ABERDEEN COMMUNITY ENERGY & the Donside Hydro

Climate Café

7th November 2017
“The story of how a group of strangers had the vision to create a lasting legacy for their community”
Background

- Former Donside Papermill
- Donside Village built
- Tenants First vision
- Tenants move in
- Set up Donside Community Association (DCA)
- Financial crisis
- Sanctuary Takeover
- DCA take the vision forward
- Government Policy & support
Why do this?

- To keep the vision alive
- Because we can
- Empowerment
- Cash! For projects

- Government Policy
  - Renewables
  - Community energy
  - Sustainable places
What is it?

1. Water enters through a water intake screen. The screen will allow fish to pass through safely and protect otters.

2. The river water flows downstream through the screw turbine.

3. The generator kickstarts the initial rotation of the screw.

4. The flow of water rotates the screw thus generating energy.

5. The generator converts the mechanical energy to electrical energy.

6. The electrical energy is then transmitted to the National Grid and sold for cash.

The turbine which has been selected for this project is an Archimedean screw turbine.

ACE
Finance £1.25m

- Development
  - £150,000ish
    - Local Energy Scotland Grant £10K
    - Loan £150K
    - Further Bridging Loan £100K
  - Own cash
  - Patience of consultants

- Land Purchase
  - Funding from Scottish Land Fund

- Construction
  - ~£1m
    - Bridging finance
  - Share offer
    - All community
    - Target £500,000
    - 7% ROI

- Bond offer
  - Target £600,000
  - 4% ROI
Hydro by numbers!

- 2.15m head
- 4.3m screw diameter
- 9 m screw length
- 25 tonnes screw weight
- 7% Return on Investment
- 10 m³/sec flow
- 10-20 rpm turbine speed
- 500 new trees planted
- 130 homes powered
- 180m lade
- 240 tonnes annual reduction in CO₂
- £20,000 annually for community benefit
- £130,000 annual turnover
- 500,000 kWh generated
- £1,250,000 to build
Added Bonus-Collaboration

- Working with very knowledgeable companies and consultants
- Working with the renewable energy family
Added Bonus-Environment

- Environment- Use of reclaimed contaminated land.
- Encouraging wildlife, nesting boxes, tree planting.
- Creating new areas for people to use
- Meeting in with existing paths network
Added Bonus-History

- Utilising the power of the river as mills have done.
- Swopping old rather dirty industry for modern and clean
- Uncovering of old lade
- Discovering old mill machinery
Added Bonus - Community Development

- Community development (most ambitious community project the city has seen)
- Part of Tillydrone regeneration
- Development of people.
Added Bonus-Education

- Involvement of schools
- Focal point for teaching on renewable energy
- STEM Ambassador
- Environmental Policy Manager
Added Bonus - Publicity

- Publicity for the area and the city.
- Making the city a focal point for renewables
- People know where we are
The scheme has received a tremendous amount of publicity during the launch and construction phases. We hope that this can continue now that we are in operation.

Publicity

Renewable community project issues £500,000 share offer

Most pen has launched

1. Donside first in Scotland to host new renewable energy scheme

Donside Hydro scheme under operation

Aberdeen has been chosen as the first city in Scotland to have an urban hydro energy scheme. The Donside Hydro project will draw renewable energy from the River Don and feed it back to the national grid. This could mean around £300,000 per year for community initiatives and enough power for 150 homes.

Construction is planned for late next month at the sites of former drinking water reservoirs near the River Don and at Old Aberdeen.

A community hydro power scheme has been given the go-ahead in Aberdeen, harnessing energy from the River Don.

The Donside Hydro project is aimed at powering about 130 homes on the site of the former Donside paper mill, as well as selling energy to the National Grid.

Aberdeen Community Energy (ACE) is now hoping to attract investment.

ACE founding director Sinclair Lang said: "We have been working towards launching the scheme for the past three years.

Construction is planned for late May."
Added Bonus - Awards

Winner in two categories and overall award winner at the Aberdeen EcoCity Awards

Winner of the Best Community Project Award at the Scottish Green Energy Awards

Winner of “Best Newcomer” and Runner-up in Most Enterprising 3rd Sector Organisation at ACVO Awards
NEXT STEPS

- Operation of the scheme
- Look at Direct Supply arrangements
- Post-Build landscaping
- Community Investment Plan
- Land Purchase
- Educational activities
- Design and deliver follow-up projects
THANKS!

Q&A

Contact
info@ACEnergy.org.uk
http://ACEnergy.org.uk
https://twitter.com/ACEnergy2016
https://www.linkedin.com/company/aberdeen-community-energy