

Brecon Mountain Railway

The Brecon Mountain Railway is a popular tourist railway that operates steam locomotives along a scenic route in the Brecon Beacons National Park. Running from Pant to Torpantau via Pontsticill and Dolygaer, the railway follows part of the former Brecon and Merthyr Railway, offering visitors a unique heritage experience over a distance of approximately 4.5 miles (7 km).

Industry

Leisure - Railway Transport

Technology

LED Lighting

Location

Powys, Wales

Overview



LED LIGHTS INSTALLED

49



ANNUAL CO2 SAVINGS
(TONNES)

5



ENERGY SAVED

70%



PAYBACK (YEARS)

2



ANNUAL ENERGY SAVING (KWH)

25,194



EQUIVALENT RATE (P/KWH)

1.7p

The Motivation

Brecon Mountain Railway houses its historic steam locomotives in a purpose-built building that includes a workshop and a public viewing gallery. However, the lighting within the facility was inadequate, affecting both staff working conditions and the visitor experience. The existing lighting system was outdated, inefficient, and costly to run. Maintenance of the old lighting posed a safety risk due to the high ceilings and complex floor layout. To improve visibility, enhance safety, and reduce energy costs, BMR sought an effective lighting upgrade.

The Ineco Solution

Upgrading the Lighting System

Ineco Energy was selected to modernise the lighting within BMR's engineering workshop and steam-train parking sheds. The new lighting system was designed to accommodate the unique challenges posed by the heat and vapour produced by the steam locomotives. Specialised fittings were chosen to ensure durability and efficiency in this demanding environment.

Managing Installation in a Complex Environment

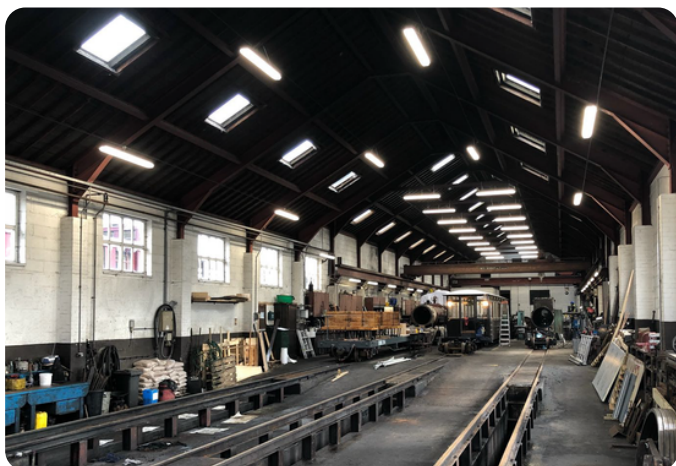
The survey, design, and installation process had to navigate a challenging workspace featuring varying floor levels, pits, gradients, and large overhead cranes. Health and safety planning was crucial to ensure that BMR's daily operations remained unaffected. Additionally, working within a live railway environment introduced extra safety considerations for both staff and installation teams.

Securing Financial Support

To make the project financially viable, Ineco Energy secured grant and loan funding from the Carbon Trust Green Business Fund. This funding significantly reduced the capital costs for BMR, making the transition to an efficient lighting system even more affordable and cost-effective.

The Benefits

The upgraded lighting system significantly increased light levels, greatly improving visibility for the maintenance teams. This provided a safer and more productive working environment. The new lighting system not only reduced electricity costs but also came with a 5-year parts and labour warranty. This assurance delivered peace of mind to BMR's management, ensuring the system remained efficient and reliable for years to come.



Light levels are so good that we don't need additional lighting and our visitors can see all the activity within the workshop. Our safety risk is also improved because we won't have to get up and replace the bulbs every year."

Director, BMR