AINA CASE STUDY
CLIMATE CHANGE

Solar power: four innovative examples

British Waterways has used solar power to light towpaths and power a range of essential equipment

With thought and planning, solar powered energy can be applied to most locations, and various examples reveal best practice or innovation in a waterway context. Operational sites by canals and rivers can often be remote or isolated from mains supplies, and self sufficient power can be helpful in this context. British Waterways have applied solar power to a number of projects and locations, as outlined below:

1. Solar powered lighting has been used to illuminate the towpath and under-bridge areas at Market Drayton on the Shropshire Union Canal, and low power marker lights have been installed at Stone on the Trent and Mersey Canal to light the towpath edge and obstructions. Both sites use robust, low-cost fittings which, similar in concept to aircraft landing lights, can be fitted almost flush to the ground.

2. A meter house which helps to control water levels entering the Montgomery Canal from the River Tannant is now lit by solar power. Staff visits take place at all times of day, including after dark, and a power source was therefore required for internal and external lights, even though mains power was some distance away. A standalone post and solar panel were installed where water enters the feeder and roof mounted solar panels power the lighting, fitted with energy saving bulbs. The system is activated by a remote control device operated from a vehicle, and a 30 minute switch off delay allows enough time for inspection whilst ensuring the system is not left on all night. Costs were around £8,000, similar to a mains connection, but no standing charges will apply, ground disturbance was minimal, and operating costs are naturally low.

3. British Waterways uses telemetry to record and transmit data relating to water levels, and there are now more than 400 installations besides locks and pumping stations across their canal network. These GRP kiosks or brick shelters are being replaced with specially developed and flexibly located unobtrusive steel bollards which incorporate solar panels. These are cheaper to install and run and do not rely upon electricity or telephone networks. They are also much more suitable in an historic canal environment.

4. Solar power is also used to power a pump which supplies a cattle trough adjacent to the Kennet and Avon Canal. This is fed by canal water and helped solve the problems caused by cattle trampling and subsequent damage to the canal bank.