

The sun always shines on PV - off grid PV pay and display machines



Photovoltaic (PV) cells collect energy from the sun and convert it into electricity - even on cloudy days. This technology was first developed in the 1950's for space travel to provide a reliable and compact power source.



Woking Borough Council today uses PV energy to power town centre pay and display machines. These machines are not connected to the electricity grid network but are powered by PV cells capable of producing up to 10W of electricity. As the machines use less than 10W of electricity during the day the

surplus is stored in a battery in the foot of the machine to provide power overnight.

Even on overcast midwinter days, the PV cells are capable of producing enough electricity to power the machine through the day and overnight too. Since the machines were installed in 1997 they have never lost power.

The systems are fitted with anti-theft and ticket sales monitoring devices linked by microwave technology to computers in the Council's Civic Offices.

Benefits

As PV pay and display machines are unconnected to the electricity grid there is no disruption caused by the need to dig channels for cables - the machines are simply planted in concrete holes.

Besides the benefits of no energy bills (an annual saving of £150 per year), the total project cost for the PV pay and display machines was cheaper than the estimated cost for traditional machines.

And as well as energy savings of over 2000kWh per year, the town centre PV pay and display machines help to raise awareness of renewable energy.