camlin energy

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FINERGE
CUSTOMER SPOTLIGHT

Safeguarding renewable energy generation by maximizing asset availability with Camlin Energy's transformer monitoring solutions and services.



"To maximise grid interconnection, we are integrating solar generation into several of our wind energy sites. Understanding transformer health is vital for uptime so we can understand the risk profile of our transformers, respond rapidly to faults and safeguard power supply to the grid."

Hugo Carvalho, Head of Asset Management at FINERGE

FINERGE Overview

FINERGE, a major independent renewable energy provider, owns and operates 2,1 GW of wind and solar projects spanning Portugal and Spain. Across these projects, 889 turbines harness the energy of the wind, and thousands of photovoltaic modules collect energy from the sun, transforming it into up to 4500 GWh of clean energy to power homes and businesses.



Why monitor power transformers?

As with many renewable projects, a single power transformer often connects the renewable project to the electricity grid. Although these transformers should have lifespans that exceed the life of the project, they can and do fail, resulting in immediate loss of generation from the wind or solar project. Furthermore, at several larger wind projects, FINERGE are embarking on a program to add solar capacity to these projects to maximize the generation potential from the existing balance of plant and interconnection at these sites. The uptime of the power transformers at these sites becomes even more critical for the success of the business.

As the cost and lead time for such transformers continues to rise, an unanticipated transformer outage and especially a catastrophic transformer failure can have significant costs for the business.

FINERGE Requirements

To mitigate against this risk FINERGE required a holistic monitoring solution for their most critical, remotely located, transformer assets, to provide:

- Real-time visibility of transformer health
- Early warning if any issues or faults are developing with the transformer that could result in a risk of asset failure and lost generation; and
- Support from subject matter experts providing deep condition health assessments with clear recommended actions to mitigate against such risks, thereby maximizing transformer asset availability.

Why Camlin?

"Implementing transformer monitoring across our major projects is a key strategic objective. Camlin Energy's installation team recognised our business drivers and adapted their program to avoid any downtime. Their proactive approach ensured smooth implementation, aligning perfectly with our objectives."

Joaquim Silva,
Asset Management at FINERGE

"Following a very successful first installation, we were pleased to support Finerge with our transformer monitoring solutions across all of their key projects"

Dr. Ian Hunter, Business Development Director
CAMLIN ENERGY

FINERGE chose Camlin Energy as its transformer monitoring partner. In 2022, Camlin Energy installed a TOTUS transformer monitoring system at a FINERGE wind farm project in Portugal. Following its success, FINERGE expanded the deployment of Camlin's TOTUS transformer monitoring solution to all major projects in Portugal in 2023 and in Spain in 2024.

Given the criticality of the transformers, a TOTUS system complete with nine-gas dissolved gas analysis, partial discharge monitoring, bushing monitoring and through fault current monitoring, was selected to give the most holistic picture of transformer condition.

Camlin's installation team adapted to the priorities of FINERGE and, with a flexible and responsive schedule for installation, project downtime was not required.

Key to a successful monitoring program is the understanding of risk and determining the operational and maintenance actions to take for the monitored asset.

The Camlin Energy Asset Performance Team are a specialist group of industry experts, with decades of in-house experience in transformer design, reliability, and diagnostics, that support customers to make informed decisions to safeguard their transformer assets.

The Asset Performance Team are providing ongoing condition assessment services to FINERGE. Their focus is maximizing the uptime of the transformer, and hence the uptime of renewable energy generation. By managing transformer risk, Camlin Energy are supporting FINERGE to deliver on their renewable energy generation objectives.

