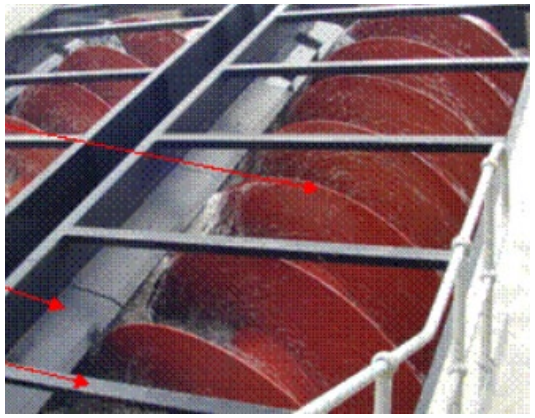
Eckington Hydro

RCEF Stage: 1



The Story

Renewables First feasibility assessment of the hydroelectric power (HEP) scheme situated in the River Avon in Eckington, Pershore. The scheme would utilise the head across the Eckington Weir. An Archimedean screw is the most suitable turbine technology and would be installed around the existing lock. The electrical generation could be exported to the grid and the system would operate in parallel with the grid. The financial success of the scheme is dependent on the existing HEP scheme at Eckington Weir not becoming operational. The HEP scheme has the potential to achieve a peak power output of 13.7 kW per Archimedean screw. A 3-screw system has been determined to offer the best return on investment and has the potential to generate 228,000 kWh of electricity per year. This equates to a CO2 emission saving of almost 42 tonnes/year. The capital cost for a 3-screw system has been estimated to be £847k, giving a cost of energy of £188/MWh. Once funding is secured, the next step to progress with the scheme would be to carry out an outline design and secure all the relevant contracts.

Challenges & Risks

The cost of the project is going to be the main issue. The group are trying to collaborate with the Parish Council to rally support. The abstraction license may also be prohibitive and the project will need planning permission.

Key Facts	
Hydro	Site deemed to be feasible in initial study.
Community Benefits	Potential to provide energy for local EV car parking which would be positive infrastructure for the community.

Key Figures	
Project size: Hydro	13.7 KW
Energy Generation	228,000 kWH per year
Private finance leveraged	None to date
CO2 savings	42 tonnes per year
RCEF grant	Stage 1 £11750

Further Notes
LEP area:
Link