Case Study

Heat Pumps

The Proposition

Private House, Strachur, Argyle

- 1830's building
- replace existing heating & hot water system
- electric wall mounted radiators & immersion heater
- Cost £3,000 to heat over a winter

The Options

Oil/Gas

Boiler with radiators

Ugly & ineffective

Annual fuel £££

Replacement parts ££

High Carbon Footprint

Heat Pump

Heat pump, under floor heating & few radiators

Invisible & effective

Annual electricity £

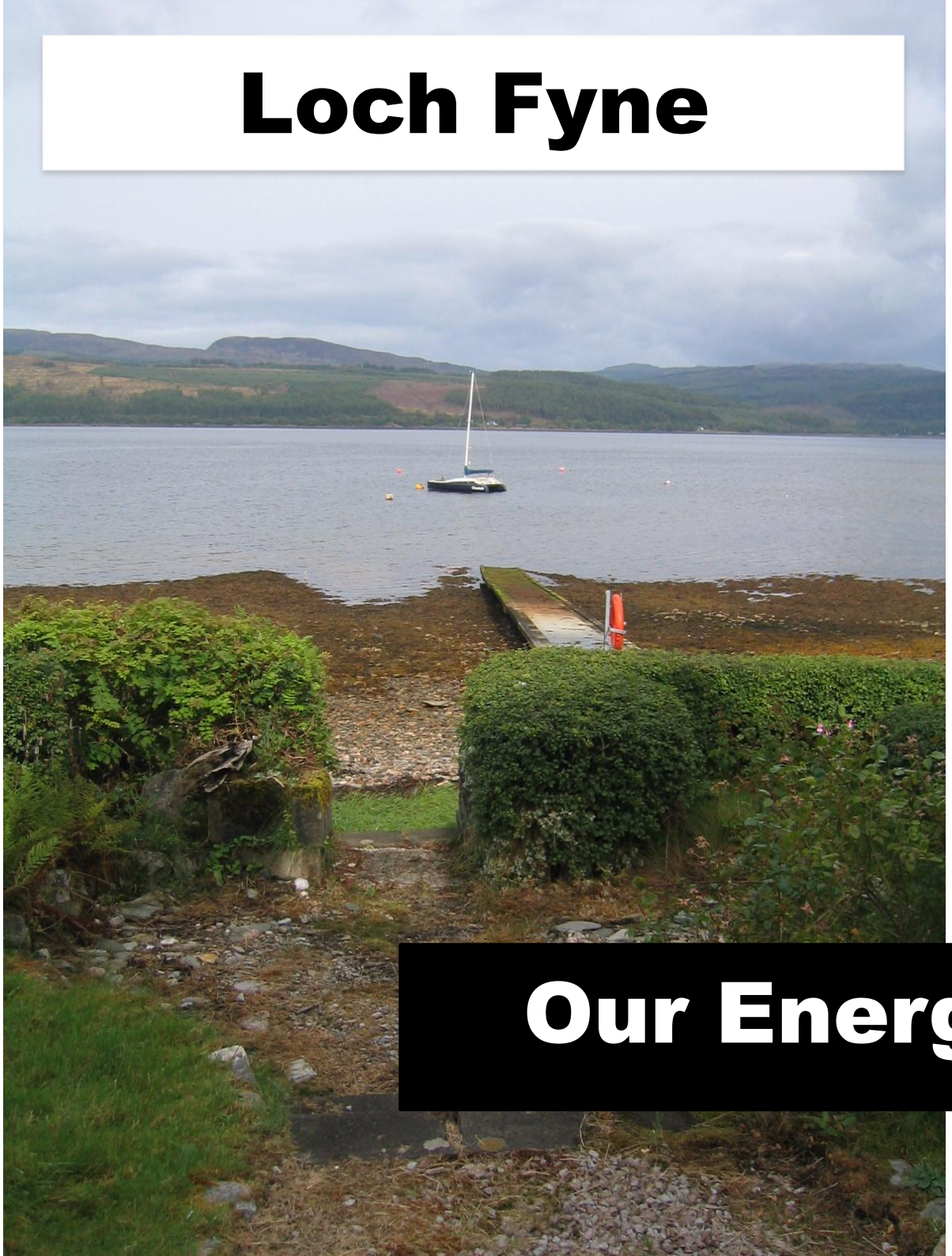
Replacement parts £

Low Carbon Footprint

SCHRI Grant

Both £15/16,000

Loch Fyne



Our Energy Source

8 x 100m coils of 32mm diameter pipe

Flow & Return 63mm diameter

Piped up the garden

Under the drive

And into the house

4.75kw in

19kw out

'Waterfurnace' heat exchanger

Underfloor heating tank

Underfloor heating manifold

Hot water tank

Nice dry, warm, house and hot water

Almost 4 x return on energy input

Paperwork

- Building Control & Planning
- Crown Estates
- Clyde Harbour Board
- National Hydrographic Society
- Fisheries Protection
- SEPA
- Electricity Board
- SCHRI

Comfort / Cost Comparison

Air Sourced 450% (now) freeze unfreeze process.

Land Sourced 500% Can freeze and gaps in conductivity.

Water Sourced 550% Steady source temperature and excellent conductivity.

4 x more efficient than gas

Reflections

Air to Air: An easier option
No Permissions

Community Scale Coils

Refrigerant Developments