



## Rooftop Solar PV Fault Finding and Remedial Works

Location: Hertfordshire

Client: Private Size: 50 kW(p)



The Energy team have assisted a private client to troubleshoot a 50 kW rooftop solar PV that reported continuous tripping of inverters during sunny intervals. The problem had been previously investigated by the installer and the electricity supply company but without success.

One of our engineers carried out a number of electrical tests in order to determine the cause of the fault. Error analysis of the inverter logs indicated that the equipment was shutting down due to high voltages from the incoming supply.

Our engineer liaised with the District Network Operator (DNO) to carry out local tests on the grid. These confirmed that although there had been brief periods of high voltage in the area, they had been operating within supply agreement tolerances. Our engineer then contacted the inverter manufacturer who confirmed that although those voltage spikes were within the agreed operating tolerances for the DNO they were outside the voltage levels defined in the inverter firmware, resulting in a shutdown of the equipment. Although simple, this problem was particularly difficult to troubleshoot as its occurrence was seemingly random.

Once the fault was identified, our engineer coordinated firmware updates for all inverters on site with a local contractor. This inexpensive corrective action dramatically decreased the downtime of the installation and had an immediate effect on generation yields and income.