

CLEAN ENERGY WORKING IN PARTNERSHIP WITH LOCATION ONE

LOCATION: BRISTOL, SOUTH WEST

SECTOR: FILM AND TV

0330 433 1766

www.sunbeltrentals.co.uk/case-studies



CLEAN ENERGY – LOCATION ONE

INTRODUCTION

Temporary power solutions are a necessary requirement for many industries when a connection to the national grid isn't available. With multiple filming locations sited in remote areas and many sites without access to mains electricity, Film & TV is one such industry, and is therefore heavily reliant on temporary power solutions such as generators.

Rising fuel costs, a mission to decarbonise productions and a need to lower noise pollution on set means that the TV & Film industry are actively seeking out alternative energy solutions. As a specialist supplier to TV & Film companies for over 15 years, Location One is working on several trials in partnership with the Sunbelt Rentals' Clean Energy Team to explore how the power set-up at unit base can be made more sustainable.

So, when the team at Location One sought to trial a cleaner energy set-up for one of their latest productions in the Southwest of England, they called on the expertise of Sunbelts' Energy Team to help them supply a solution.

DURATION:

1 WEEK

PRODUCTS (INC QUANTITY):

LITHIUM BATTERY STORAGE UNIT

BUSINESS UNITS INVOLVED:

CLEAN ENERGY

THE CHALLENGE

The location had no mains connection, so temporary power was essential.

As has been the norm for many decades, the Location One team installed a (100kVA) generator to deliver 24/7 power to the 9 large trailers and all other supporting services at Unit Base. Although the generator was fuelled exclusively with renewable HVO, that didn't go far enough.

The challenge was to prove to the production team that they could significantly reduce their CO2e emissions through implementing a hybrid solution (generator and battery storage unit set-up) without compromising the smooth-running of their location shoot or blowing their budget.

THE SOLUTION

As a first step, Location One recced the site and modelled its power profile. Then, working alongside the Sunbelt Energy Team, they were then able to identify the optimum energy solution.

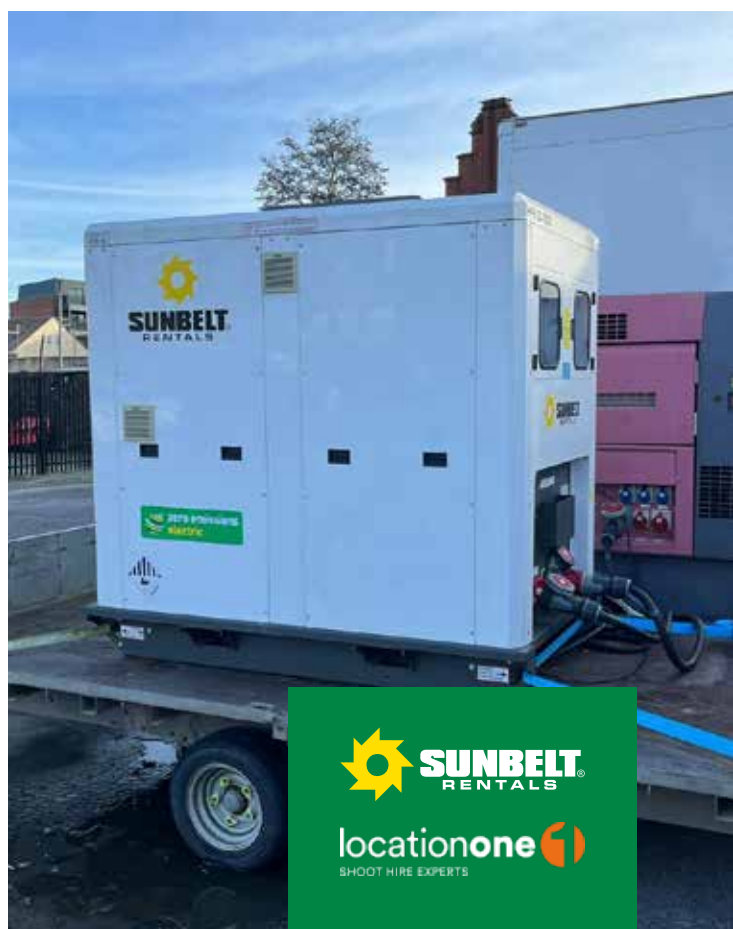
The solution was in fact quite simple. By adding a single Battery Storage Unit (BSU) to work alongside the 100kVA Generator they created a hybrid power set up that could deliver:

- Lower fuel costs
- Periods of silent running
- Lower emissions

The BSU and Generator were set up in full hybrid mode with the BSU configured as the prime source of power to Unit Base and the generator as back-up.

When the Battery was depleted below a set % the power source seamlessly switched to the generator, which took to powering unit base whilst simultaneously re-charging the BSU.

Once the BSU was fully charged again it seamlessly took over ALL the power needs for the 9 trailers and other services at unit base and the results were outstanding.



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THE RESULTS

After seven days the hybrid set-up had reduced the site's fuel and CO2e emissions by 40% compared with operating a standard diesel generator, not to mention a 40% reduction in harmful NOx, particulate matter, and CO emissions.

- 54 litres of fuel saved per day, or 381 litres of fuel saved over the week.
- 1,029 kgCO2e avoided (if using fossil-fuel diesel) or 14 kgCO2e avoided (if using renewable HVO).
- 110 hours of silent, emission-free power delivered to the site.
- Reduced generator refuelling tasks.

WHAT HAVE YOU FOUND TO BE THE KEY BENEFITS OF THIS HYBRID POWER SOLUTION?

"Significant reduction in CO2e, NOx and PM emissions is the headline benefit, but the further advantage to hire companies such as ours is the reduced pressure on and the better running of our generators".

Crispin Hardy, Managing Director, Location One

"To be able to implement a solution that goes a long way to protecting my crew and the local community from generator exhaust emissions is a huge thing. And the silence was golden".

Mac MacKinnon-Phttison, Unit Manager, Location One

HOW DO YOU THINK THIS WILL BENEFIT THE INDUSTRY GOING FORWARDS?

"We all want to decarbonise the industry but sometimes the solutions can seem futuristic and out-of-reach. Our trial was a simple set-up for a traditional, mid-sized unit base. I think it's these kinds of simple steps forward that the industry needs on its transition to full electric or hydrogen solutions".

Crispin Hardy, Managing Director, Location One

"It took the theory and turned it into a practical, on-the-ground solution that delivered real results. The set-up we trialled is accessible to any unit base willing to do a bit of pre-planning".

Mac MacKinnon-Phttison, Unit Manager, Location One

** The results of this trial will be used by Location One to conduct temporary power solutions and consult on the optimum set up for each production.

