Energy Generation and Storage

Non-Renewable Energy Sources	This is when certain sources of energy will run out eventually
Fossil Fuels	• Coal, Oil and Gas • Burned to create steam, turned in turbines to create electricity. • Burning creates C02 which adds to **Global Warming**
Nuclear Power	• Nuclear Fission controls the reactor (that creates the electricity). This requires **Uranium** which is non-renewable • Accidents and waste can severely damage the environment and cause radiation poisoning • **Radiation poisoning** can be fatal and cause physical deformations • Nuclear waste has to be disposed of properly and is hazardous for thousands of years.

Renewable Energy Sources	This is when certain sources of energy will not run out.
4 **Solar**	• **Solar panels** are used to collect light and convert it into electricity • There is no waste and a consistent supply • However, the panels are not effective at night or in countries where there isn't a lot of sunlight • Solar energy can be stored with a lithium iron battery system to charge during the day and discharge after dark.
Wind	• **Turbines** harness wind energy • Not effective on non-windy days or extreme weather. • Some people don't like turbines Modern turbines are not noisy
5 **Hydro-Electrical**	• This harnesses energy from water held behind a **dam** • Has to be created by flooding land – damaging wildlife habitats • **Tidal** energy comes from using energy from waves
Biomass	• This is fuel from natural sources e.g. crops, scrap woods and animal waste • Growing biomass crops produces oxygen and uses up C02 • However, is a very expensive method.

Storing Energy

2 **Pneumatics:** This is the production of energy using compressed gas or air. E.g. Pistons in an engine

Hydraulics: Like a Pneumatic system, but uses water or oil under pressure. E.g. Wheelchair lifts

3 **Kinetic:** Energy that is generated by movement. This is stored by items like springs in a "clickable" pen or balloons,

Batteries: Electrical power can be stored in batteries. Rechargeable batteries are becoming increasingly popular.