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**Why LEDs haven't yet cut energy use for lighting**

**If you want to sell a bicycle, light it up, says Eamon Barrett, owner of the Altitude bike shop in Waterford, Ireland. The glossy technicolour paints, the chrome, the shiny new spokes - they all glisten in bright light.**

But having fluorescent bulbs[[1]](#footnote-1) blazing all day long to help shift a supposedly green form of transport began to bother Mr Barrett. So, around three years ago, he decided to switch to more efficient LED lighting in Altitude's showroom and also the workshop, canteen and back offices.

Motion sensors[[2]](#footnote-2) mean lights in some areas now only come on when someone enters the room. The system is powered partly by new solar panels and a battery.

"It's a win-win," says Mr Barrett. "The quality of the lighting is better." And, he says, his annual electricity bill has fallen by 35%. That saving would be even greater, adds Mr Barrett, were it not for Russia's invasion of Ukraine, which dramatically pushed up energy prices.

LED lighting has been around for decades but many businesses are yet to install it. That's partly down to the upfront cost of a switchover. Mr Barrett says he spent roughly €10,000 (£8,800; $10,900) on new lighting across his 6-7,000 sq ft property. He estimates that it will take around seven years to recoup this as well as the additional cost of the solar panels and battery.

Many residential properties, particularly in the West, have already adopted LEDs. But the transition is taking longer in commercial buildings. Government policies could help encourage businesses to switch. And further energy savings can be made, she adds, when lighting is paired with smart systems, such as the motion sensors used by Mr Barrett. That could help global energy consumption for lighting come down.

Marmax Products in County Durham recycles plastic to make outdoor furniture such as picnic tables. Last year, the firm finally made the switch from incandescent bulbs to LED lighting in its warehouse and offices. "We felt that, because of our product range, we were doing our bit," says Dave Johnson, general manager. It was an energy reduction audit that flagged the possibility of moving to LED lighting. "You can always do more," adds Mr Johnson.

In some locations, simply replacing long-defunct lighting remains a challenge. Earlier this year, at the Stamford Hill Estate in London, lighting manufacturer Gemma Lighting was called in to recommend options for exterior and street lighting.

Annual energy consumption for the old lights - had they all been working - would have been 341,000 kilowatt hours (kWh), says Mr Lowbridge, which is enough to meet the annual electricity demands of more than 120 [average British homes](https://www.ofgem.gov.uk/average-gas-and-electricity-usage). The new LEDs require just 36,000 kWh annually, a reduction of nearly 90%.

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1. Bulbs : ampoules [↑](#footnote-ref-1)
2. Motion sensors : détecteurs de mouvement [↑](#footnote-ref-2)