

Traditional watermills are being stopped from generating 'green electricity' by a 46-fold increase in Environment Agency fees.

The latest 4.6-fold increase introduced on the 1st April comes on top of an earlier 10-fold increase that will inevitably consign working watermills to history as there is no way that mill owners can meet the cost or negotiate the bureaucracy involved. The new policy will damage fishing by destroying the habitat for young fish and the endangered European eel, so may not even be legal. The Environment Agency claim the typical licence application fee of £7000 is necessary to pay their £100+/hour costs. It is argued by mill owners that watermills, most of which have been in place for hundreds of years are an environmentally benign technology that should be exempt from charges to encourage their restoration.



Millstreams also provide habitat for otters and beavers, as in the case of my own mill in Cornwall, so the Environment Agency policy of demolishing mill weirs, is both expensive for the taxpayer, and can bring about exactly the opposite environmental outcome that they intended. This is not a new scenario, but one that has been imposed at regular intervals by misapplied Government regulations.

The Environment Agency has introduced 'blanket charges' that even they agree will make small domestic projects uneconomic. Highly inflated project costs of over £100,000 have been used so they can argue their fees of between £6110 and £6947, would only add about 10% to the overall cost, but most small projects are carried out by the mill-owners themselves, so the fees would be nearer to 50% of the overall cost. If a mill owner wants to replace a £2000 energy bill with a 'renewable energy system' it would only be worth spending around £20,000 (not £100,000) to restore the mill to working order if he has to borrow the money.

Mill owners are usually anglers and keen environmentalists, so wish to protect the rivers that they know far better than remote bureaucrats. It's a case of Government thinking it knows best, but with small-scale waterpower it doesn't. This is a case of imposing restrictions for problems that don't really exist, and to pay the cost of bureaucracy that doesn't know what it's doing. In the past it has takes ten to fifteen years for such mistakes be rectified, but we don't have 15 years to save the planet from climate change.

Decades of environmental legislation designed to protect rivers have inadvertently caught small domestic scale waterpower and watermills in their web and will kill them off in a few years if nothing changes. If the public only want a handful of museum mills run by smock-clad volunteers, that is what they will get, but the opportunity to repurpose mills to generate domestic green electricity will be lost, along with the weirs and millstreams that have been a feature of the British landscape since before the Norman Conquest and the subject for many artists and photographers.

Water Source Heat Pumps.

A further illustration of just how stupid the Environment Agency policies have become, relates to 'open-loop water-source heat-pumps' that can be installed alongside waterpower projects to increase their efficiency. These devices simply extract heat from the water that drives the turbine. Heat pumps more than triple the energy available as heat, so are very environmentally beneficial, but the new Environment Agency 'application fee' for the domestic unit shown (below) is £9859 plus the fee for the turbine of £9876 making £19735, i.e. more than the cost as the plant. The Government's own report on heat pumps states that this type of heat pump installation is the most efficient and it saves over 60 tons of CO² per year, but the Environment Agency doesn't appear to agree!



The UN Secretary-General reacting to the IPCC latest report, said last week

“It’s ‘now or never’ to limit global warming to 1.5 degrees”.

Jonathon Porritt commented

“This report reveals an extraordinary state of affairs regarding the future of traditional watermills here in England. At a time when we should all be doing everything we can to promote genuinely sustainable renewable electricity (big and small), the fact that the Environment Agency has become the biggest threat to maintaining and restoring traditional watermills is truly shocking. There simply has to be a change of heart at the highest level in the Environment Agency, before this reckless vandalism causes further damage.”

Adam Hart-Davis commented

This report describes a disaster in the making. The Environment Agency apparently wants to destroy traditional watermills, which is outright vandalism. Surely the primary aim of the EA should be to promote all things that improve the environment, yet watermills, which have been part of our countryside for hundreds of years, are not only benign but positively useful in generating clean green energy, not to mention providing safe habitats for otters, beavers, and fish. Why on earth should the EA want to wipe them out? Will they next promote shooting all herons to protect the fish? This monstrous plot by the Environment Agency must be stopped.

A few examples of projects that are doomed by the Environment Agency policy:

1. Priory Leat Launceston

The Augustinian Monks of the Priory in Launceston Cornwall harnessed the waters of the river Kensey to grind corn in the 13c. Nigel Bowman of the Launceston Steam Railway bought the 'old mill leat' with the intention of generating renewable electricity, and possibly powering an off-season electric tram on the 3-mile line up the valley to Newmills. The Environment Agency licence application fee would make such a project uneconomic as the electricity would be more expensive than purchasing electricity from the grid.

The 'Priory Mill Leat' is even described in 'The Family and Heirs of Sir Francis Drake' where *Sir Francis (2nd Baronet) agreed to settle upon Drake's Mother, the Priory mills near Launceston, and certain meadows and woods, called Castle woods.*



Map showing River Kensey with 'leat' to the South flowing to the Priory

2. Trecarrell Mill - Launceston



Trecarrell Mill, near Launceston (about 1900)

Rupert Armstrong Evans, a campaigner of 40 years for renewable energy and the environment has lived at Trecarrell Mill since a child and rebuilds watermills around the World. The mill that has worked for around 500 years was one of the first to feed ‘green electricity’ into the National Grid. During an upgrade to produce enough electricity for around 30 homes, the Environment Agency decided to take advantage of the ‘shutdown’ by insisting that 2mm screens costing tens of thousands of pounds were installed before the plant could be reopen. The ludicrous conditions were overturned by another mill-owner in Norfolk, but indicate the continuing belligerence of the Environment Agency towards this mill owner (who they described in emails released under freedom of information) as “old, opinionated and broke” (all true!).

3. SHARE – (South Hill Association for Renewable Energy)

From the SHARE newsletter:

SHARE Hydro Feasibility Update, March 2022

Regular readers will remember earlier articles describing our initial investigations into the potential of water turbines. For the benefit of newer readers, those investigations involved installing a measurement weir structure, however this unfortunately came to a premature end when the **Environment Agency** took an active interest. Temporary measurement weirs are permitted, however in this instance the EA considered that expensive licenses would be needed, and that special provisions would have to be put in place to enable eels and migrating fish to move upstream unhindered. To our knowledge, eels and migrating fish haven’t been seen in this tributary of the Lynher in living memory, however the possibility that Samantha Salmon might take a wrong turn and find her path obstructed was enough to keep the good folk at the EA awake at night. Also, the required licenses were unaffordable, and so the measurement weir had to go.

This picture shows the stream passing between concrete piers at the measurement site



To summarise:

- The Environment Agency are imposing fees that will make the reinstatement of traditional watermills totally uneconomic, and it also has a policy to demolish mill weirs, even if this destroys the habitat for eels and juvenile fish by cutting off the water to millstreams.
- The Environment Agency have also imposed extortionate fees on ‘open-loop water-source heat-pumps’, because I don’t believe they understand the technology!
- Last week Rishi Sunak announced at long last that the 5% VAT imposed by the EU on waterpower projects would be removed for 5 years inline with other renewable energy and energy saving systems.

Summary of consequences:

- Loss of ‘green electricity generation’ when it should be increasing.
- Loss of vast potential from ‘water-source heat-pumps’ that have zero environmental impact.
- Loss of small-scale storage hydro projects for ‘generation levelling’ in connection with solar and wind power installations.
- Loss of combined flood alleviation and generation schemes.
- Loss of traditional working watermills.
- Loss of test sites for water systems for the developing world.
- Loss of test sites for developing ‘fish-friendly’ water turbines.

Rupert Armstrong Evans
Trecarrell Mill
Trebullett
Launceston
Cornwall
PL15 9QE

01566 782323
sales@evans-engineering.co.uk