



Energy Efficiency Euroclad Group, Cardiff

Project:

This project focused on reducing the carbon emissions associated with Euroclad Group's laminating process, one of the most energy-intensive operations within the business. The project was undertaken to identify a practical alternative to conventional natural gas while maintaining operational performance and avoiding significant capital expenditure.

Supporting both the Carbon and Energy pillars of the Planet Passionate programme, the initiative combined a fuel source transition with targeted energy efficiency improvements. The objective was to achieve meaningful emissions reductions from a major operational process while continuing to meet production requirements.

Challenges:

Natural gas has historically been a significant part of the laminating process. During 2024, heating the laminator oven with natural gas accounted for 66.5% of Euroclad Group's total emissions, equivalent to 208 tonnes of CO₂. This made the process a priority area for improvement.

Alternative solutions were evaluated, including electrification of the laminator. However, this option would have required substantial capital investment and major upgrades to the site's electrical infrastructure. The challenge was therefore to identify a lower-carbon solution that could be implemented without extensive disruption or major infrastructure changes.



Analysis
Breakdown
overleaf



Division:

Kingspan Insulated Panels EAA

Site Location:

Euroclad Group

Person responsible for project:

Dan Angell



Energy Efficiency, Euroclad Group, Cardiff



Solution:

To address the challenge, Euroclad Group transitioned to a new gas supplier in April 2025, following verification of the associated sustainability documentation. The site began purchasing certified biogas, supported by ISCC certification and carrying a reported carbon intensity score of ** -12.4 gCO₂/MJ^{**}.

The fuel transition was combined with a series of practical energy efficiency measures. These included upgrades to the laminator control systems and improvements to the laminator housing to reduce overall energy demand. By combining the change in fuel source with operational efficiency improvements, the project delivered a lower-carbon approach for a key manufacturing process while avoiding the need for major capital investment in electrification and electrical infrastructure upgrades.

Lesson learned:

- Evaluating alternatives to full electrification can identify practical routes to reducing emissions while maintaining operational performance.
- Supplier selection and confidence in sustainability documentation are important factors when transitioning to alternative energy sources
- Combining fuel switching with energy efficiency measures can provide additional reductions in overall energy consumption.
- Targeted improvements to existing processes may avoid the need for major infrastructure upgrades.

