

A Low Energy Solution for Backlit Display Advertising

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Sustainable Backlighting for Advertisers

As global warming moves to the top of the public agenda, the media world is starting to ask some logical questions:

- * Should we be investing energy to illuminate advertising displays?
- * If so, are these displays as environmentally responsible as they could be?
- * How can we drive down the carbon footprint of backlit advertising?

The outdoor advertising industry has begun to recognise that providing good answers to the second and third questions is the best way to prevent the first question from dominating the debate.

In short, the industry needs to do everything it can to reduce its environmental impact now, before governments start to legislate financially punitive measures.

Governments are only one source of the pressure to go green. Advertisers are also increasingly concerned about their own carbon footprint and are keen to demonstrate their commitment to improve.

It's time for the outdoor media industry to step up with solutions that dramatically improve on the current state of the technology.

The trouble with fluorescents

The outdoor media industry is starting to realize what lighting engineers have known for years - fluorescent tube lighting is unsustainable:

- Fluorescent tubes waste energy.
They convert only 7-10% of their energy into light.
The rest is wasted as heat – which often needs to be removed by power hungry air conditioning
- They demand costly, regular maintenance.
Tubes fail suddenly and unpredictably, forcing annual replacement – further waste and cost.

- They create hazardous waste.
Fluorescent tubes are hazardous to manufacture and expensive to dispose of, with the risk of releasing mercury into the air, water and food chain.

This environmental cost is matched by an aesthetic penalty: fluorescent backlighting provides uneven illumination, 'striping' patterns and dark zones when tubes fail.

LEDs: a better way to backlight

Solid-state LED technology has been replacing less efficient lighting sources for many years. It's already widely used in everything from consumer electronics to traffic lights.

But until recently, high brightness LEDs have been too expensive for more general use.

Fortunately, the price/performance ratio has been improving dramatically. For the first time, LEDs are cost-effective enough to change the economics and environmental impact of the entire outdoor media industry.

Sustainable Backlighting™

Bright Green Technology has pioneered the use of solid-state LED backlighting for display advertising and signage.

The new generation of solid-state backlighting, Sustainable Backlighting™, creates advertising displays that look better, cost less and reduce the carbon footprint of every display by as much as 88%.

- Bright Green systems use up to one-eighth the energy of a traditional 'tube box'.
- Bright Green systems are zero maintenance, with no need for costly annual re-tubing and tube disposal.
- Bright Green systems last longer – typically 5 years + before needing a fast, simple and safe LED replacement (with no hazardous waste to dispose of).

Carbon footprint: Bright Green vs. Tubes

A single, backlit, 6-sheet poster box puts 6-8 times the carbon into the atmosphere with fluorescents than with Bright Green systems (and incurs 6-8 times the energy costs):

| | Fluorescent Tubes | Bright Green |
|--------------------|-------------------|---------------|
| One Year | | |
| Illumination | 6 x 58W tubes | 2 Lightsticks |
| Total Power | 348W | 58W |
| Energy cost/year* | \$610 | \$102 |
| Carbon emissions** | 3,048 lbs/year | 318 lbs/yr |
| Five Years | | |
| Energy costs* | \$3,050 | \$510 |
| Carbon emissions** | 15,265 lbs | 1,590 lbs |

* \$0.20 per kW-hr

** @ 1 pound of carbon per kW-hr

A green initiative that pays for itself

By using less energy, lasting longer and requiring no maintenance, Bright Green systems don't just reduce greenhouse gas emissions, they also pay for themselves.

A single fluorescent tube box (with 6 tubes) costs \$3,310 more over five years than the Bright Green equivalent:

| Five-Year Savings | Fluorescent Tubes | Bright Green |
|----------------------------|-------------------|--------------|
| Tube/ballast cost | \$230 | -- |
| Tube disposal | \$60 | -- |
| Labour (planned/unplanned) | \$480 | -- |
| Energy | \$3,050 | \$510 |
| Total | \$3,820 | \$510 |

Carbon footprint: Bright Green vs. Tubes

Bright Green solutions use one eighth the energy and cause one eighth the carbon footprint of traditional backlit advertising and signage. To put that into perspective:

- A single six-sheet display using fluorescent tubes (x6), puts over 3,000 pounds of carbon into the air every year.
- The equivalent Bright Green display only generates 318 pounds of carbon – saving 2,730 pounds of carbon, every year, per display. This is about the same as an average western household's annual heating footprint (3,280 pounds) for each and every six-sheet display in the world.
- Just replacing the world's 6-sheet displays with Bright Green systems would save 30,000MW hours of energy every single day (not even including the larger billboards). That's 30 million pounds of CO₂

The aesthetics bonus

Sustainable Backlighting systems look better than traditional tube-boxes and support more creative uses.

The LEDs are optimized for advertising display, giving a soft, warm light that delivers vivid colors and bright whites. Because there are no tubes behind the posters, there's no striping – just an evenly illuminated display surface that always looks its best.

Unlike fluorescent tubes, Bright Green systems can be dimmed, programmed and turned on and off, saving more energy and opening up new creative opportunities.

As advertisers increasingly reward suppliers that actively reduce carbon emissions, Bright Green systems provide an attractive alternative with no penalty in terms of illumination quality.

A sustainable system for any site

There's a Bright Green solution for every application, from six-sheet bus shelter to backlit billboard. Two different systems are on offer:

- **Bright Green Edge™** – the super-thin, edge-lit system suitable for 6-sheets and smaller.
- **Bright Green Matrix™** – the patented LED Suspended Array™ technology that's scalable and retrofittable.



Chosen by top contractors around the world

Bright Green solutions are in daily use by some of the industry's most progressive contractors, including CBS Outdoor, Clear Channel and Titan Worldwide.

The bottom line: sustainable backlighting that pays for itself

As the outdoor media industry rises to the challenges of global warming, government pressure and advertiser demand, Sustainable Backlighting™ shows the way forward by:

- Using much less energy, so generating much fewer greenhouse gases.
- Being maintenance free and foregoing the need for annual engineer visits and tube disposal.
- Lasting at least five times longer than fluorescent tubes with no recyclability issues.

Clearly, the time for Sustainable Backlighting™ has arrived.

About Bright Green

Bright Green Technology is the technology and market leader in solid state LED backlighting systems for the advertising and signage industries.

Bright Green develops and markets proprietary backlighting systems built on our own patent-protected technology.

Our mission is to dramatically improve the environmental performance and ROI of all backlit advertising and signage by replacing fluorescent tube boxes.

Contact us at www.brightgreentechnology.com