Towards a sustainable future: Ensuring future energy supplies

Oil is a non-renewable resource and will run out if we continue to use it at the current rate. The future of energy supplies can be ensured by:
- using oil reserves carefully and wisely
- finding alternatives to oil.

Using reserves wisely

Remaining oil reserves need to be conserved now to make sure supplies last as long as possible. Experts agree that new discoveries and inventions can extend the availability of cheap oil for only a few decades. New technologies may also allow more oil to be taken from known deposits.

Finding alternatives

Renewable alternative energy sources include wood, wind, the Sun, energy from ocean waves and hydro-electricity. The best alternative sources to use are ones that:
- cause little environmental damage
- give a continuous supply that will not run out.

CASE STUDY

New oil deposits

The search continues for new oil deposits to help keep up the supply. Additional discoveries of new oilfields will be made, however there are limits.

Oil in Alaska

The Prudhoe Bay oilfield on the North Slope of Alaska is the largest oilfield ever discovered in the Americas. The crude oil in this field is estimated to be about 10 billion (1 000 000 000) barrels.

The Alaskan oil pipeline brings crude oil from the Prudhoe Bay oilfield to tanker ships docked in southern Alaska. Crossing 1270 kilometres of Alaskan wilderness, the pipeline carries up to 2 million barrels of oil per day from the Arctic coast to the Gulf of Alaska.

At current rates of oil use, Prudhoe Bay will only produce enough oil to supply the United States for less than two years. Prudhoe Bay is the only oilfield of this size discovered in the area in more than 100 years of exploration.

Fast fact

In 2010, an estimated 15 900 000 litres of oil spilled into the Gulf of Mexico after an explosion on the Deepwater Horizon rig.

Fast fact

It is estimated the remaining oil reserves in the United States will last for less than 8 years at the current rate of production.