

# Edexcel Geography A-level

## The Carbon Cycle & Energy Security

### Definition Flashcards

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# Acidification



## Acidification

The gradual reduction of pH of the oceans, due to dissolving carbon dioxide from the atmosphere.



# Afforestation



## Afforestation

Planting trees and vegetation in the aim of increasing forest cover.



# Biofuel



## Biofuel

Burning crops and vegetation for electricity and heat.



# Carbon Capture & Storage (CCS)





## Carbon Capture & Storage (CCS)

The capture of carbon dioxide emissions directly from the factory, pumped into disused mines rather than being released into the atmosphere.



# Carbon Fluxes



# Carbon Fluxes

The movement of carbon between stores.



# Carbon Neutral



## Carbon Neutral

A process that has no net addition of carbon dioxide to the environment.



# Carbon Stores



## Carbon Stores

Places where carbon accumulates for a period of time such as rocks and plant matter.



# Choke Points





## Choke Points

Points in the logistics of energy and fuel that are prone to restriction.



# Combustion



## Combustion

The process of burning a substance, in the presence of oxygen, to release energy.



# Decomposition



## Decomposition

The break down of matter, often by a decomposer which releases carbon dioxide through their own respiration.



# Energy Mix



## Energy Mix

The composition of a country's energy sources.



# Energy Security





## Energy Security

The ownership and full control of a country's energy source, production and transportation.



# Energy Pathway



## Energy Pathway

The movement of energy from its extraction or source, through pipes, freight logistics or cabling.



# Energy Players



## Energy Players

Key companies and individuals who own, distribute and sell energy and energy sources.



# Enhanced Greenhouse Effect



## Enhanced Greenhouse Effect

The build-up of greenhouse gases in the atmosphere, reducing the amount of solar radiation reflected into space.



# Inorganic Carbon





# Inorganic Carbon

Carbon stored in carbonated rocks.



# Non-Renewable



## Non-Renewable

A source of energy that can only be used once to generate electricity or takes thousands of years to replace. E.g. Fossil Fuels.



# Nuclear Fusion



# Nuclear Fusion

The process of joining atomic nuclei together, to produce energy.



# OPEC



# OPEC

Oil & Petroleum exporting countries. An organisation that supports and coordinates fossil fuel exporting countries.



# Organic Carbon





## Organic Carbon

Carbon stored in plant material and living organisms.



# Outgassing



## Outgassing

The release of dissolved carbon dioxide (e.g. at plate boundaries, warming the oceans).



# Photosynthesis



# Photosynthesis

The process of converting carbon dioxide and water into glucose and oxygen. All plants and some organisms rely on this process to survive.



# Phytoplankton



# Phytoplankton

Small organisms that rely on photosynthesis to survive, so intake carbon dioxide from the atmosphere.



# Primary Energy





## Primary Energy

The initial source of energy, as it is naturally found. This could be natural ores, water, crops or radioactive material.



# Renewable



## Renewable

Primary energy that can be re-used to produce electricity or has a short lifetime, therefore any used can be replaced quickly. E.g. Hydroelectric, biomass, solar.



# Respiration



## Respiration

The process of converting glucose and oxygen into carbon dioxide and energy. Some organisms rely on respiration to survive.



# Secondary Energy



## Secondary Energy

The product of primary energy, mostly electricity.



# Sequestration





## Sequestration

The transfer of carbon from the atmosphere to stores elsewhere - living biosphere, inorganic rocks, etc.



# Thermohaline Circulation



## Thermohaline Circulation

The movement of volumes of seawater from cold deep water to warm water surface water.



# Tipping Point



## Tipping Point

A critical threshold where any changes to a system after the tipping point are irreversible.



# Urbanisation



# Urbanisation

The growth of populations in towns and cities.

