



## Hydro schemes

### Energy business group

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An internal rate of return of 13%.

#### Background

Approximately 35% of the UK's renewable energy currently comes from hydro projects. In 2010 the Department of Energy and Climate Change identified 1,692 sites and a potential output of 2,500 mW across England and Wales alone.

UHY Hacker Young act for a number of clients in this sector, including Alba Energy, a co-operative of over 25 small scale hydro scheme operators. As a result our experience within this sector is significant, as we tap into this knowledge pool. Members of our energy team have been involved in the planning, construction, funding, operation and disposal of numerous hydro schemes across the UK and internationally.

#### Feasibility

We can carry out an initial due diligence appraisal of the proposed project. This can include carrying out high level forecasts to give indications of IRR returns, expected profit levels etc. We can also make introductions to various specialist consultants such as hydrologists and scheme designers etc. At this stage UHY Hacker Young can comment and advise on the most appropriate structure and corporate vehicle to run and operate a scheme as well as advise on available tax relief.

#### Planning and construction

UHY Hacker Young can provide advice in the planning process of a hydro scheme. This can include introductions to hydro generator

manufacturers, civil engineering companies who specialise in the development and design of these schemes and assistance during negotiations with government bodies.

#### Funding

UHY Hacker Young can assist in the fundraising for the project. We have good relationships with banks, private and institutional investors who are all currently looking to invest in renewable projects. Our work would include the completion of a robust business plan and projections and the project management of the transaction including liaising with solicitors etc, until funds are received.

#### Operations

UHY Hacker Young can assist in the day to day financial running of a scheme once it is operational. Our services can include not only preparing accounts and completing tax returns but also operating and communicating with electricity suppliers regarding electricity sales and dealing with Renewable Obligation Certificates (ROCs) and Feed In Tariffs (FITs) as appropriate.

#### Projections

In connection with suppliers, consultants and developers of hydro schemes, we have prepared high level projections to be used for illustrative purposes and give an indication of the income and returns that could possibly be made from such a scheme.



Providing a value for money service to assist energy companies.



The development of small scale schemes has only recently become more cost effective with the Government's introduction of the FITs to incentivise small scale electricity generation by communities, businesses and land owners. Effectively the electricity generator will now be paid for every kilowatt hour (kWh) of electricity generated whether the electricity is used onsite or exported to the local electricity network.

The FIT scheme started on 1 April 2010 and the Government confirmed that tariffs for hydro schemes will be paid for 20 years once the scheme is operational.

It is worth noting that FIT payments are indexed by RPI, to ensure that target rates of return are maintained in real terms for the lifetime of the scheme.

#### Results

For a 450 kW scheme the high level projected profit & loss account can be provided.

The key figures are as follows:

Turnover per annum	£165,000
Profit before interest & tax	£76,000
Payback period	8 Years
Internal rate of return over 20 years	13%

#### Assumptions

The projections have been prepared on the following bases and assumptions:

- The capital cost of a 450 kW scheme will amount to circa £970,000, excluding VAT.
- The scheme will be utilised on an annualised basis of 2,628 hours. This is equivalent to a 30% efficiency.
- The scheme will be entitled to a FIT rate of 11p per kW of generation. This is based on panels being fitted to existing properties.
- The scheme would earn 3p for each kW of electricity exported. (Sold to the grid and not consumed by the generator).
- It is currently assumed all electricity would be exported.
- The capital equipment is depreciated over 20 years.
- The forecast does not take interest or tax into account. This has been omitted as we have no knowledge of funding structure or vehicle structure being proposed. (Banks are typically lending at circa 5.5% to 6% at present. Corporation Tax for small companies is currently 21%, reducing to 20% in 2012. Profits generated from commercial PV plants are subject to UK Income and Corporation Taxes).

**For further information or advice please contact your usual partner, or visit our website at [www.uhy-uk.com](http://www.uhy-uk.com).**

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