,452 as the number of businesses running without valid permit. They are now turning out of places for which they are paying residential property tax while carrying on commercial activities, considered illegal as per zoning regulations and the high court.

A recent circular from BBMP to commissioner N Manjunatha Prasad had warned of shutting down commercial activities from residential places for which they are paying residential property tax that they should shut down their activities before December 14. The deadline is now past.

But now, he has come up with another shocker for those indulging in this illegal activity. He is planning to col-

late data from Bangalore Electricity Supply Company (Bescom) and the commercial tax department to arrive at the accurate figure and nail these violators.

Prasad said that to know how many illegal commercial businesses are being run in residential areas, "We need to link it with various data available with us. We have mapped all properties with GIS geographical information system network. If we look at that, the number of properties paying property tax as commercial are 88,453. If we look at the number of trade licenses issued by the BBMP, it is just a meagre 5,000, which is with the zoning regulations. With the remaining 83,453, that is 38,452, we are unaware of what they are doing." He said.

The commissioner feels that these 38,452 who are running commercial activities illegally in residential areas, either have not taken trade licenses or they are not eligible for those. "But since these commercial activities are being carried on in residences, our people wouldn't have checked it," Prasad said.

WHERE BUSINESS ACTIVITIES CAN TAKE PLACE

40 FEET is the minimum road-width for permission to do business. No commercial activities were allowed in ring one, ring two and ring three of the zoning regulations if the condition is not met.

500 SQFT is the maximum built up commercial space one can do business on in ring one and ring two areas if the road width is more than 40 feet.

10,000 SQ FT in ring three. If the site is more than 10,000 sq ft and the frontage has a more-than-100-foot road, then commercial activities are allowed in residential areas.

(Areas coming within the core ring road come under Ring 1. Those between the core ring road and outer ring road are in Ring 2. Those beyond the outer ring road and within the local planning authority fall under Ring 3)

Prasad is now trying to collect and correlate two types of data - one on how many commercial meters and connections Bescom has issued in Bengaluru, and two, from the commercial tax registration certificates issued by the commercial tax department.

"I have told officials to go according to the zoning regulation maps, which will clearly display residential and commercial areas. Officials will collect details of such commercial activities and details of the establishments. Once the data is available with us, we will issue a show cause notice to them along with the High Court order directing them to shut down their businesses. We will be waiting for their replies, and accordingly, the orders will be issued," he said. Meanwhile, the BBMP has already commenced training procedures to its health inspectors, who are authorised to issue trade licenses.

Former additional chief secretary A Ravindra has updated officials about the High Court order and about the zoning regulations which need to be followed.

"The RWAs (residents' welfare associations) have met me recently and they have discussed with me. I have asked the officials to first act on the list given by the RWAs," he said. Prasad said: "Already we have issued a public notification. According to the revised master plan-2015, which came into force in 2007, it provides for a lot of commercial activities in residential areas. Then, around 20 RWAs took up the issue to the court. In January 2012, interim order was passed; and after that, 254 trade licences which were issued by the BBMP for commercial activities in the residential areas, were cancelled. Subsequently, BDA modified zoning regulations and an amendment was made in September 2014."

A helpless commissioner Prasad said although zoning regulations are available with BBMP, nobody took implementation seriously. This forced local residents to approach the court. The court also directed the BBMP to take action, but commercial activities in residential areas continue to be rampant.

ECF: 0-6, 08-2017
₹8-crore Energy Boost for Zenatix from PI Ventures

BENGALURU Zenatix Solutions has raised ₹8 crore from investors led by PI Ventures in a pre-series A round which also saw participation from existing investor Blue Ventures, reports *Source: Health*.

The data-driven energy efficiency startup had earlier raised angel funding from Trifecta Capital's Rameshanna, Google's Rajan Anandan and Snapdeal cofounders Karal Bahl and Rohit Barwal. The company plans to use the current round of funding for expanding business and recruitment.

Along with the energy efficiency solution faced by a range of clients, the company uses advanced machine learning models and delivers energy efficiency solutions for industrial consu-

... internet of things...
... the challenge of energy conservation in an industrial...

The Hindu 8/2/2017
SNIPPETS

Brace for high power tariff

If you think the electricity bill is already making a big dent in your monthly expenditure, there is bad news in store. Electricity supply companies have sought an increase of ₹1.48 per unit for electricity tariffs for the next fiscal, in its petition filed to the Karnataka Electricity Regulatory Commission. Replying to a question by MLC N. Appaji Gowda in the Legislative Council, Energy Minister D.K. Shivakumar said the revision is inevitable to set right the gap between revenue and expenditure of the power supply companies.

Times of India page no: 17 08/02/17
India eyes solar storage technology from Belgium

New Delhi: India is looking at an innovative Belgian solar storage technology that promises to offer consumers a source of quality power as a green and reliable alternative to flickering supply from battery storage or diesel generators in distant or off-grid locations.

National Institute of Solar Energy, an autonomous entity under the new and renewable energy ministry, and Tiger Power of Belgium, on Tuesday inked a MoU for vali-

dation of the technology that combines solar panels, normal lead-acid battery and hydrogen fuel cells to produce steady power.

Simply put, the package is essentially a solar-battery storage module with a hydrogen fuel cell in tandem.

"Defence could be one area where the technology may be useful as it comes in foldable modules," a government official familiar with the development told TOI. *TNN*

Times of India page no: 17 08/02/17
POWER BILLS FOR POWER CORRIDOR

The power cluster - comprising Vidhana Soudha, Vikasa Soudha and Multi-Storied Building - paid a power bill of Rs 5.4 crore in 2015-16. Replying to a question in the legislative council, public works minister H C Mahadevappa said his department was taking steps to cut down on power bills in these three buildings by opting for solar power. While Vikasa Soudha has a solar grid, Vidhana Soudha and MS Building will shortly be powered by solar energy, Mahadevappa said.

E-PILLS THAT CAN MONITOR PATIENT HEALTH IN THE OFFING

MIT scientists have developed a small battery that runs on stomach acids and could power next-generation ingestible electronic pills which may monitor patient health and track diseases by residing in the gastrointestinal tract for extended periods of time. The device may offer a safer and lower-cost alternative to the traditional batteries used to power such devices. "We need to come up with ways to power these ingestible systems for a long time," said Giovanni Traverso from MIT.

WEDNESDAY

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Bangalore Mirror

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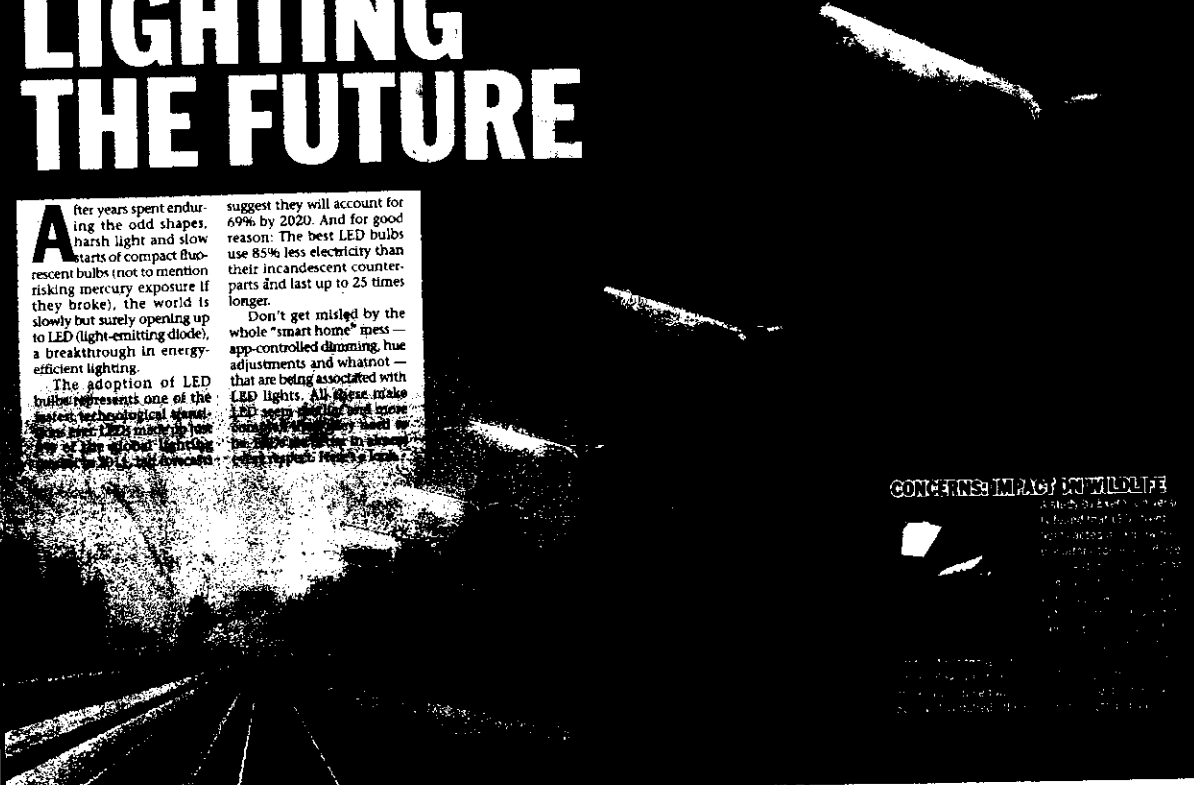
LIGHTING THE FUTURE

After years spent enduring the odd shapes, harsh light and slow starts of compact fluorescent bulbs (not to mention risking mercury exposure if they broke), the world is slowly but surely opening up to LED (light-emitting diode), a breakthrough in energy-efficient lighting.

The adoption of LED bulbs represents one of the most technological breakthroughs in lighting since LEDs made their first appearance in the 1960s.

suggest they will account for 69% by 2020. And for good reason: The best LED bulbs use 85% less electricity than their incandescent counterparts and last up to 25 times longer.

Don't get misled by the whole "smart home" mess — app-controlled dimming, hue adjustments and whatnot — that are being associated with LED lights. All these make LED seem like the most advanced lighting technology available. In reality, LED bulbs are simply better than incandescent bulbs.



CONCERN: IMPACT ON WILDLIFE

A study by the University of Exeter, UK, found that LED lights can have a significant impact on wildlife. The study found that LED lights can attract insects, which can then be eaten by birds and other animals. This can lead to a decline in the number of insects available to other animals, which can have a cascading effect on the ecosystem. The study also found that LED lights can disrupt the natural behavior of some animals, such as birds and insects.

ENERGY EFFICIENT

LED bulbs reduce demand for electricity, which cuts back markedly on the greenhouse gas emissions fast cooking the planet. A 6W LED bulb can put out as much light as a 50W halogen bulb. Swapping all the lights in a small apartment will make a dent in your energy bill.



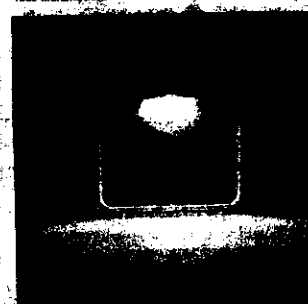
RICH COLOURS

With regular bulbs, you can have any colour so long as it's a shade of yellow. With LEDs, you get access to the full spectrum, should you want to get fancy. It also comes in cool shades of white that can make your kitchen and bathroom look exactly as they would under direct daylight.



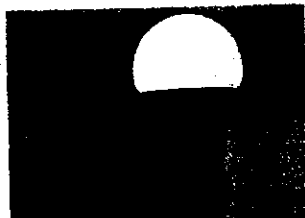
FLEXIBILITY

You can choose how wide a beam of light your LEDs will produce. Some are intended to be spotlights and are thus more narrow and focused, whereas others broadcast out to a 120-degree arc that gives a softer, more diffuse illumination.



SO COOL THEY ARE NOT

LEDs don't give off anywhere near as much heat as incandescents, which is a nice side effect of their efficiency: they don't emit invisible infrared or ultraviolet light, which would express themselves as just wasted heat, and their output is only useful light.



	Incandescent	LED
Watts	60	10
Lumens	800	800
Life (years)	0.9	22.8
Annual energy cost	> 100	< 10

LEDs were significantly more expensive than incandescent bulbs when they first came out, but as technology improved, the price of LEDs fell and their life span increased. Now, LEDs are the most energy-efficient lighting option available.

