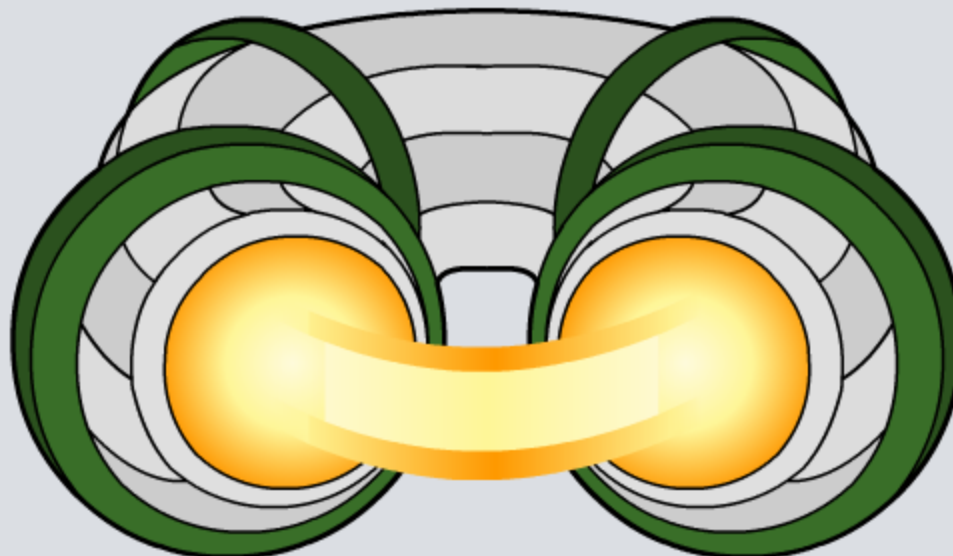


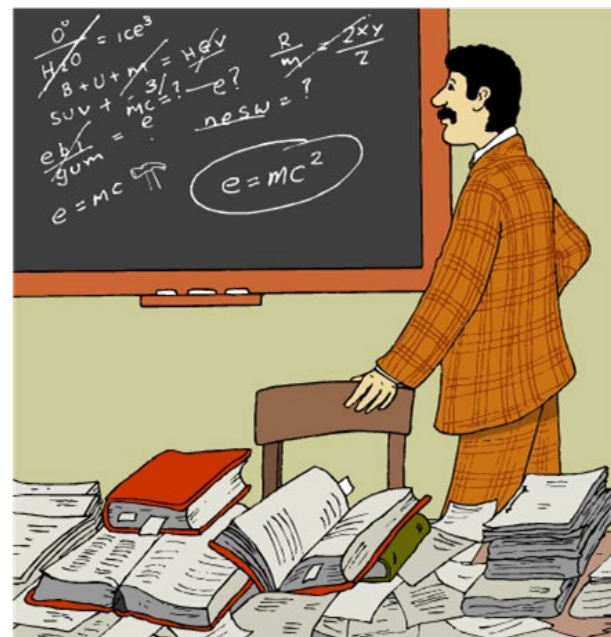
# Energy Resources for the Future



# Energy from atoms

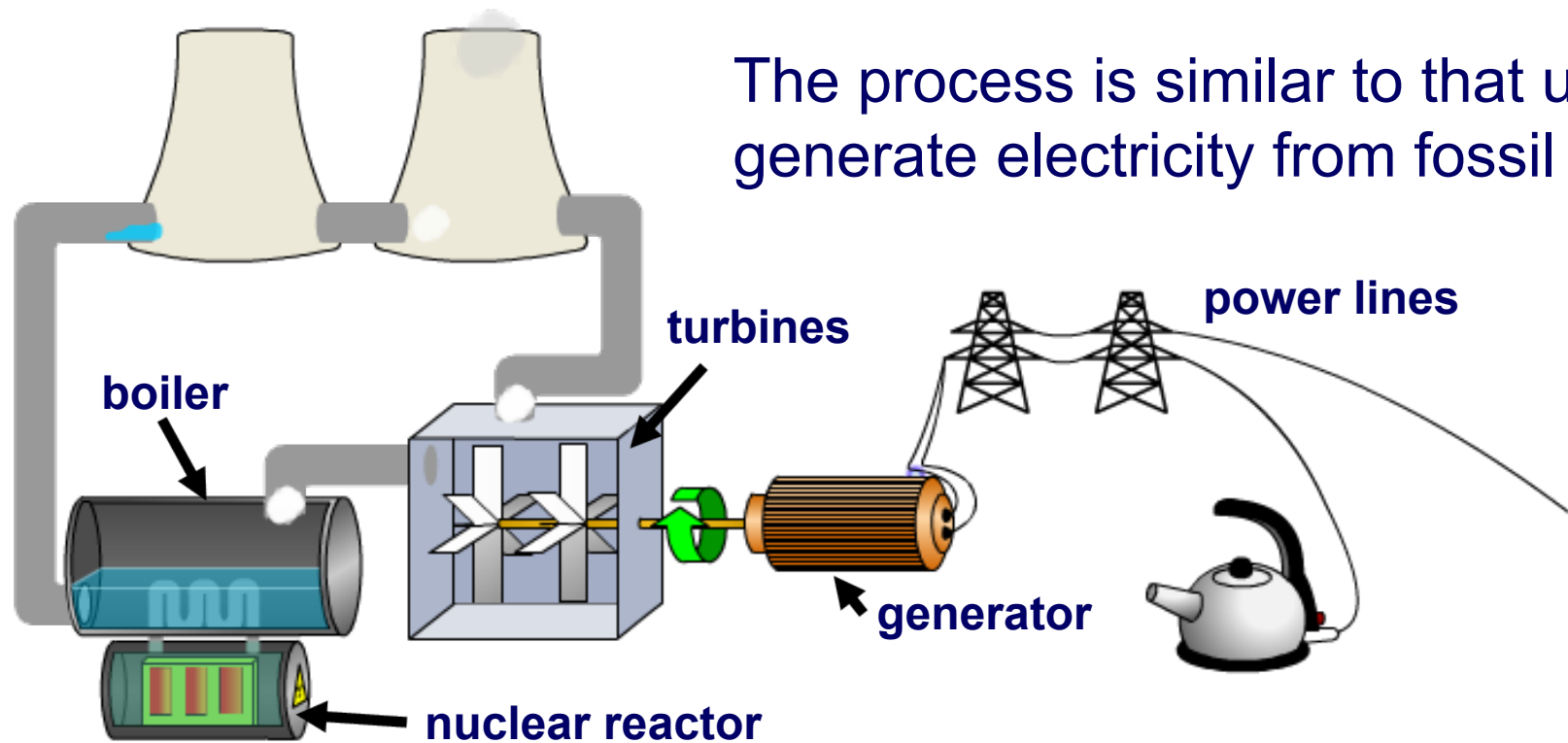
Albert Einstein is perhaps the most famous physicist of all time. He first came up with the idea of getting energy from atoms.

Scientists found that large amounts of energy could be produced by a process known as **fission**, which involves splitting atoms of **uranium**.



Towards the end of World War II, the United States dropped two uranium bombs on Japanese cities. The effects were devastating.

Nuclear power stations use fission in a controlled way to generate electricity.



The process is similar to that used to generate electricity from fossil fuels.

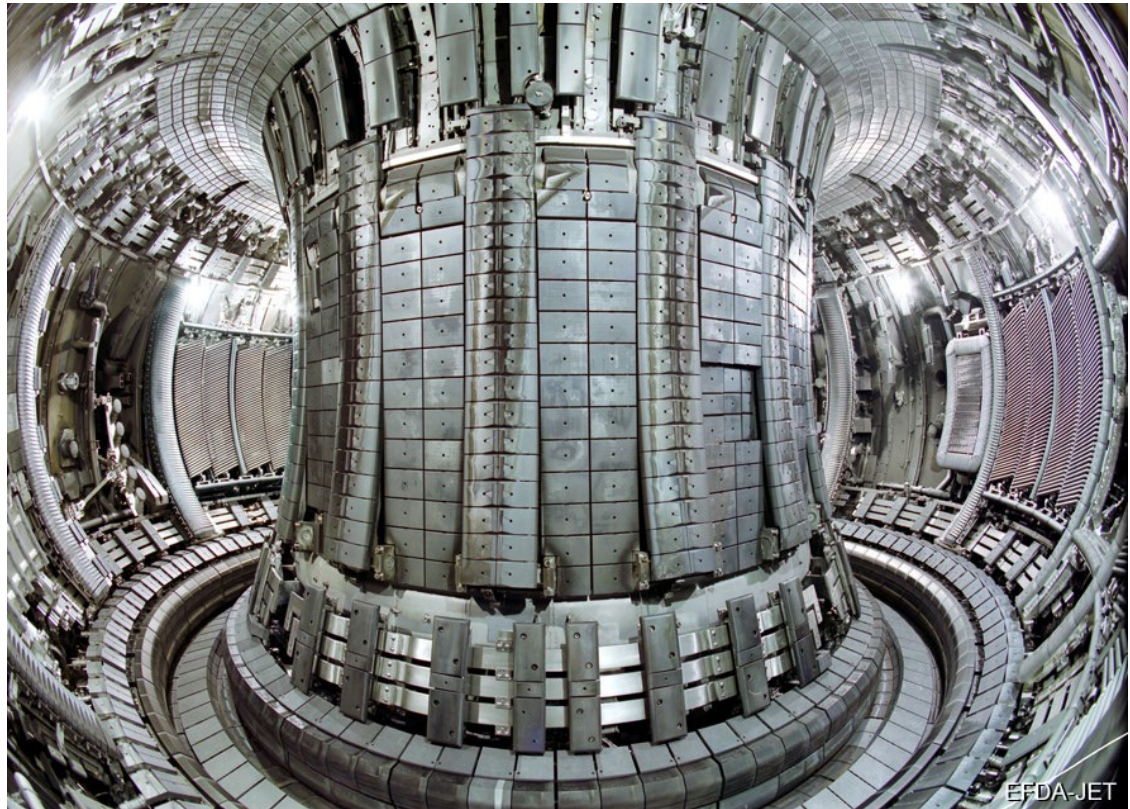
Unfortunately, fission reactions create dangerous radioactive waste products. Is nuclear energy renewable?

# Nuclear fusion

Fusion (joining atoms) is the opposite of fission (splitting atoms). The Sun and all other stars are powered by fusion reactions.

Fusion produces no harmful waste and generates enormous amounts of energy.

Unfortunately, it needs very high pressures, and temperatures as hot as the Sun to get it started.



# New ways of generating useful energy

Hydrogen is now being used to power cars in California, where you can fill up with hydrogen just like gasoline. It is converted by the car's fuel cells into water and electricity.

Currently, the production of hydrogen is expensive and often requires a lot of energy.



Methane is a waste product from animals and from rotting plant and animal material.

The gas can be collected and burned in a power station.

## Match each energy source to the correct drawback

biomass

solar panels

fusion

fission

methane

hydrogen

uses up land

produces dangerous waste

hard to collect and transport

requires extreme heat and pressure

fuel production requires energy

only work well in sunny climates



solve

