



Rooftop Solar PV – System Repair and Optimisation

Location: Kent

Client: Private

Size: 110 kW(p) + 70 kW(p) extension



The Energy team have assisted a private client to troubleshoot a 110 kW rooftop solar PV that had historical problems of low energy yield and system outages. Our analysis indicated that the system was underperforming by 25% for its location and orientation.

Our engineers performed a technical appraisal of the system and test results identified several electrical issues including a faulty inverter, incomplete DC connections of the panels, constant tripping of the G59 isolation relay and current leakage through the neutral that caused a diesel generator to malfunction. All these problems directly affected the uptime of the system, causing low yield and loss of income.

Our engineers instructed a solar contractor and coordinated the repairs and replacement of the inverter at no cost to the client. A post works analysis revealed the system is now consistently +15% excess generation which is a total of a 35% improvement from its previous condition. Based on this improvement the client invested in a further 70kW system.

Our team also discovered the system did not have grid consent and this was retrospectively achieved with consultation with the DNO. In addition, our engineer coordinated the implementation of a comprehensive monitoring solution for the PV and the setup of an Operation and Maintenance contract.