



# A CLEANER ENERGY SOLUTION FOR STORY CONTRACTING

Location: Motherwell, Scotland  
Sector: Construction

**0330 433 1766**

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## THE AIM:

To reduce the impact on the environment through lower emissions, less noise pollution, reduced fuel consumption and overall, reducing costs associated with temporary power and energy on site.

## PROJECT OVERVIEW:

Story Contracting are delivering a bridge replacement project as part of the Ravenscraig development program of works for Network Rail in Scotland.

The construction of a new under bridge is part of the ongoing works to upgrade the road connections between Motherwell and Ravenscraig for North Lanarkshire Council.

## THE CHALLENGE:

This complex project is expected to take 12 months to complete and involves constructing the structure offline then positioning it below the West Coast mainline.

To carry out the works Story Contracting required a large site compound with a 24/7 temporary power solution for flood lighting, EV charging and a welfare complex of 18 units including office space, drying rooms, canteen, stores, meeting rooms, toilets and showers.

The welfare units had already been supplied by the Sunbelt Rental's Accommodation team with eco savings in mind. Fourteen units in the main compound are eco rated, meaning they offer a range of savings including efficient lighting, extra insulation to reduce heat loss by 39% and water efficiencies saving up to 58% more water when compared with standard units.

However, the team at Story are passionate about seeking out greener solutions that can reduce their environment impact wherever possible, so they wanted to go further and sought a cleaner energy solution that could further reduce their carbon footprint and the impact on the surrounding environment.

## EQUIPMENT SUPPLIED

- Battery Storage Units (BSUs)
- Energy Management System (EMS)
- Solar Array
- EV Charger
- 60kVA Generator
- 18 Welfare Units (including 14 Eco Units)



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## THE SOLUTION

Traditionally a 150kVA generator would be needed to power the sites' needs, running 24/7 and burning approx. 18 li/fuel per hour.

But, there is a much better, cleaner energy solution and it's delivering significant savings.

Andy Gordon from the Sunbelt Rentals' Energy Team assessed the sites' power requirements and recommended Story Contracting install a battery storage unit (BSU) and energy management system (EMS) alongside a smaller, 60kVA fuel powered generator as well as an EV charger.

The cleaner energy solution was installed on 7th June 2022

The EMS was programmed to switch off non-essential devices when not in use (such as heaters, lights, water boilers etc).

This allowed the energy management system to control, regulate and monitor power requirements on site, fundamentally suppressing the peak load and creating a perfect environment for a BSU to operate in.

The BSU could then power the entire site whenever the load dropped below a certain kw (typically overnight and at weekends). This is silent, fuel-free, emission-free power.

▲ We engaged with Sunbelt's Accommodation and Power divisions well in advance of the project starting to discuss how we could make the site compound as sustainable, innovative and cost effective as possible. Our agreed solution was an 18 x 'Eco' cabin complex powered by a clean energy setup, which includes a 60kva generator supported by a battery storage unit (BSU) and automated energy management system (EMS).

We wanted to push the boundaries of what was possible on this high-profile project and have already seen a major reduction in generator run time, resulting in lower fuel costs, carbon emissions and noise levels. The quality of the eco cabins supplied by Sunbelt is first class and the whole process, from early consultation through to the installation of the compound, has been seamless. ▲

**Darren Kirkland**  
Senior Site Manager  
Ravensraig WCML Crossing Project



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[enquiries@sunbeltrentals.co.uk](mailto:enquiries@sunbeltrentals.co.uk)



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## THE RESULTS

After just 3 weeks site were able to start measuring savings with early reports showing the BSUs powering the entire site 51% of the time, delivering a significant fuel saving.

This is in addition to the 50% fuel savings\* already made by downsizing from a 150kVA to a 60kVA.

On 8th August 2022 Story further upgraded the Cleaner Energy solution with the addition of a second BSU and an 8 panel Solar Array, which enhanced charge to the BSUs through solar energy.

The result further reduced generator run time and maximized BSU efficiency.



In the first 6 months of the project the TWO BSUs have powered the site on average 68% of the time.

Reducing fuel consumption by an estimated 1,168 litres per week. \*

Reducing emissions by approx. 3,083 kg per week. \*

And delivered over all cost savings of £21,929.44 over the first 6 months (on average £843.44 saved per week). \*



\*Comparisons are based on a traditional temporary power set up needed to run this size of site, with a 150 kVA generator only running 24/7, burning an average 18 litres fuel per hour vs a Solar array, 2x Battery Storage Units, 1x Energy Management System and 1x 60 kVA Generator running 32% of the time using approx. 8 li fuel per hour.

Ecost savings include hire rates for all equipment.

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03/23/01432

