Small Hydro – FAQs

What is small scale hydro?
Small-scale hydro schemes (50kW to 5MW) generate renewable electricity from rivers and burns. While there are a small number of storage schemes with dams in the 50 kW – 5MW range, the majority of small hydro schemes are 'run of river'.

These 'run of river' systems generally don't need large dams to store water. What they require is an intake weir at the top of the river and a turbine house at the bottom, with an accessible location between them for a pipeline, or 'penstock' to be buried. The water is removed or 'abstracted' from the watercourse, delivered at pressure to a turbine and generator and returned to the river after passing through the turbine. The turbine runs a generator which provides electricity to the local community via the national grid.

A modest 500kW hydro operating at capacity for an average of 35% of the year could produce sufficient electricity for more than 400 homes. Hydro is the least obtrusive and longest lasting of all renewable energy systems, with schemes capable of operating for 100 years or more. Hydropower is an important and valuable contributor to the UK renewables mix and to achieving the UK's low carbon targets. There are no direct CO2 emissions from hydropower schemes.The cost per kW of clean energy is the lowest of all renewable technologies over the full lifetime of the scheme.

How many are there in Scotland?
There are currently around 500 small hydro schemes in Scotland, many in rural and remote communities, providing employment to hundreds of workers. Including larger scale operations, hydropower contributed almost a fifth of renewable electricity output in Scotland in 2018.

What is the issue with rateable values?
Rateable Values set by the Scottish Assessors are unfair, absurd and unsustainable. They've been set at an average of 24% of turnover, which is multiple times higher than most other businesses in Scotland. Rateable Values for small hydro currently stand at 240% of the level of those for small wind schemes which are supported by the same Feed-in Tariffs (FiTs).

There are three distinct elements to the process. The legislation on which the assessors are given powers to set Rateable Values. The assessors' methodology, which in the case of Scottish hydro, is flawed and sets unfair and punishing RVs. The reliefs set by government, which have been helpful to many operators, but which are not guaranteed for the future, and are not a long-term or permanent solution, mean uncertainty hangs over the sector. Some operators see less benefit from the reliefs than others because of state aid rules. (see later section on why 60% reliefs don't solve the problem).

The fundamental issue is the proportion of the construction costs of a hydro scheme that the assessors consider to be rateable for the purposes of levying business rates. The hydro sector believes it should be 25%, as agreed by the Tayside Appeal Committee. The assessors believe it should be 55% or more, which increases the rateable value far beyond the equivalent levels applied to wind or solar companies.

The uncertainty and unfair method of valuation has already meant that some proposed small hydro schemes in Scotland have not gone ahead, while other operators have put expansion on hold and are considering the future viability of their schemes.

What is the knock-on problem with business rates?
Unfair Rateable Values lead to unfair business rates because business rates are based on RVs. Hydro businesses are not disputing their obligation to pay fair business rates, in line with other businesses; but they are currently being targeted with absurdly disproportionate Rateable Values.

When did the problems arise for small hydro in Scotland?
After a revaluation by the Scottish Assessors in 2010, Alba Energy members took an appeal over Rateable Values for small hydro in Tayside to the appeal committee, which considers such cases. That case, which centred on the valuation of six 'run of river' schemes operated by the Old Faskally Farming Company and others, is known as 'Old Faskally'. In 2013, the appeal committee ruled in Alba's favour. In summary, the hydro operators and the committee agreed that key components of plant and machinery in hydro construction – the turbine, generator and penstock – were not rateable and that the turbine building was the premise to be rated, in line with rents being paid. The Tayside Assessor Alastair Kirkwood disagreed with the rental valuations and determined that the costs of all civil engineering works should be rateable. The Tayside Assessor appealed the decision and the case ended up in the Lands Valuation Appeal Court (LVAC). The judge, Lady Dorrian, sent it back to the appeal committee which again ruled in Alba's favour. After a further appeal by the Tayside Assessor, in 2016, the LVAC – the highest court of its kind - sent it back to committee for yet another consideration, which is where the case currently lies. In effect, the appeal committee has ruled in small hydro's favour for six years, and the Tayside Assessor has constantly taken that committee back to court.

Up until 2016, rates were valued but weren't paid by small hydro operators. That changed in 2016, when the Scottish Government removed reliefs for renewable energy businesses. Scottish hydro operators then faced a further revaluation in 2017, effectively a 'double whammy' on operators who, over the course of two years, faced two significant increases, based on flawed methodology. That's why many operators see their hydro businesses as potentially unstainable.

Who are assessors and why are they facing criticism?
The Scottish Assessors are unaccountable, independent public officials who decide the rateable value of property. A total of 14 Joint Valuation Boards operate in Scotland, with a loose alignment to local authorities. After a revaluation in 2016, new RVs were introduced in April 2017 which unfairly penalised small hydro operators in Scotland. After lobbying by the hydro industry, led by the BHA, the Scottish Government, which had identified the scale of the problem, responded by introducing a maximum year on year increase of 12.5% on schemes of up to 1MW for financial year 2017/18. After further lobbying by the hydro industry, relief levels were increased to 60% by Finance Secretary Derek Mackay from 2018/19 who also extended them to schemes with RVs up to £5m. The relief is due to apply until the next revaluation due in 2022, or until there's a change in the legislation covering RVs for small hydro. In 2018, Scottish ministers established the Tretton Review.

What is the Tretton Review?
The review group is chaired by David Tretton FRICS, along with Professor Fiona Grant of Heriot Watt University, Alastair Kirkwood on behalf of the Scottish Assessors and Kenny Hunter of Hunter Hydro Services on behalf of the small hydro sector. The group's remit was a fast track assessment of the legislation that drives business rates for Feed-in Tariff (FiT) scale hydro schemes. The secondary legislation in question is the Plant & Machinery Regulations (PMO) 2000 which are at the heart of hydro scheme valuations, and which the assessors had used to unfairly set RVs for small hydro. The Review group included the Tayside Assessor (Alastair Kirkwood), whose original decision led to the Old Faskally case (see above) and it became evident very soon into the review group's 2-year inquiry that there was little, if any, prospect of a review group so heavily influenced by assessors agreeing to legislative change. Small hydro operators had hoped the Scottish Government would be on their side in challenging the issues, but so far there has been no such support other than the relief schemes.

What are Feed-in Tariffs (FiTs) and why do they matter in this story?
The Feed-in Tariffs scheme, launched in 2010 by UK Energy and Climate Change Secretary Ed Miliband, is a UK government programme designed to promote the uptake of renewable and low-carbon electricity generation technologies, including hydro, wind and solar. It closed to new entrants on March 31st, 2019. It provided payments to owners of small-scale renewable generators at a fixed rate per unit of electricity. Feed-in Tariffs were introduced to reimburse small operators for the development costs of building hydro

schemes, but have been calculated wrongly, in the view of the hydro sector, by assessors as simple income.

The Scottish Government may suggest that Feed-in Tariffs are to blame for the current difficulties being experienced by the small hydro sector, but small hydro plants built under the previous subsidy scheme, Renewables Obligations Certificates (RoCs) are facing similar rateable value issues – one hydro scheme in Argyll, **Ormsary Farmers**, built under RoC has a Rateable Value set at 49% of turnover.

The Scottish Government says the assessors are independent and therefore its hands are tied, why is that incorrect?
The assessors are given their powers under legislation. In small hydro's case that is the Plant & Machinery Regulations (PMO) 2000. The assessors have stuck belligerently to an absurd and distorted valuation principle and methodology which has led to a perverse outcome for small hydro.

The Scottish Government has the power to direct the assessors. The assessors may be independent but should not be unaccountable.

The Scottish Government has introduced 60% rate reliefs for small hydro – why doesn't that solve the problem?
Because they are not guaranteed for the future and do not solve the structural problem, which is the unfairness of the methodology used by the assessors. State aid rules mean the reliefs also don't have the same impact on all small hydro operators, because there is an upper limit of €200,000 relief in any three-year period, after which the relief scheme ceases to apply and full rates become due. This is called the 'de minimis' provision.

Businesses like **Ardtornish** in Argyll, with rates payable of some £360,000 per year before relief, very quickly exhaust their relief eligibility, and are therefore subject to the rates in full because the relief scheme ceases to apply. The de minimis rules impact upon portfolios or individual schemes with a capacity of more than 1.5 megawatts, which represents a significant proportion of Scottish hydro schemes.

What do small hydro operators in Scotland want to be done?
Small hydro operators want fair Rateable Values, and fair business rates that do not punish an important, indigenous Scottish industry and threaten the green economy putting rural jobs at risk. They want rateable values set at around 8-10% of turnover, more in line with – though nevertheless still higher on average than – many other sectors. There are different ways this could be achieved – possibly, through a minor clarification of secondary legislation. The industry believes it should be possible to amend the Plant and Machinery Regulations to achieve a fair outcome without triggering state aid issues. There has been no indication of any willingness on the part of the assessors to support such activity. This is where the sector needs the Scottish Government to act. If the Scottish Government had the will – which it should, particularly as it's hosting COP26 this year, then it could resolve this issue.

Don't the assessors and Scottish Government say that turnover is of no relevance to the rating system?
If the High Street retail sector, which is understood to contribute about 25% of the UK business rates take, is complaining about rateable values that are in the region of 5-6% of turnover on average, then it is unsustainable for the Scottish Government to continue to claim that there has not been a 'compelling case' to reduce rateable values for hydro? Across the business sector, Rateable Values are, on average, around 10% the proportion of turnover.

The assessors state that turnover plays no part in rating, and that rateable value as a percentage of turnover is of no relevance. However, the Receipts and Expenditure methodology used by Scottish assessors to determine rateable values for small hydro, uses gross turnover as its starting point.

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