

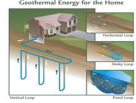

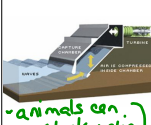





# Energy Types

Type	Where found Renewable /non-renewable	Picture	+ and -
<b>Fossil fuels</b> - Coal, oil and natural gas are burned in power plants	Lith NR		- release green house gases - will eventually run it - creates employment
<b>Nuclear energy</b> - Radioactive element (uranium) is mined and when the atom is split a tremendous amount of energy is created	Lith NR		- radiation disasters - a little creates a lot of energy - cleaner than if no GH gases - affect ground water
<b>Geothermal</b> - From the internal heat of the Earth where hot magma lies, a fluid is circulated deep underground, heated, and then returned to surface.	Lith Ren		- no harm to env. - limited possibilities for personal use - need more energy to produce heat - location can help
<b>Hydro electricity</b> - Derived from movement of falling water to spin turbines which are located in a dam - Main source of energy in Quebec	hydro ren		- blocks, destruction of lands organisms die or migrate. - no pollutants released. - no alternate form of energy needed.
<b>Wave and ocean current</b> - energy obtained from the flow of ocean tides when underwater turbines spin.	hydro ren		- no pollutants released - smaller than dam so less land destr. - can only produce certain amount of energy, so other system required. - animals can get stuck & die
<b>Tidal</b> - Electricity can be generated from tides when water from a high tide is collected	hydro ren		- can affect migration patterns of animals - does not use up land & less noisy than wind turbines - more dependent than
<b>Wind turbines</b> - As blades turn, they activate an electric generator	atmos ren		- unpredictable so alternate source needed. - needs a lot of land
<b>Sun (photovoltaic)</b> - The sun's energy is captured causing electrons to flow creating current electricity.	atmos ren		- flat land needed - energy cannot be stored - clean - wind turbines are loud. - wind turbines kill birds & affect migration

### Recap:

- Fossil fuels is the only one which contributes to global warming.
- Fossil fuels are coal, oil and natural gas.
- Nuclear power plants does not contribute to fossil fuels, but a nuclear meltdown can have devastating effects.
- Geothermal, hydro, wave, tidal, solar and wind are all renewable.

## Past exam questions

1. Which of the following technologies uses an energy source derived from the lithosphere?

- A) Tidal barrage
- B) Wind turbine
- C) Photovoltaic cell
- ☒ D) Coal-fired plant

2. A community in Gaspé is researching the environmental impacts of different energy sources. Below is a list of possible environmental impacts

- 1. Tidal barrages ☒ can disrupt marine life.
- 2. ☒ Tidal power plants and coal power plants release greenhouse gases.
- 3. Nuclear power plants create no greenhouse gases.
- 4. Flooding is a concern in the building of hydroelectric dams. ☒

Which of the above statements are true?

- ☒ A) 1, 2 and 3
- ☒ C) 1, 3 and 4
- B) 1 and 4
- ☒ D) 2 and 3