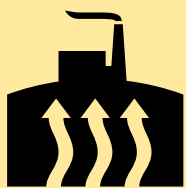


Brae Technology - Energy Generation Ideas



Geothermal

3MW produces electricity for over 100% of Brae's electricity demand (estimated 11GWh/yr) in combination with energy storage
Estimated costs of £1M - £2M per MW output

Almost 100% of Brae's energy demand

14MW produces 12x Brae's demand

Seawater heat pump

A minimum viable size such as 14MW produces hot water and space heating for almost 12x the demand
Drammen, Norway has a successful scheme



Wind

79kW produces electricity for a third of Brae
Average costs range from £1,000 - £6,000 per kW

Mean average wind speed determines output energy

Biomass CHP produces 2x Brae's heat demand

Biomass

1MW produces electricity for 480 Brae households
Biomass Combined Heat and Power (CHP)
1.65MW produces electricity for 140 Brae households



13%

River Hydro

A 500kW hydropower system can provide up to 2.2GWh annually, or 13% Brae's total energy demand

Steep small burns produce the best output energy

How many homes can be heated and powered by each technology?



There are currently 379 domestic Brae properties


3,600
Geothermal


4,750
Seawater heat pump


120
Wind


480
Biomass

 140 electricity
+
 800 heat
Biomass CHP


500
Hydro