



# Aberdeen Community Energy presents The Donside Hydro

**The Donside Hydro is Aberdeen's first community-led renewable energy project.**

It promises to not only generate clean, renewable energy to help meet our nation's energy needs, but also to help transform the area we call home.

By harnessing energy from its neighbouring river – The Don – the **Donside Hydro** will create electricity to be sold to the national grid and the income it generates will be spent on improving our community.

The **Donside Hydro** is driven by members of the Donside Community Association (DCA) located in Donside Village, Tillydrone. The DCA established a community benefit society called, **Aberdeen Community Energy (ACE)**, to build, own and operate the scheme on behalf of the community.

ACE is now working towards building the hydro. If all goes to plan, the build will start at the middle of this year - 2016.



# What does it mean for you?

Aberdeen's first community renewable energy scheme belongs to you. It will make a noticeable difference to our community and generate money we can use to fund projects that will improve our neighbourhood.

*Amongst other things, it will...*

- **Make the riverside a better place we can enjoy more**
- **Create recreational spaces like football kick-about areas**
- **Provide a space where we can teach children about our natural environment and energy**
- **Encourage wildlife to flourish**
- **Help us improve the reputation of the area**

You've already told us that the community really needs an outdoor recreational space and planning is already underway to make that happen.

It will help improve the rest of the city too. The money will also be used to set up a social enterprise called, Sinergy, which will identify opportunities to benefit the wider Aberdeen community for the years to come.

What will the next project be? That's up to **you**. Tell us how you think the money should be spent and we'll work with you to help make it happen.

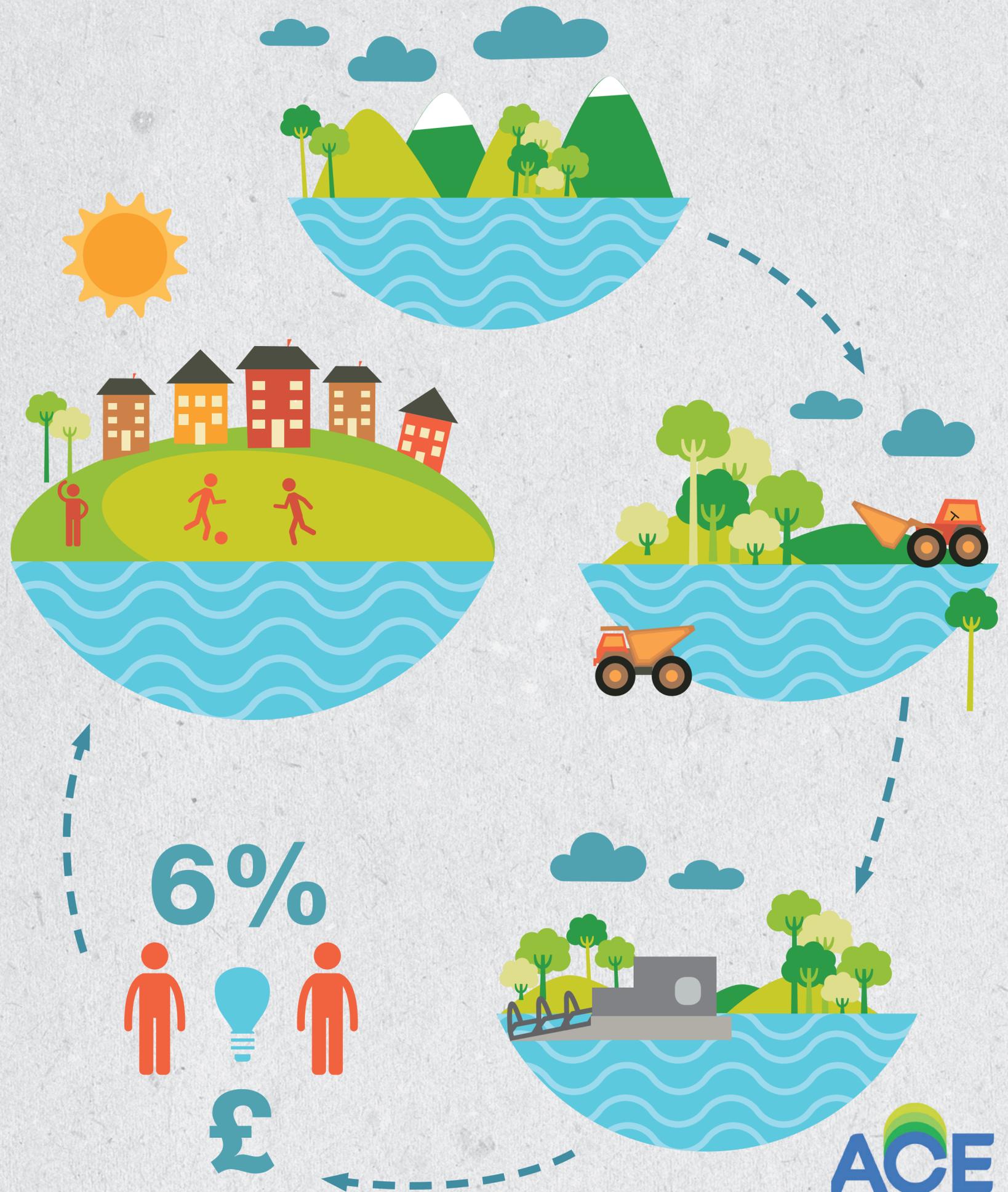
# You can also invest, even if it's just a bit

The first phase of activity was funded through an initial start-up grant and loan from the Scottish Government's Community and Renewable Energy Scheme (CARES).

The second phase – the construction phase – will be funded by cash generated through a Community Share Offer that will be open to Aberdonians and beyond.

A Community Share Offer fully aligns with the overall vision and social objectives of the project - offering the opportunity for members of the wider community and indeed country to secure a solid and low-risk financial return on investment – even on small amounts.

Investors in the project can expect to see around a 6% return on their venture.



# How it works

Hydroelectricity involves the conversion of energy stored in water held at a height as it travels to a lower level. The flow of water drives a mechanical shaft which then drives an electric generator.

The vertical fall of the water, known as the head, is essential for hydropower generation.

Fast-flowing water on its own does not contain sufficient energy for useful power production.

The **Donside Hydro Scheme** is based on a Barrage hydro scheme layout, which works by raising the water level to be diverted into a turbine, without obstructing the river like a dam or weir.

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

1

4

The flow of water rotates the screw thus generating energy

6

2

3

5

4

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 Archimedeian screw turbine.

The generator converts the mechanical energy to electrical energy

5

