



Figure 3 Barley Bridge Weir



Figure 2 Torr Site in July 2007 after a day of heavy rain

What are the barriers to  
community hydro schemes in the  
UK and how can they be  
overcome?

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# Community Hydro schemes

## Barriers:

- Technical/physical;
- Ownership problems; legal;
- Planning;
- Environmental consents;
- Distribution Network Operator;
- Financing (including grant availability); Economic viability of a community scheme/ commercial scheme?
- Formation of a community group capable of undertaking the project;

## Success factors?

# Stoppers

- Technical – will it work?
- Ownership – site specific problems
- Abstraction – a series of problems
- Grid – how far to connect?

# Technical/Physical

- Every site requires a unique technical design”
- “Trying to get someone who is truly independent is really difficult”
- “the river outperformed the turbine that was fitted”

# Legal structures – “What is it that drives your interest?”

- What sort of membership structure and
- Where is money coming from?

Structures (used by communities):

- Industrial & Provident Society (IPS)
- Community Interest Company (CIC)
- Charitable Trust

# Ownership Problems

- “Area required spanning several landowners”
- Leasing of the land is normally done outside the legal structures – often 5% of profits, although some owners ask for a larger share of the profits
- Owners “can’t be bothered – want action for themselves”

# Planning Consents

- “Planning isn’t normally a stopper - it is a matter of design”
- “never too early to build a relationship”

# Environmental Consents

- “Build a relationship with your liaison officer .. And aim for “a shopping list up front”
- “If he is a fisherman beware – his priorities may well be fish ahead of community energy generation”
- “Are we conserving fish or generating energy?”

# Distribution Network Operator

Intelligent expert challenge may pay off

- “Challenge the DNOs to bring down the costs”
- “Costs of £50,000 came down to £18,000 after a lot of informed negotiation”
- Joined-up thinking required by DNOs

# Finance

Finance was the biggest barrier

- High up-front costs – “5-10% of the total project cost”

Financial viability assessment – may be different for a community scheme;

Greatest power; shortest payback period

If a grant is available .. the scheme becomes more viable. Then the costs .. are only the marginal costs.

Reward systems change viability

- “A feed-in tariff would solve all problems”
- “Double ROCs for under 50kW”

# Formation of a community Group

- Talk to other community energy projects (even if not hydro), find out what lessons learnt...
- Set up a committee and clearly define roles and responsibilities.
- Ensure all technical, commercial and consenting issues are managed
- Community projects are the easiest to fund... vast majority of sites that we should develop are owner occupied former mills.

Table 5 Structural barriers and site-specific blocks up to decision point- a parallel processing model)

<b>DECISION POINT –stop or go?</b>	<b>Technical Group</b>	<b>Legal group</b>	<b>Consents group</b>	<b>Technical group (cont)</b>	<b>Finance group</b>
<b>FEASibility STAGE</b> Costs: 5-10% of total costs Time:1-2 yrs	<b>TECHNICAL</b> Design drawings Fish-pass? Turbine Old workings	<b>OWNERSHIP &amp; LEGAL</b> Who should benefit? Where is money coming from?	<b>CONSENTS</b> EA Abstraction, fish, flooding, drainage etc; Planning; Natural England	<b>GRID connection costs</b>	<b>FINANCE?</b> Grants, Loans, Share options Costings
<b>STOPPERS</b> (pre-feasibility stage: Time: 1month – years	<b>Technical</b> -does it work? (Head & Flow)	<b>Ownership</b> -is owner willing?	<b>Abstraction</b> - series of obstacles	<b>Grid connection</b> -is it possible?	<b>IF NO STOPPERS</b> -MOVE UP TO NEXT ROW

# Success Factors

Challenge assumptions and decisions  
negotiate with DNO, EA and Natural  
England

Size of fish screen; Percentile of water to be taken

A central point of support

- arbitration over consents to resolve dichotomies such as:

Conserving fish or generating energy?

# Success Factors

- Timely expert support: “unbiased technical advice”; “language of the professional”; a “bridge”;
- Obtaining finance (grants or loans) for high front end costs

# Key observations

- Hydro is site specific
- Perception of Barrier is time-into-the-project dependent
- Quality timely support

# Changes since study

- Marine & Coastal Access Bill
- Environment agency re-organisation
- Feed-in tariffs
  
- Any Questions?