

## Town House Solar & Wood Integration Project

### Technical Challenge:

- Replace a broken gas central heating system with renewable energy, but with the ability to add a gas boiler later if necessary.
- To safely combine new solar & wood technologies with a pressurised heating & hot water system.
- To build a safe, efficient system that responded to the family's needs.

### Advance Heating's Brief:

- Capture solar energy to heat hot water through most of the year.
- Install an efficient wood burning stove to heat radiators & hot water in winter.
- Integrate the systems to provide an efficient heating & hot water solution that ensures hot water on demand & hot radiators within minutes.



*The woodburning stove in situ*

### Results:

- Installed a highly efficient evacuated tube solar array on the rear of the property, mounted on a bespoke stainless steel frame to maximise solar capture. The rest of the solar water heating system was installed in the loft with minimal effect on household storage.
- Groundbreaking integration of a pressurised, gravity circulating central heating system with a wood burning stove. Advance Heating specialises in bringing these technologies together, & has developed the Stove Safety Kit for this purpose.
- Combined renewable system - when it's sunny the solar panels generate hot water; on cloudy days extra hot water & room heating through the radiators is generated by adding wood to the wood burning stove.
- Immersion heater back-up
- The family now has independent heating; in the event of a power cut both the hot water & heating will continue to work.

### Testimonial:

"We tried everyone else & had given up on finding someone who could design the system to our specification. Then we found Advance Heating.

The system is really easy to operate, with the solar unit working in the background without any intervention. When we need extra heat all we have to do is load fuel & the system shuttles that energy to exactly where it is needed. We are delighted with what Advance Heating have done for us."

*FG, Warwickshire*



*Solar water heating system and cylinder in loft*



*Custom mounted solar array*