

## JAF04 Unit 3 Alternative Energy

**Task 1 Read the sentences below. What is the one word missing in all of them?**

1. You can judge how healthy you are by the amount of ..... you have.
2. The kids were running around like crazily, working off their surplus .....
3. An object can store ..... as a result of its position.
4. We don't want to waste our ..... trying to persuade people who are just not interested.
5. Sport gives them an outlet for their .....
6. I'm trying to channel his ..... into something useful.

### Task 2 Pronunciation

**Write the words in the correct part of the table according to the stress pattern.**

*population geology major discussion decommission information economy  
 economical economics physics authority improvement electricity vibration  
 geyser consumption operation foundations geological potential turbine capacity  
 ecological perception generation facility*

<b>1. Oo</b>	
<b>2. oOo</b>	
<b>3. oOoo</b>	
<b>4. ooOo</b>	population
<b>5. ooOoo</b>	

### Task 3 Discussion

**Brainstorm all the energy sources that you can think of. Which of them are renewable?**

#### Task 4 Exercise

**Complete the gaps with verbs in suitable forms. There is one verb you do not need to use.**

*take      aid      heat      transport      convert      derive*

1. Geothermal energy is produced by harnessing the Earth's natural geological heat source and \_\_\_\_\_ it into a source that can \_\_\_\_\_ a domestic property.

The Earth is normally around 55°F (12.8°C) and this heat can be utilised by the use of ground source heat pumps.

Certain geological characteristics \_\_\_\_\_ the production of geothermal power such as geysers or hot underground magma deposits.

Iceland \_\_\_\_\_ advantage of the country's unique geological make up to use geothermal power to great effect. Currently 17% of Iceland's total electricity production is \_\_\_\_\_ from geothermal energy.

(source of the text: <http://www.cus.net/renewableenergy/subcats/geothermal/geothermal.html>)

#### Task 5 PROS AND CONS OF WIND FARMS

**The use of wind turbines for the generation of green electricity is often an emotive subject and there are persuasive arguments for and against this form of renewable energy generation.**

#### FOR

1. Land-based wind energy has the potential of covering six times the world's electricity consumption, or the world's total energy consumption. The energy consumption for production, installation, operation and decommission of a wind turbine is usually earned back within three months of operation.
2. More recent wind farms have their turbines spaced further apart, due to the higher capacity of the individual wind turbines. They no longer have the cluttered look of the early wind farms.
3. It is possible to hold a conversation directly underneath a modern wind turbine without any difficulty whatever and without raising one's voice. The modern turbine is quieter than its predecessors owing to improvements in the blade design.
4. Studies show that the number of birds and bats killed by wind turbines is negligible when compared with other human activities such as traffic, hunting and high-rise buildings.

## AGAINST

1. There is a perception that wind farms are noisy and are eyesores.
2. The construction of a large wind energy facility requires straight flat roads, a large hole filled with tons of steel and concrete to secure each giant assembly, clearing of trees in wooded areas and a transformer and power lines for each turbine.
3. Siting wind farms offshore raises other issues, such as dangers to navigation.
4. Another important complaint is that wind turbines kill many birds and bats. Siting generally takes into account bird flight patterns, but most paths of migration, particularly for birds that fly by night, are unknown.

### Task 6 Agreeing and Disagreeing

Make collocations by matching words from the box on the left with words on the right.

be	agree	sb's point	into an argument		
tend to	see	enter	agree	a compromise	sb's opinion
reach	share	in complete agreement	up to a point		

### Task 7 Discussion

The government plans to build a wind farm near the coast and you are in a town meeting to discuss the issue. Each person should take one of the roles below and think about their position. Which arguments will you use to support your point and convince the others you are right?

- a) You are a wind farm owner who wants to build a new wind farm here.
- b) You are a government official whose task is to find ways to reduce oil consumption.
- c) You are an environmentalist who wants the government to act decisively to reduce pollution.
- d) You are a resident in the area where the government is proposing to build a wind farm. You love the peaceful atmosphere of the area and are worried about the decline of seabirds in your country.

(Task 5 and 7 adapted from Lane, S. *Instant Academic Skills*. CUP, 2011)