

# Optismart® Range Case Study

The intelligent product set cuts household gas usage by 94%.



With their Wattson Solar Plus showing them they were exporting most of their generated power, the Davies installed Optimersion then Optiplugs to make as much use of their free electricity as possible. • Just 68p spent on heating water over period of 6 weeks during summer months • Savings of 58% on their house bills in August alone.

## Household.

Mr and Mrs Davies live in a 4 bedroom house in Newport, South Wales.

Both are in full time employment so are not usually at home during the day to make use of their generated electricity. Their daughter stays with them some weekdays.

## PV size.

4kW solar panel installation on their South facing roof.

## Fuel.

They have a 1.5kW element immersion heater and they use Gas Online Variable Nov 2013 with EnergySmart gas to heat their water.

## Cost of heating water.

Annual gas & electricity charges for 2012 were around £1,200.

“ I knew the system would be efficient when I chose to install it, but I never guessed how fantastic it would be in terms of saving energy and money. ”

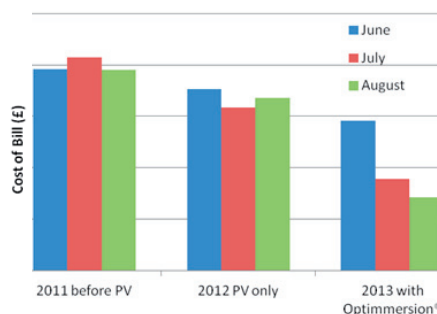


For more details about Optimersion visit: [www.energeno.com](http://www.energeno.com)

Since his solar panels were installed in September 2011, Steve Davies noticed that his Wattson Solar Plus was constantly glowing green in the daytime, especially during summer months. He knew that when he saw the green light, some of his home generated electricity was being exported to the national grid. An energy conscious couple, Mr and Mrs Davies only shower in the evening, once the boiler is at temperature. Whenever possible, they would switch on their immersion heater manually when Wattson showed them they were generating excess electricity. If the water was not hot enough for a shower, they would boost the gas for an hour before showering.

The couple needed an easier way to make use of their generated electricity as their Wattson Solar Plus showed they were exporting colossal amounts of electricity per day and then buying it back later. This prompted Mr Davies search for products that make the most of their solar energy. They installed Optimersion® in April 2013, the intelligent controller that diverts all unused generated electricity to heat the water in the immersion tank.

“We are getting a full tank of water before 12 o'clock midday almost every day!”



Mr Davies is so happy with Optimersion®, in July 2013 he reported that the household used only 11 kWh of gas in six weeks, a cost of 68 pence for the Davies. Using the Wattson Solar Plus software, he notices that within 1h of sunlight his tank is full of hot water, more than enough for several showers so no need to heat the water with the gas boiler.

Mr Davies was still seeing most of the household's generation being exported to the grid once the immersion tank was heated to temperature. A month later, he bought some Optiplugs to continue to make better use of generated electricity.

Optiplug is an intelligent switch that turns appliances on and off only when there is surplus electricity available. It runs the appliance until there is no longer enough solar electricity. The Davies have been using them to power their air-conditioning units and look forward to controlling a storage heater to keep rooms in the house warm during the colder months.

The Davies have managed to save 30% on the household energy bill since installing solar PV on the roof. Now with Optimersion®, the couple has not needed to heat any water using the gas boiler, saving 58% in August alone. Mr Davies is looking forward to seeing this cost reduce even further in the months to come.

The Davies' actual gas bill comparison identifies savings up to 58% since the installation of their Optimersion system.