

**LIGHTING
THE WAY:
AN IN-DEPTH
LIGHTING
STUDY ON THE
CAGE AND
WAITING FOR
THE OUT**

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Across the film and TV industry, use of LED lighting is now commonplace - but taking sustainable lighting design to the next level can still prove challenging.

In this case study, we'll be looking in detail at two lighting packages; one for Element Picture's upcoming series, *The Cage*, and the other for Sister Picture's recently released and critically acclaimed series, *Waiting For The Out*. We'll look at what technology the productions utilised, how this impacted power usage, and discuss the practical implications of these sustainable decisions.



The Lighting Packages

Spearheaded by the production manager on *The Cage*, Ben Szoradi, and working with Tink Lite Ltd, the gaffer and DOP created a low-load, high-impact lighting design. In addition to the standard Sunbelt LED lighting package, over 200 metres of LED flex tape was used to create the glow in the main location, while multiple LED Fresnels were used for key lighting. This design set up was not only sustainable but also enabled creative choices, with full colour flexibility at the flick of a switch.

Meanwhile, *Waiting for the Out*'s DOP Jamie Cairney set a clear vision from the outset: to aim for near 100% LED lighting across the shoot, without compromising creative ambition. Jamie's progressive approach gave the lighting team, led by Gaffer Craig Cowper and Best Boy James Harris, the confidence to innovate with technology and embrace unconventional workflows. They partnered with No Filter Lighting, a supplier known for their sustainability standards, and integrated their NANLUX Evoke 2400B and 5000B lighting fixtures to replace the legacy 4k and 9k HMI's respectively.



Impact on Power Usage

The work of both teams made it possible to follow the industry-recommended power hierarchy of prioritising grid power first. On *Waiting For The Out*, the production's LED lighting package allowed mains to take centre stage. Due to decreased energy levels required for NANLUX lighting fixtures, 83% of shoot days ran from the local grid supply. This was then assisted by portable Instagrid and Astera battery units, which provided power on 76% of days and enabled flexible low-impact lighting setups. This use of both mains and batteries, in turn, ensured the 45kva generator was used sparingly, with only 29 shoot days (53%) requiring it and only HVO being used for fuel. This power usage was monitored by using Enerlytic clamp-on power monitors to allow real-time energy tracking and verify savings.



On *The Cage*, the main location in which the lighting package was installed was able to eradicate the need for a lighting generator; this meant that all 16 days at that location were run on mains. Through the rest of the shoot, LEDs were implemented across the board, meaning 73% of all shoot days could run lighting from either local grid supply or batteries.

As a sparks generator was infrequently required, this meant only 5,000 litres of HVO was used by Lighting. The decision to use LEDs instead of tungsten on both productions already had the potential to cut lighting emissions by up to 80%, but the reduction and elimination of generators and fuel usage increases this further.



The Financial Truth

While the initial upfront costs of these lighting packages may seem high, the power and fuel savings, as well as the reduction or elimination of generators typically results in cost savings for most productions.

For example, the cost of The Cage's lighting package and installation was at an 87% uplift compared to the standard package – an upfront cost made justifiable thanks to the BBC's Decarbonisation Fund. However, even if this additional funding had not been provided, estimations based on the lighting team's 100,736kWh usage in the main location compared to the real consumption rate of the spark's generator across the rest of the shoot found that a conservative estimate of £31,620 fuel costs were avoided. Had the production funded the LED package without decarbonisation support, it would still have produced a net cost saving. This demonstrates the catalytic power of broadcaster decarbonisation funding: it can unlock low-carbon innovation that might not otherwise have been considered, and deliver long-term operational, financial, and environmental benefits.

The cultural shift

The decisions made on these productions helped to adjust typical industry practices. Lighting is one of the biggest drivers of generator sizing on UK productions; not only because of power draw, but because 200 kVA lighting trucks double as storage, meaning many productions end up with oversized generators by default. By designing a low-load LED system from the ground up, The Cage flipped this logic so that no lighting generator was required at the main location. Not only this, but this decision also significantly cut fossil fuel demand, reduced site noise and fumes, and made the set a stable, low-carbon, low-maintenance environment. Creatively, the LED flex system turned the entire space into a controllable light source. The team achieved highly responsive lighting control, rapid colour changes for mood and story cues, and a vivid, energetic look that would have been far harder (and far more power-hungry) to achieve with traditional fixtures.

Finally, Waiting For The Out demonstrated that LED- and grid-first lighting is not just possible; it is practical, cost-effective, and creatively liberating. The combination of forward-thinking leadership (Jamie, Craig, No Filter) and real-time power data (Enerlytic) set a new standard for sustainable lighting in high-end TV. Interviews with crew also revealed the opportunity for a shift in mindset:

"Everything's basically controllable now - wireless, dimmable, colour-tunable. The speed it gives us is incredible. We're lighting faster, cleaner, with less power - there's no reason to go back."

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