

# River Ness Hydro Project

## Learning intentions

- To understand how an Archimedes screw works and how we can use it to produce electrical energy.
- To identify and understand the differences between renewable and non-renewable energy sources.

## Activity 1 –Quiz

- Watch [this video](#).
- Log into Kahoot and complete [the quiz](#).

## Activity 2 – Energy Sources

- Watch this [video](#).
- In the table below, sort these energy sources into renewable and non-renewable energy sources.
  - Coal
  - Wind
  - Solar
  - Gas
  - Hydro
  - Nuclear
  - Oil
  - Biomass
  - Geothermic

Renewable	Non-Renewable

- c) In the table below, write down 3-5 pros and cons for renewable and non-renewable energy sources.

	Pro	Con
<b>Renewable Energy Sources</b>		
<b>Non-Renewable Energy Sources</b>		

- d) Watch these videos to learn about some careers within the renewable energy sector.
- [James at the European Marine Energy Centre \(EMEC\)](#)
  - [Jerry at the European Marine Energy Centre](#)
  - [James at SSE](#)

- e) In the table below write down some of the things that EMEC and SSE do in the renewable energy sector.

EMEC	
SSE	

### Activity 3 – Group Presentation

- a) In groups, decide where in the Scottish Highlands you would build a renewable energy power facility and what you would power with the energy it would generate. It could be an Archimedes Screw like they have built in the River Ness or any other renewable energy source you think would work well in your chosen area.

Here are some pointers to help you:

- Location:
  - Where is the location?
  - What is the geography like? Are there hills/lochs/rivers etc?
  - What is the weather like? Is there a lot of sun/wind?
- What renewable energy source are you going to use?  
Wind/solar/hydro/geothermic/biomass?
  - Why is this a good energy source for the area?
- Venue powered with the energy produced by your facility:
  - How far is it from your renewable energy facility?
  - Does it require a lot of power?
  - How many people will it benefit? Do a lot of people use the venue?
- What other benefits would there be for the local area/community from using your chosen renewable energy source to produce electrical energy?
  - Will it create lots of jobs?
  - What careers and skills will it bring to the area?
  - Will it improve the air quality?
  - Will it reduce the cost of energy bills?

- b) Present your idea back to your class.
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