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Newsletter on Eco-labelling and Eco-friendly Products

Environmental Information System
INDIA
ENVIS CENTRE

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Energy Conservation...

The need of the Hour

Sponsored by:

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ENVIS Centre on:

Eco-labelling and Eco-friendly Products

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January-March-2014

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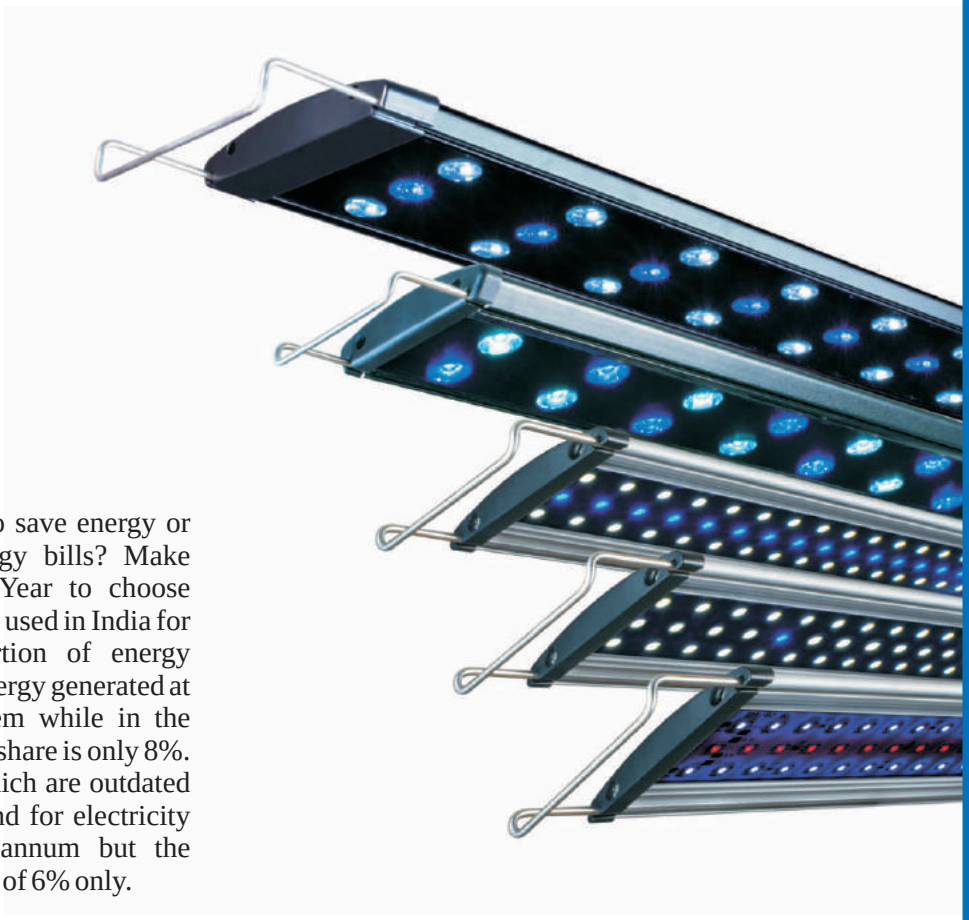
The Environmental Information System acronymed as ENVIS was implemented by the Ministry of Environment & Forests by end of 6th Five Year Plan as a Plan Scheme for environmental information collection, collation, storage, retrieval and dissemination to policy planners, decision makers, scientists and environmentalists, researchers, academicians and other stakeholders.

The Ministry of Environment and Forests has identified Consumer Education and Research Centre (CERC), Ahmedabad, as one of the centers to collect and disseminate information on "Eco-labelling and Promotion of Eco-friendly Products". The main objective of this ENVIS Centre is to disseminate information on Eco products, International, and National Eco labeling programs.

FOREWORD



Are you looking for ways to save energy or want to lower your energy bills? Make resolutions in this New Year to choose energy-saving lightings. The energy used in India for lighting is consuming large portion of energy produced. About 17% of the total energy generated at present goes to the lighting system while in the developed countries corresponding share is only 8%. It is due to the lighting systems which are outdated and inefficient. In India our demand for electricity increases at a rate of 9% per annum but the generation of electricity is at the rate of 6% only.

Promoting efficient use of energy and its conservation Government of India had launched Bachat Lamp Yojana (BLY) in 2009 under the United Nation's Clean Development Mechanism. Its aim is to catalyze the widespread replacement of conventional incandescent light bulbs with CFLs, which cost more but consume only one-fifth as much electricity. The Bachat Lamp Yojana Small-Scale Programme of Activities (SSC-PoA) is a scheme developed by Bureau of Energy Efficiency (BEE) to promote energy efficient lighting in India. The Indian government has also developed policies to stimulate the adoption of LED lighting in the country, and is funding a number of pilot LED street-lighting projects. The Climate Group, a non-profit organization that works internationally with business and government to promote clean technologies and policies, has been working closely with the BEE to promote LED street-lighting. LEDs are less toxic and even more efficient than CFLs but are more expensive. BEE is an Indian governmental organization created in 2001 responsible for promoting energy efficiency and conservation.

The current issue reproduces a comparative report on LEDs manufactured by different companies and about eco-friendly lightings published in a not-for-profit UK magazine **Ethical Consumer**. This magazine is published by **Ethical Consumer Research Association Ltd**. It is Manchester, UK based an independent, not-for-profit organization. Its mission is to make global business more sustainable through consumer pressure. It publishes ethical product guides in a way that accurately reflects the issues that are most important to you - be that animal testing, climate change, sweatshop labour, GM crops, nuclear power or whatever. The brands tested are available in India also, so this report will help the consumer to select eco friendly LEDs.

LEDs are emerging as the most efficient, cheapest source of lighting for everything, ranging from automotive lighting to recreational illumination. These are the future of lighting. These are very cost effective, long lasting and trouble free. It is now Consumers' prerogative to choose energy efficient products for a healthier economy, a cleaner environment, and greater energy security. Using less energy has lots of benefits – you can save money and help the environment.

LEDs

Lighting the way

This article is written by Heather Webb, from Ethical Consumer magazine.

A year ago a huge change occurred in the light bulb industry: from the 1st September 2012 incandescent light bulbs were banned from being sold and manufactured in Europe. The reason was that they were too inefficient, emitting far more of the energy they used in heat than they did in light.

The market has also changed since we last visited light bulbs in 2007. Consumers can now buy LED light bulbs more akin to the arbitrary shape Thomas Edison invented. All the companies in this report produce LED light bulbs and the selection keeps getting bigger. Companies are seeing the benefits too. Philips, for example, have just announced that in the first quarter of 2013 it has seen a 38 percent jump in LED sales from a year earlier, with LED sales now representing 23 percent of its total lighting sales.[1]

One issue with LED light bulbs has been the cost in comparison with buying compact fluorescent lamps (CFLs). Over the last five years the costs have reduced due to the fact there have an increase in the number of manufacturers. Our price comparison table below shows that, for a LED light bulb (comparable to a 40W incandescent bulb), the price ranges from £7-£20. A comparable CFL bulb would cost around £2-£4 these days. Matt Beswick from Lamp Shop Online talks about the savings that can made on page 8.

Bright light

In May 2013 Which? magazine tested a range of LED light bulbs for their brightness. They found there had been much improvement in the range available with six of the nine bulbs being nominated as best buys. However it states that despite results from its tests, “LEDs are still not very bright, as most bulbs are only available up to 40W equivalent. Brighter 60W equivalent LEDs are on sale now and it's likely there'll be more in the next few years. In the meantime, if you're looking for a brighter bulb you may be better with a CFL bulb”.

See table to work out what wattage you need. Brightness and wattage compared

Lumens	Incandescent	LED	CFL	Halogen
200-500L 500-700L 900-1300L	40W 60W 100W	5/6W 10/11W n/a	7/8W 12/13W n/a	28W 8/11/15W 15/20W

Which? 2013

Halogen and Compact Fluorescent Lamps (CFLs)

While LEDs are hoped to lead the way in household energy efficiency, two other light bulbs are still available, both of which offer some energy savings compared to the old incandescent bulbs. Nearly all the companies in this report also make Halogen and Compact Fluorescent Light Bulbs.

The most common light bulb now is the compact fluorescent lamp (CFL) – sometimes called energy saving light bulbs. These contain mercury and therefore need to be recycled rather than thrown away in ordinary waste. Within the EU, CFLs are subject to the WEEE recycling scheme. Any company that produces or sells items which fall under the WEEE regulations has to provide a recycling service for those items. In terms of light bulbs this means that if a customer was to re-lamp an entire building, then the company which sold them the new bulbs would have to provide a service to remove and recycle the old light bulbs.

A phone call to both IKEA and B&Q revealed that they both offered customers a service to take back their old CFL light bulbs. However they did not offer recycling points for customers who had not purchased their light bulbs from their store. If purchasing CFL light bulbs over the internet, it may be worth enquiring how the company will ensure that they are recycled after use.

Energy labels

The European Union (EU) Energy Label rates products from A to G in terms of energy consumption, with 'A' being the most efficient and 'G' being the least efficient. By law the label must be shown on all light bulbs. It is worth checking the Energy Label to see how efficient a lamp is because there are still large differences, especially amongst halogen and CFL bulbs.

Phosphor

Some of the greenest technologies of this era, from electric cars to efficient light bulbs to very large wind turbines, are made possible by an unusual group of elements called rare earths. The world's dependence on these substances is rising fast with China responsible for producing more than 99 percent.

In order to make lights have a more natural white glow, manufacturers coat the bulb with yellow phosphor. While in comparison to fluorescent lighting LED lights use very little per unit basis, the rare earth elements often come from some of the most environmentally damaging mines in the western China provinces of Guangdong and Jiangxi. A New York Times report suggested that over half the mines are illegal mines dominated by criminal gangs.[2]

As many LED components are made in China, many western LED materials suppliers are establishing a manufacturing base there to help mitigate against any restrictions that China may place on rare earth exports. All the companies in this report have operations based in China with most of the smaller companies having a worst rating in the Supply Chain category. This is fairly alarming considering the well known issues with workers' rights in China.

Lobbying against human rights

Multinational companies lobbying governments have long been part of the resistance to change. Siemens, General Electric, Philips, and Toshiba are all heavily involved with some of the world's free trade lobby groups which pressurise governments to make decisions at the expense of environment, animal welfare, human rights, or health protection.

In 2012 it was reported that Siemens, who sat on the board of the US Chamber of Commerce, was involved in the lobbying against Section 1502 of the Dodd-Frank Act – a provision in the USA which aimed to

		Environment					Animals			People					Politics				
Brand	Ethiscore (out of 20)	Environmental Reporting	Nuclear Power	Climate Change	Pollution & Toxics	Habitats & Resources	Animal Testing	Factory Farming	Animal Rights	Human Rights	Workers' Rights	Supply Chain Management	Irresponsible Marketing	Arms & Military Supply	Genetic Engineering	Boycott Call	Political Activity	Antisocial Finance	Company Group
Ledon	13											●							Tomas Lorunser
Kosnic	12	●										●							Kosnic (UK)Ltd.
Lloytron	12	●										●							Laltex & Co Ltd.
TCP	12	●										●							TCP International Holdings
Megaman	11.5	●								○		●							Neonlite (HK) Ltd.
Sylvania	11.5	●								○		●							Havells India Ltd.
Crompton	10.5	●										●		●			○		GCH Capital Ltd.
Osram	9.5									●		●					○	○	Osram Licht AG/Siemens
B&Q/Diall	6.5				○	○	●	●	●	○		●			○		○	●	Kingfisher Plc
Philips	5.5			○	●				●	●	●	○	●	○			●	●	Koninklijke Philips Elec NV
IKEA/Ledare/Sparsam	5	○		○	○	●		●	●	●	●		○		○		○	●	Stitching INGKA Foundation
Toshiba	4.5		●	●	●	○				●	●	●		●			●	●	Toshiba Corp
General Electric	3	○	●	●	●	○	●			●	●	●		●			●	●	General Electric Inc

See all the research behind these ratings together on www.ethicalconsumer.org

Ethiscore: The higher the score, the better the company across the criticism categoroies

● = bottom rating

○ = middle rating

empty = top rating (no criticism)

prevent the trade in tin, tantalum, tungsten, and gold from fuelling conflict and human rights abuses in eastern Democratic Republic of Congo (DRC).[3] It required companies listed in the USA to establish if the minerals in their products were sourced from the DRC or adjoining countries and, if so, to carry out supply chain due diligence to determine whether their mineral purchases are funding armed groups in eastern DRC.

In October 2012, despite the concessions made to industry around Section 1502, the Chamber of Commerce, the National Association of Manufacturers (NAM) and the Business Roundtable filed a lawsuit over the final rule for Section 1502. In their petition, the industry associations requested that the rule "be modified or set aside in whole or in part."

Industry lobbying to water down the provision contributed substantially to a sixteen month delay in issuing the final rule, and has led to disruption in the minerals trade in eastern DRC. The lawsuit risked further undermining efforts to establish conflict-free supply chains from the region.[4]

However, in July 2013 the US District Court for Columbia dismissed the challenge from the Chamber of Commerce and NAM upheld the new rule which requires publicly-traded manufacturers to disclose whether any tantalum, tin, gold, or tungsten in their products has originated from the conflict-ridden DRC. Companies will now be required to publish a Conflict Minerals Report which must also be publicly available on its website.

Best Buy

LEDs

LED light bulbs have a slightly better environmental performance, but cost more and are not good enough for bright lights.

Best buys for LEDs would be ***LEDON,*** a top rated but expensive brand. Also scoring well and slightly cheaper are ***Kosnic, Lloytron***, and ***TCP***.

CFLs

Best scoring brands of CFLs are ***Kosnic, Lloytron, TCP, Sylvania***, and ***Megaman*** in descending order.

Company profiles

On Friday 5th July 2013 Siemens sold most of ***Osram Licht AG***, but retained a 17% stake.

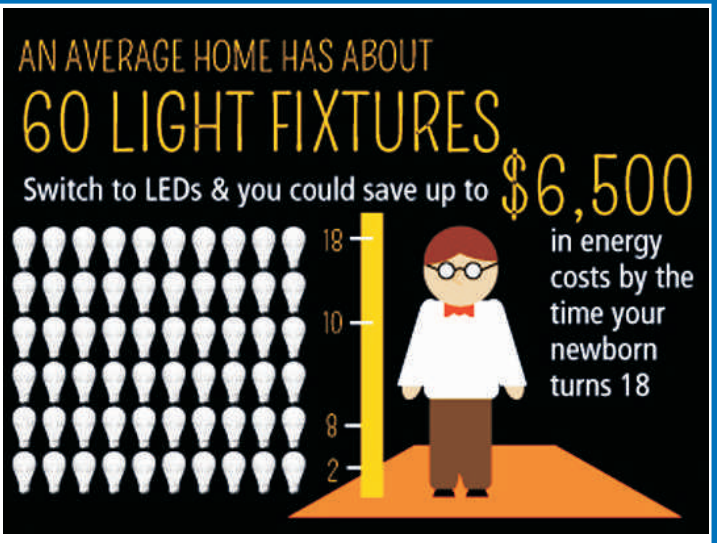
Osram has been preparing for this departure for some time and in March 2013 Osram sold its CFL

light bulb factory in China after it had previously announced investing more than €100 million (£86.4 million) into the construction of an LED assembly plant in the Chinese province of Jiangsu. According to Wolfgang Dehen, the CEO of Osram: "LED is the future of the lighting market".[5]

Europe's largest engineering company, ***Siemens***, has been reorganising since 2007. Last year the new chief executive, Peter Löscher organised the company into three divisions – industry, energy, and health care. He then embarked on creating another division - infrastructure and cities. "Siemens wants to set up a one-stop shop to boost its business with the world's 600 biggest cities", which it says account for half the world's economic output.[6] The sale of Osram and its mobile phone partnership with Nokia symbolise a move away from consumer products. It followed an announcement by the company to quit the nuclear industry it had played such an instrumental part in creating.[7] It now seems that many consumers will be using Siemens products in their everyday lives after the UK government sealed a contract with the German company to build 1,140 train carriages for the cross-London Thameslink rail route.[8]

Kingfisher Plc is the owner of the DIY chain B&Q and a number of other DIY stores across Europe. The company received a best rating for environmental reporting. Its Net Positive report made some ambitious targets to go beyond zero impact and instead to make a positive difference in four areas – timber, energy, innovation, and communities. The report included detailed discussions around each of the four areas, including a target to source timber from 100% responsible sources by 2020. However, the company did have two subsidiaries which were holding companies based in Luxembourg, which were likely to be involved in tax avoidance strategies.

In April 2013 ***Philips*** announced that it had created the most efficient LED light bulb. It said "the prototype tube lighting LED was twice as efficient", producing 200 lumens per watt compared to currently 100 lm/w, and so would offer the same amount of light using less energy. It is hoped that by 2015 it could be introduced into offices and then eventually into homes.[10]



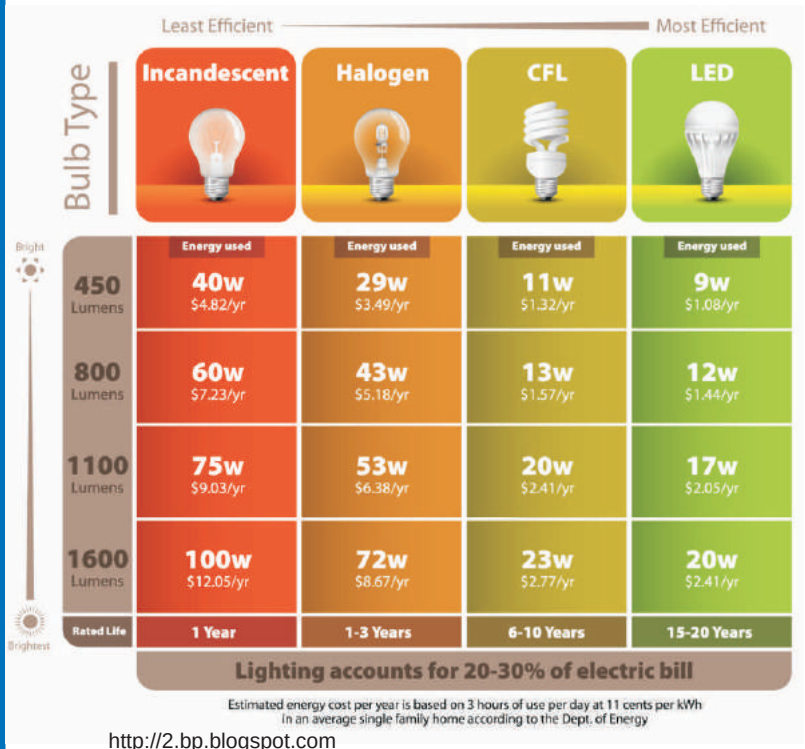
http://assets.inhabitat.com/

IKEA, the Swedish home furnishing company, has often been thought of as a sustainable alternative and it scores best and middle ratings for Supply Chain Management and Environmental Reporting respectively. Yet the company has a murky past. In 2011 IKEA was reported to have used political prisoners in East Germany as "slave labour" to make furniture.[11] IKEA was said to have developed strong links with the communist state in the 1970s, opening a number of manufacturing facilities. The company has since apologised. There have also been problems in the present day. Recently IKEA Israel was criticised for discriminating against Palestinians by refusing to deliver to cities such as Ramallah.[12] However in July 2013 IKEA announced that it would consider opening a store in the city of Ramallah to serve the local Palestinian population.[13]

Crompton Lamps is one of the oldest lamp businesses in the world, founded in 1878 by Colonel Crompton, an entrepreneur with an interest in electricity. It is owned by GCH Capital who also own Dent Steel. In 2009 the company won a contract worth £11 million to play a key role in the construction of the Royal Navy's latest aircraft carriers.[14]

Megaman (UK) Ltd. manufactures CFLs and LEDs for domestic and commercial use. The company has been campaigning for a ban on the use of liquid mercury in CFLs and replacing it with 'solid amalgam mercury'. It claimed the effects of this type of mercury were considerably less if a light bulb was to break.

Sylvania products are sold under the Sylvania,



http://2.bp.blogspot.com

Concord, Linolite, and Lumiance brand names. Formed in 2007 from the integration of SLI Sylvania with Havell's Netherlands BV, the company is owned by Havells India Ltd.

Technical Consumer Products (TCP) is a supplier/manufacturer of private label and TCP branded compact fluorescent, halogen and LED lamps.

Austrian company ***LEDON*** focuses solely on LED lamps and until recently was part of the Zumtobel Group until it was sold to Thomas Loruenser. In a *Which?* report on LED light bulbs in May 2013, ***LEDON light bulbs were recommended as a Best Buy due to their durability.***

Zeta LED is the leading UK developer and manufacturer of LED Lighting systems. In 2011 the British company won £450,000 in a government competition to create an ultra-efficient replacement for 60w incandescent light bulbs. The bulb is said to have 650 lumens light output. Unfortunately the company director Philip Shadbolt confirmed that the light bulb will not be available until Christmas 2013. As soon as it is we will let you know and add the company to this report online.

LED price comparison

Brand	Average Price
Sylvanis 6W (E)	£ 14
Kostic 6W	£ 12-£ 13
TCP 6W	£ 8-£ 11.50
Ledon 6W	£ 17-£ 20
Diall 6W	£ 16
Toshiba 7W	£ 13
Megaman 7.5 W	£ 10
Osram 7.5W	£ 17.50
Lesare 7.5W (E)	£ 7
Crompton 8W	£ 13-£ 14
Philips 8W	£ 13-£ 17
General Electric 9W	£ 26

The price of a GLS LED bayonet light bulb, closest available to 40W equivalent incandescent.

Prices were based on prices listed on the following websites: B&Q, Robert Dyas, Lampspec.com, lyco.co.uk, Amazon, Asda, Homebase, Lampshoponline.co.uk, Led-bulbs.com and IKEA.

Prices correct as of 23rd July 2013.

Lloytron is not on the table as no nearest equivalent to 40W could be found, only 60W.

Where a range of prices appear, this shows it was possible to buy dimmable and non-dimmable bulbs.

(E) = only available in Edison (screw fitting).

Ethical dilemma

Q. Is it better to throw out the CFLs that I am currently using in my house and replace them with LED light bulbs, or should I wait until they need replacing?

A. While LED light bulbs use less energy overall, the actual saving in energy by switching light bulbs would be minimal. A report by the US Department of Energy (DOE) in April 2013 into the total life-cycle impact of LED lamps in relation to other types of bulb found that for an LED light bulb with an average of 25,000 lifetime hours, the energy footprint in comparison with CFLs was fairly similar. The benefits only increased significantly once the average LED light bulb lifetime hours increased to 40,000 (which is not predicted until 2015).

The study proves that switching all your CFLs before they have expired would be counterproductive. The benefits gained through saving energy through the lifetime use of an LED would be lost through the environmental impact of the early disposal of the CFLs.

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DON'T LET General Electric, HITACHI, and TOSHIBA WALK AWAY FROM THE FUKUSHIMA DISASTER!

Toshiba, General Electric and nuclear power

Toshiba is a Japanese manufacturer of nuclear reactors, consumer electronics and home appliances. General Electric manufactures aircraft engines, locomotives, household appliances, light bulbs and plastics. It also builds and operates nuclear reactors, while its finance arm ranks as one of the biggest financial services to manufacturing companies in the world.

In March 2013 Greenpeace ran an article which argued that companies involved in the design, construction and running of nuclear reactors at Fukushima, such as Toshiba and General Electric, should be held accountable for the triple meltdown which occurred.

Under the International Nuclear Damage Liability Law, companies which build reactors are protected by law should there be a nuclear disaster.[9] Essentially this means they can make a profit without worrying about the risks of a meltdown, since the public pays the damages should an accident happen. The cost of the Fukushima nuclear disaster is estimated at US $250 billion and yet these companies have not paid one cent of the cost for the reactor failures.

You can sign a petition asking these companies to take responsibility at

www.greenpeace.org/international/en/getinvolved/they-profit-you-pay

References

1. Philips sees booming LED lighting sales; BBC; 22nd April 2013 www.bbc.co.uk/news/business-22244564
2. 2 Earth-Friendly Elements, Mined Destructively; New York Times; 25th December 2009 www.nytimes.com/2009/12/26/business/global/26rare.html?_r=3&pagewanted=all&
3. Getting to Conflict-Free: Assessing Corporate Action on Conflict Minerals; Enough; December 2010
4. Companies must come clean on conflict minerals lawsuit; Global Witness; 10th December 2012
5. Osram sells Chinese CFL factory; Lighting; 7th March 2013 www.lighting.co.uk/news/latest-news/osram-sells-chinese-cfl-factory/8643904.article
6. Siemens head Loscher to create new unit and sell Osram; The National; 7th April 2011 www.thenational.ae/business/industry-insights/technology/siemens-head-loscher-to-create-new-unit-and-sell-osram
7. Siemens to quit the nuclear power business; Nuclear Engineering Magazine; 22nd September 2011 www.neimagazine.com/news/newssiemens-to-quit-the-nuclear-power-business-721
8. Siemens Thameslink trains contract confirmed; Guardian; 27th June 2013 www.guardian.co.uk/business/2013/jun/27/siemens-thameslink-contract-win
9. Liability for Nuclear Damage; World Nuclear Association; July 2013 www.world-nuclear.org/info/Safety-and-Security/Safety-of-Plants/Liability-for-Nuclear-Damage/#.Ue6K_KzZeSo
10. 'Most energy-efficient' LED light revealed by Philips; BBC; 11th April 2013 www.bbc.co.uk/news/technology-22106718
11. IKEA 'used political prisoners in GDR as slave labour'; The Daily Telegraph; September 2011
12. IKEA attempts to dodge responsibility for Israel store's discriminatory delivery practices; Electronic Intifada; December 2012; www.electronicintifada.net
13. IKEA considers opening West Bank store; Guardian; July 2013 www.guardian.co.uk/world/2013/jul/18/ikea-considers-opening-west-bank-store
14. Companies land £11m Navy carrier contracts; Telegraph & Argus; March 2013
15. Life-Cycle Assessment of Energy and Environmental Impacts of LED Lighting Products; U.S Department of Energy; April 2012 http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/lca_factsheet_apr2013.pdf

Source: Ethical Consumer, Issue 144, Sept/Oct 2013 pg 24-28

Image : http://www.livegreen.cc/wp-content/uploads/2012/08/LED-versus-CFL-light-quality1.jpg

Eco-Friendly Lighting

it's about so much more than CFLs

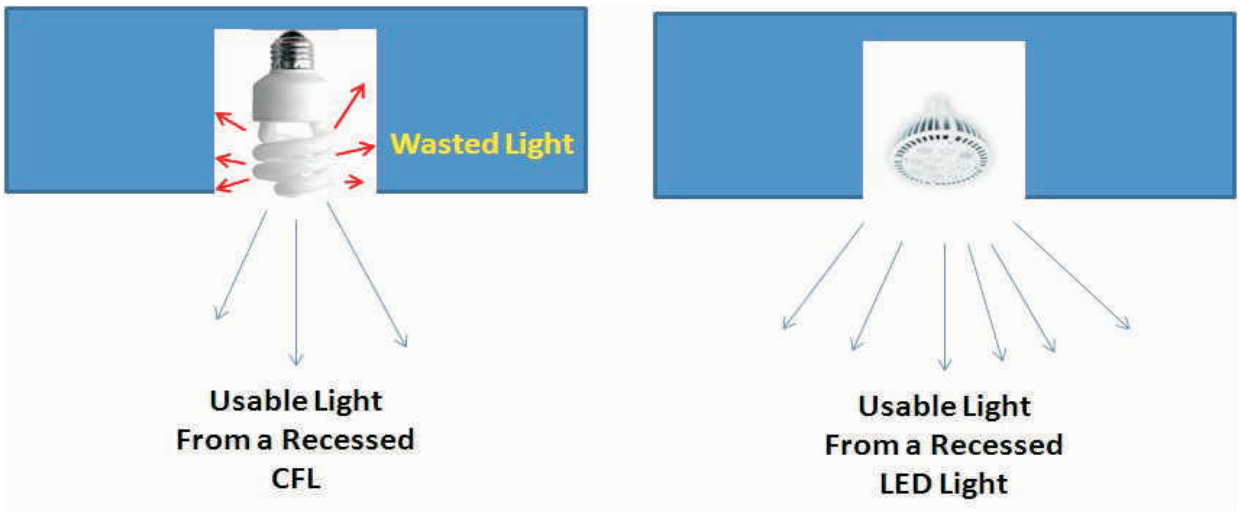
This article is written by Matt Beswic- who is the managing director of Lamp Shop Online. Lighting is a passion of his so he set up Lamp Shop Online three years ago, to help people with their lighting needs.

In 2011 the UK introduced the EU wide ban of incandescent light bulbs; the iconic, familiar bulb was out and new style eco-friendly lights were in. At the time, the cheapest and most readily available alternative was the CFL or compact fluorescent light bulb. This led a lot of consumers to assume that the ban was, in essence, a straight switch from old style bulbs to CFLs but this wasn't the case at all. EU legislation gave no specification about the exact nature of the alternative lighting. It simply banned the incandescent bulb based on its inefficiency and this means that all kinds of different lighting can be used to replace your old light bulbs. Leading the way in new, sustainable and efficient lighting is the LED (light-emitting diode).

LEDs: the future of lighting

Few consumers are aware that in ten years' time it's very possible that public spaces, social housing and offices will be lit by LEDs. CFLs are fast becoming a stop-over solution as lighting experts work to reduce costs and make LED a viable option for consumers. LEDs are being designed to be direct retrofits for incandescent bulbs and the price is constantly dropping.

LEDs are significantly more efficient and cost-



effective than alternatives. Firstly, they're built to last. A typical domestic LED bulb lasts 25,000 hours – 25 times longer than an incandescent – so the initial cost saved by using one LED bulb has to be multiplied by 25 to get a picture of the real savings. If we're replacing a basic 50 watt incandescent bulb with a 6 watt LED bulb (which will match in terms of brightness) and paying 15 pence per kWh of electricity, we save a massive £165 over the lifetime of the lamp. That's £165 per bulb; if you have just ten light bulbs in your house you'll save £1,650 by making the switch.

It might sound a little too good to be true. If the saving is this significant then why aren't more people switching to LEDs? Well, in truth, a lot of people are. Transport for London recently investigated the use of LEDs to light buses and the Energy Saving Trust has produced a comprehensive report which demonstrates that LEDs could generate on-going savings in excess of 3,372,058 kWh if installed in social housing which is the equivalent of 5,788 typical UK homes for a year. Fluorescent tubes can now be replaced by LED tubes for applications in offices and public spaces and even lighting in industry is getting overhauled.

Beyond the home

Factories and warehouses are now being forced to change their lighting as EU legislation has started phasing out industrial lights like sodium lamps which are also used for street lighting. As a result LED corn lamps have been manufactured (so called because they look just like a cob of corn) which reduce energy use by up to 75% so that a 400w old lamp replaced with 100w LED lamp (again, same brightness) saves £90 a year. A small warehouse with ten lamps will save £900 per year and the lamps themselves last for 50,000 hours and 16 1/2 years. The total saving on just one lamp comes to £1,485.

Summary of key savings of LEDs

- Switching to a standard 6 W LED (GU10 direct replacement – a very common lamp in bathrooms and kitchens) saves £165 per bulb
- If you switch ten light bulbs to LED you'll save £1,650 across the bulbs' lifespan
- A small warehouse can save £1,485 on just one lamp by switching to LED
- Switching to LEDs in social housing will save the equivalent of electricity use in 5,788 typical UK homes
- These are big money saving figures which indicate that switching to LEDs isn't just good for the environment it's also economically enticing. If you want to upgrade your lights to the most eco-friendly option and save a fair bit of cash then make sure you consider the LED lamp alongside the well-known CFL.

Source: Ethical Consumer, Issue 144, Sept/Oct 2013 pg 29

Write to us

We value your views and suggestions. Please send us your feedback on this issue. We would also like to have your contribution on the information relevant to the Eco product and Eco labelling.

Please mail: cerc-env@nic.in

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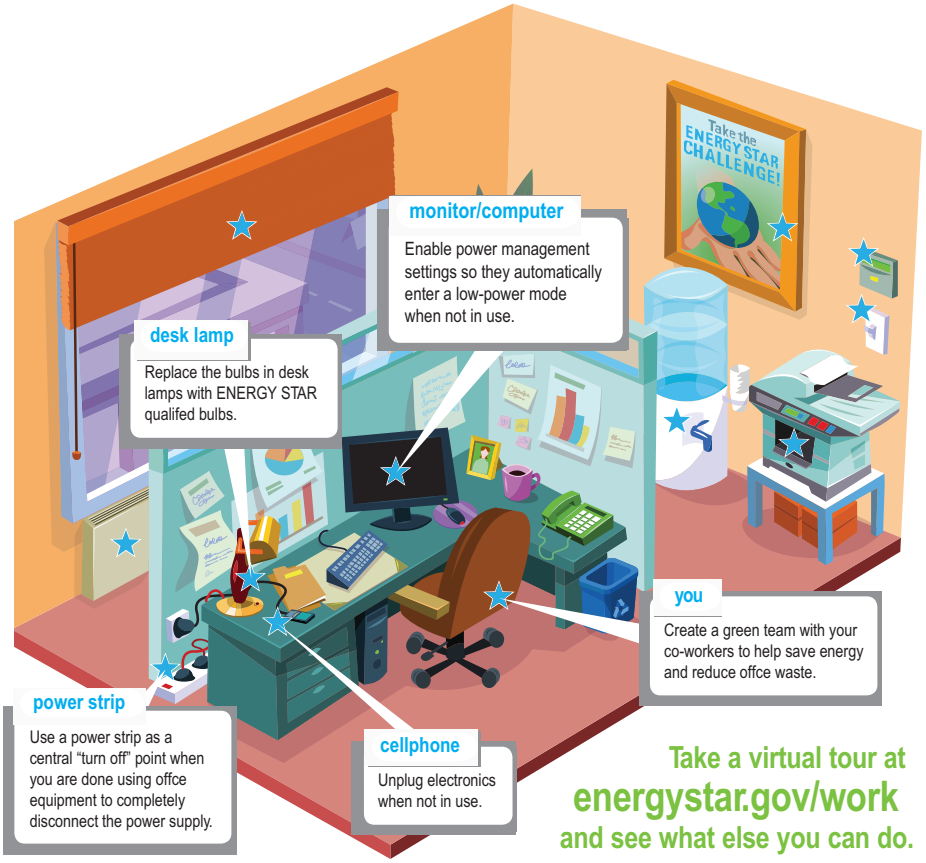

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