

# Urban forests.

future solutions

The year is 2050. Cities have been transformed into green networks of parks, tree rows and urban forests that cool the cities and absorb  $\text{CO}_2$ .

### **Fun facts:**

- The temperature in green neighborhoods can be up to  $5^{\circ}\text{C}$  lower.
- In many cities, trees are part of the climate infrastructure.
- Urban forests absorb millions of tons of  $\text{CO}_2$  per year.

# Lab-grown meat.

future solutions

The year is 2050. Some meat is produced from animal cells in labs. This reduces the need for large livestock farms.

### **Fun facts:**

- Much less land and water is used to produce this meat.
- These products have the same taste and texture as traditional meat.
- This technology can reduce emissions from livestock farming by a large percentage.

# Direct air capture.



future solutions

The year is 2050. Large carbon capture plants filter  $\text{CO}_2$  from the air and permanently store it underground or use it in industry. This technology helps remove some of the emissions that we have not been able to avoid.

### **Fun facts:**

- One large plant can remove as much  $\text{CO}_2$  as tens of thousands of trees.
- Some plants already remove millions of tons of  $\text{CO}_2$  per year.
- In some countries,  $\text{CO}_2$  from the air is used to produce synthetic fuel.

# Green hydrogen.

future solutions

The year is 2050. Industry and transport use green hydrogen produced from renewable energy. It has replaced fossil fuels in steel mills, ships and aviation.

**Fun facts:**

- Steel plants no longer emit  $\text{CO}_2$  but water vapor.
- Large ships cross oceans using hydrogen as fuel.
- Hydrogen has become a key part of the energy transition.

# Solar energy from space.

future solutions

The year is 2050. Large solar power plants are orbiting Earth. They collect solar energy without clouds or nighttime and transmit it wirelessly to Earth.

**Fun facts:**

- In space, solar energy is available 24 hours a day.
- A single large space-based power plant can supply energy to millions of homes.
- The energy is sent to Earth using microwaves or lasers.

# Artificial photosynthesis.

future solutions

The year is 2050. New technology mimics photosynthesis and converts  $\text{CO}_2$  from the air into fuel and valuable chemicals.

**Fun facts:**

- The systems use solar energy and  $\text{CO}_2$  from the air.
- The resulting fuels can power ships or planes.
- The technology helps reduce the amount of  $\text{CO}_2$  in the atmosphere.