Gregor
Heating, Electrical & Renewable Energy

CASE STUDY

Switch from oil heating to renewable technologies

Client situation

When Russell and Kate moved to a village near Axbridge, their large, 1990's four-bedroom house was heated by an oil boiler. They limited their use of the radiators to two or three of the rooms due to the high cost of the oil and their being concerned about the environment and climate change. They had been thinking about changing the heating system since they moved in, but it was a matter of picking the right time as the technologies were evolving so quickly. With no piped natural gas in the village, Russell, a retired science teacher, calculated that direct electrical heating would be expensive to run and that a heat pump system might work much more cheaply for them and at the same time be kinder to the environment.

When they found that Gregor Heating, Electrical & Renewable Energy could advise on and install an integrated heating and solar photovoltaic panel system, the company felt like a good fit.

Russell says, *"We had been thinking about switching to renewables for a long time before the pump failed on the oil boiler and we realised that this was the right time. I was keen to have an integrated system to reduce our carbon footprint. Gregor's engineers had thorough knowledge of air source heat pumps and the other renewable technologies available. Gregor Heating felt like a larger company, offering security that they'd be able to support us long term. When their surveyor came to visit us, he was convincing and we felt very reassured by him and his knowledge."*

Scope of works

While calculating the right size of Mitsubishi Ecodan air source heat pump for their home, Gregor Heating confirmed that Russell and Kate would also need new, larger radiators and replacement pipework.

Russell comments, *"This work was carried out efficiently and neatly by their plumbing team. The electrical team quickly installed the solar panels on the garage roof, both east and west sides. This means that we benefit from the morning and evening sun, at the times when we're using the most energy, which has worked out very well. The plumbing and electrical teams worked together to install the heat pump, new hot water cylinder and the associated monitoring equipment. Everyone was friendly, helpful and happy to explain what they were doing as the project progressed."*

Gregor Heating, Electrical & Renewable Energy also installed an EDDI solar diverter, which diverts spare energy from the solar photovoltaic panels to the hot water cylinder. After the renewable energy system had been in place in their home for several months, Gregor Heating returned to install and integrate a Zappi car charger for Russell and Kate to make the switch to an electric car.

Successful switch to renewable energy

Since the system was installed, Russell has been monitoring their electricity usage and the contribution of the solar panels. He confirms that, *"Overall, we are paying less for our energy. Yes, the electricity bill has gone up, but I anticipate that it will only increase by about £250 per year for electricity use within the home and we're no longer buying any heating oil which was much more expensive than that! It's a common misconception that heat pumps are only effective with underfloor heating. However, that has proved not to be true - as long as your house is well insulated and that you get the specifications right for the size of heat pump, radiators and pipework. Kate says that the house has never been warmer!"*

Russell and Kate are environmentally aware people and have been for a long time: recycling what they can, reducing their travel and leaving areas of their garden to grow wild. They decided to get an electric car after installing the solar panels and discussing the car charger with Gregor Heating. Russell says, *"Our old car was about 15 years old, and we weren't planning to change it yet, but we found a good deal which helped us to buy an electric car. With the Zappi car charger, our solar panels help to charge the car up and we're doing many of our local journeys on mostly solar energy in the sunnier months of the year. The charger can be set to slowly charge the car using spare solar energy or it can be set to fast charge the car at about 7kW, the rate of a standard domestic car charger. This will add more to our electricity bill, but not nearly so much as we would otherwise be paying for petrol.*

"This was a complex project which provided a completely integrated system that is all working efficiently. There were a few issues along the way to get the solar diverter integrated correctly, which Gregor Heating were able to resolve.

Zappi car charger

Mitsubishi Ecodan air source heat pump

Eddi Solar Inverter

On my home energy smart hub, I can see that in the six months from January to June, the hot water has been around 60% solar heated. Obviously, the proportion will vary from summer to winter."

Russell sums up, *"With Gregor Heating having done this work, we are feeling much more comfortable about our impact on the planet and the environment. Their installers are friendly, reliable and know what they are doing; most importantly, they really want to make it work for you. I've already recommended Gregor Heating to other people who are considering similar projects."*

TESTIMONIAL

At the core of it, it's all about Gregor's engineers who had thorough knowledge of air source heat pumps and the other renewable technologies available.

Gregor Heating felt like a larger company, offering security that they'd be able to support us long term. When their surveyor came to visit us, he was convincing and we felt very reassured by him and his knowledge.