

Case Studies: Renewable Energy Capability Study

A large industrial customer engaged us to apply engineering first principals in a technologically agnostic manner, to evaluate options for renewable energy generation at their production sites.



MoSPEX

Our engineers developed a model to predict annual solar generation potential for sites based on the installation size, orientation and latitude. Dubbed MoSPEX (Model of Solar Generation in Excel), our model considered typical weather patterns, changes in the angle of sunlight throughout the year, roof angle and other key factors that affect photovoltaic (PV) efficiency. This tool was used by senior stakeholders to establish the viability of solar implementation at various sites to make informed sustainable decisions.

Testimonial

"Frewer worked from a broad scope and the tool they developed has been informative. We worked closely together to guide the project direction, and the resulting tool and insights were shared across all geographies in the business."

Energy Storage Assessment

We also conducted a survey of current energy storage solutions, to provide an assessment of the estimated Levelised Cost of Storage (LCOS) and weigh up the feasibility for the customers sites. Energy storage is essential to provide reliable supply from renewable sources and our customer wanted to better understand the options available to them.

Energy System Modelling

Finally, we conducted an in-depth study to assess the generation potential of a particular UK site. Combining our solar energy model and data on energy storage solutions to propose generation/storage mix scenarios. Using real site data, our engineers followed a statistical approach to predict how each scenario would help to increase "behind the meter" generation, save money by reducing grid demand, reduce emissions, and improve grid resilience.

