

CIRCULAR ECONOMY IN ENERGY

50%
of Scotland's energy will be supplied from renewable sources by **2030**

ENERGY



But what about the materials needed to make this happen? Moving to new clean technologies requires raw resource extraction and increased material use.

Why is a circular economy approach important?

1. Safeguards against future shortages of critical materials
2. Reduces carbon impact of energy infrastructure

Wind turbines



Turbines typically have an asset life of 25 years.

The first onshore wind farms installed in Scotland are now ready to be replaced.

The new generation of offshore turbines will be 250m tall and each one will weigh nearly 1,000 tonnes

Blades are made from composites which are not currently recycled at scale.

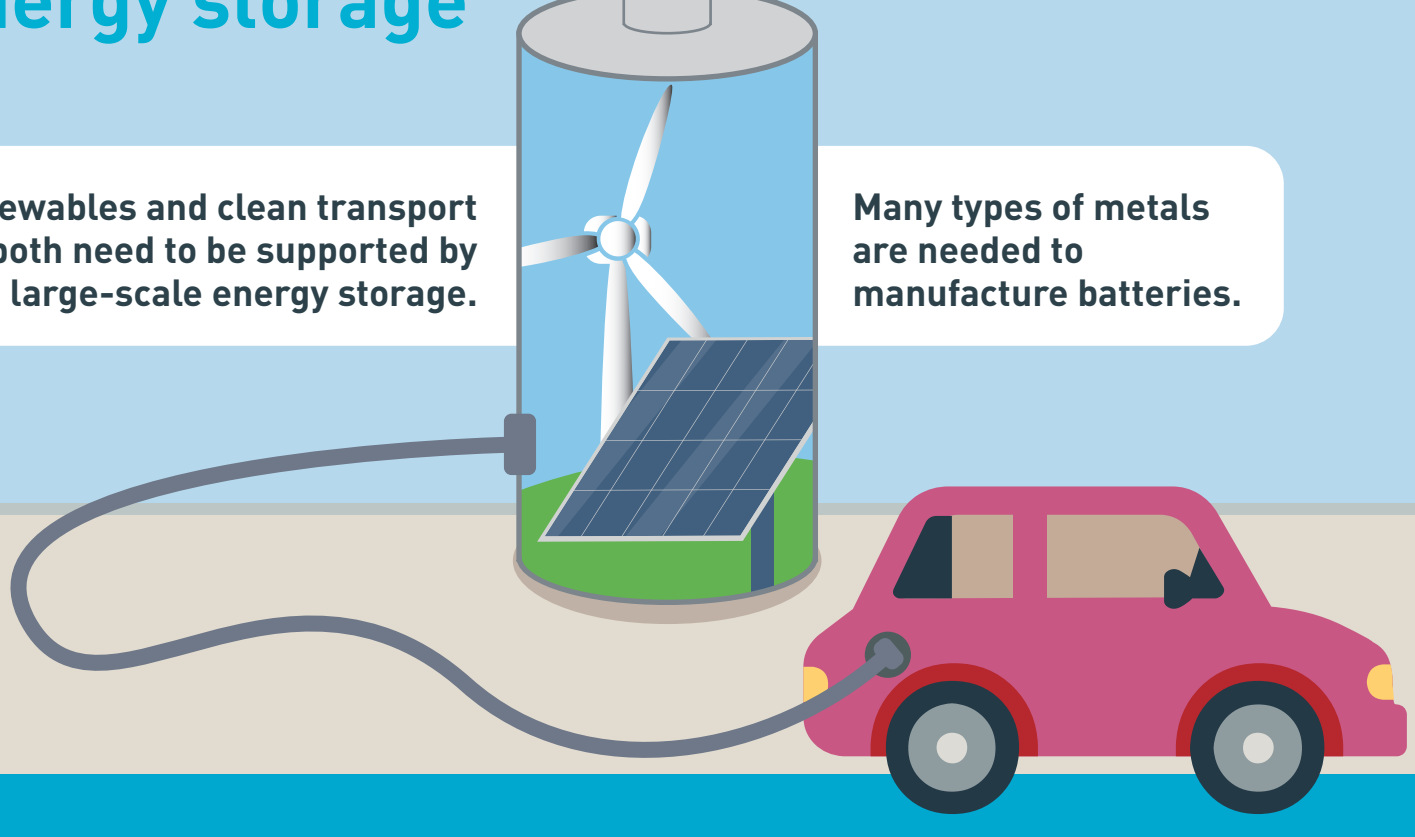


We are working with operators and technology developers to scale up reuse and recycling solutions in Scotland.

Energy storage

Renewables and clean transport both need to be supported by large-scale energy storage.

Many types of metals are needed to manufacture batteries.



We are supporting companies looking at second-life markets and building an evidence-base to better support future policy in this area.

Oil and gas



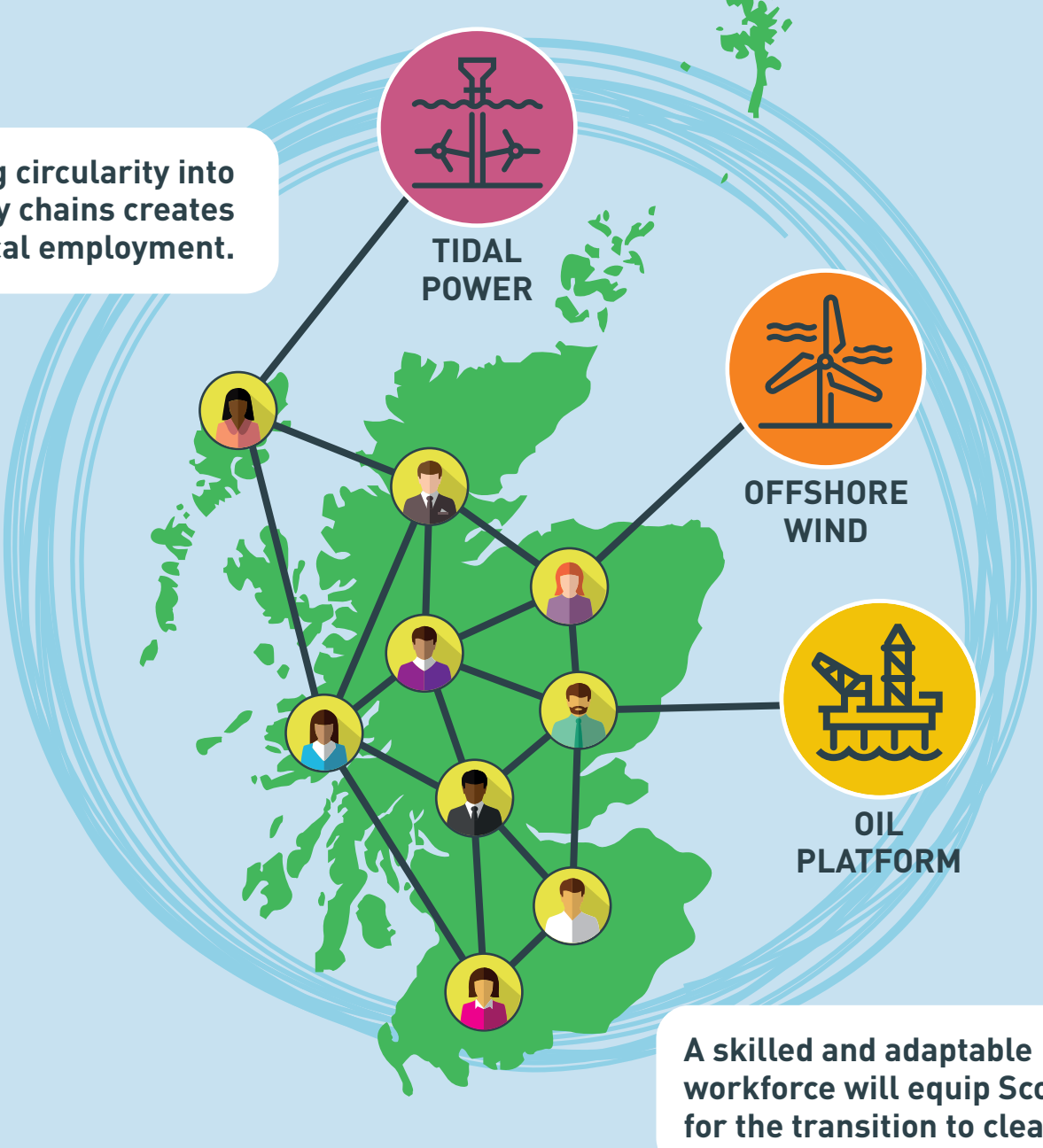
At least 60% of oil and gas platforms in the North Sea will be decommissioned by 2030, representing over 1 million tonnes of materials.

Local supply chains help keep economic benefits in Scotland and could also facilitate the energy transition to cleaner fuels.

We are supporting businesses who refurbish old equipment, and other sectors that could use decommissioned materials.

Future resilience

Building circularity into supply chains creates local employment.



A skilled and adaptable workforce will equip Scotland for the transition to clean fuels.

We are mapping what skills will be needed to create a more circular and resilient Scottish energy sector