

Top Trumps

You can use one set of cards or copy more sets if you have more players.

Rules

- 1 Shuffle the cards
- 2 Divide the cards evenly between all the players. Keep them face down.
- 3 Look at your top card.
- 4 Wait for the player left of the dealer to choose a card and read 1 of the stats.
- 5 Invite other players to compare the same stat on their card. Go around in a circle and have each player list the same stat from the topmost card on their deck. Once everyone shares their stat, determine who shared the highest number.
- 6 Collect all of the other players' cards if your stat is highest. Wait for all of the other players to put their losing card face-up in the middle of the playing area. Stack these cards and place them at the bottom of your card pile.
- 7 You can stop at any time. The winner is the person with the most .

Definitions of Statistics (Stats)

CO₂ emissions

Carbon dioxide pollution

Pollution

Something that makes the earth and/or air dirty and unhealthy

Power Output

The amount of power made

Reliability

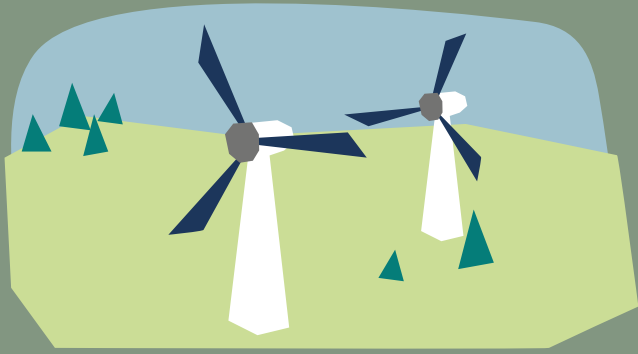
Always produces the same amount of power

Renewability

The fuel does not all get used up



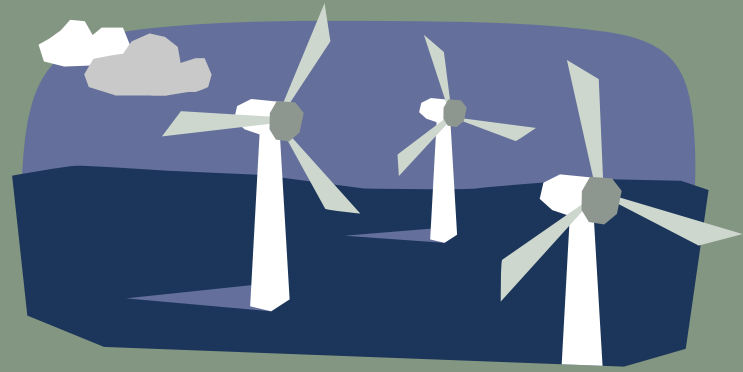
Onshore Wind Farms



Britain is the windiest country in Europe. Onshore wind farms generated 11% of Britain's electricity in 2020.

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|-----------------------|---|
| 3 Power Output | 10 Low CO ₂ Emissions |
| 2 Reliability | 10 Low Pollution |
| 9 Renewability | 9 Safe |

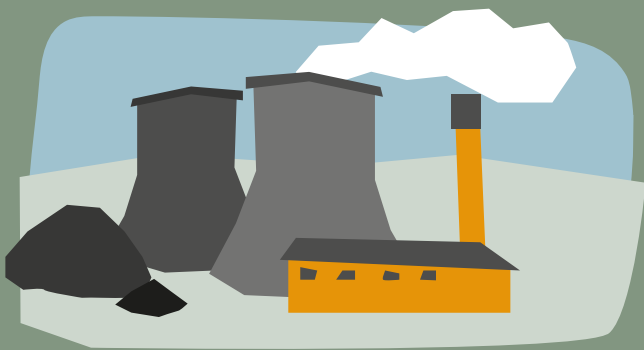
Offshore Wind Farms



Wind farms at sea benefit from stronger winds. They produced 13% of Britain's electricity in 2020.

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|-----------------------|---|
| 4 Power Output | 10 Low CO ₂ Emissions |
| 3 Reliability | 10 Low Pollution |
| 9 Renewability | 8 Safe |

Coal Fired Power Station



Coal is burnt to produce energy. It can be very damaging to the earth and environment - Now less than 5% of UK energy comes from coal.

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|-----------------------|--|
| 8 Power Output | 0 Low CO ₂ Emissions |
| 10 Reliability | 0 Low Pollution |
| 0 Renewability | 2 Safe |

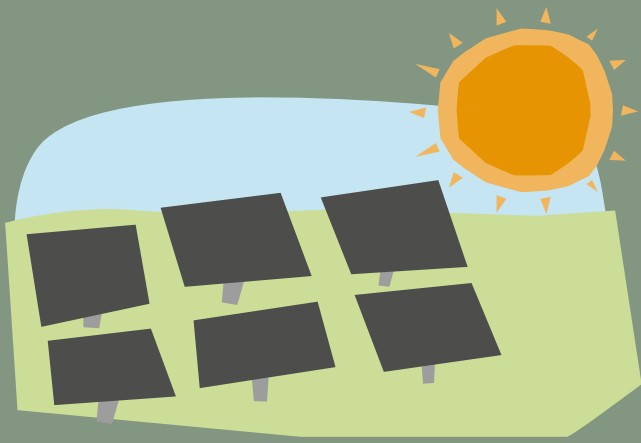
Power from Waste Station



In the UK recycling is increasing however there is still a lot of waste produced. This can be burnt generating energy for heating and electricity.

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| 5 Power Output | 1 Low CO ₂ Emissions |
| 9 Reliability | 6 Low Pollution |
| 2 Renewability | 8 Safe |

Solar PV Farms



Electricity directly from sunlight is called Photovoltaic (PV). Solar panels turn the energy from sunlight into electricity. They only work in daylight.

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|-----------------|----------------------------------|
| 1 Power Output | 10 Low CO ₂ Emissions |
| 4 Reliability | 9 Low Pollution |
| 10 Renewability | 9 Safe |

Biomass Power Station



This process is carbon neutral which means that it doesn't add any more carbon dioxide (CO₂) to the atmosphere.

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|-----------------|---------------------------------|
| 5 Power Output | 7 Low CO ₂ Emissions |
| 10 Reliability | 3 Low Pollution |
| 10 Renewability | 7 Safe |

Gas Fired Power Station



Gas (methane) is a cleaner fossil fuel than coal and supplies about one third of UK total energy. It is easy to transport by pipeline.

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| 8 Power Output | 3 Low CO ₂ Emissions |
| 9 Reliability | 2 Low Pollution |
| 0 Renewability | 3 Safe |

Nuclear Power



There are lots of arguments about this method of energy production. It has low carbon dioxide emissions but many people are worried about dangerous waste, waste disposal and safety.

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|-----------------|---------------------------------|
| 10 Power Output | 9 Low CO ₂ Emissions |
| 10 Reliability | 9 Low Pollution |
| 3 Renewability | 2 Safe |

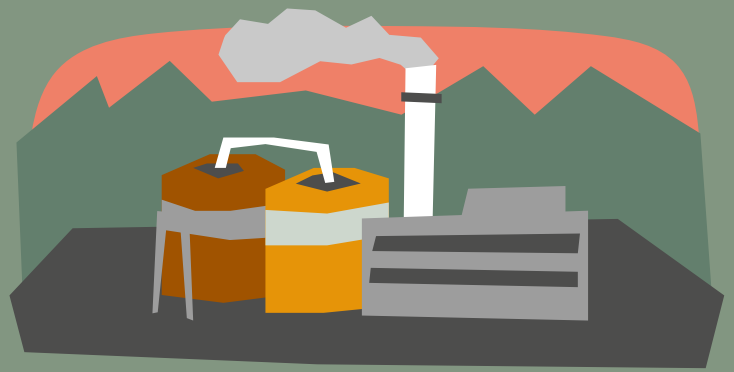
Hydroelectric Power (HEP)



Steep valleys are dammed to store water which then flows through turbines to make electricity. This can be expensive and can damage the environment but it produces reliable and renewable energy.

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|----------------|----------------------------------|
| 8 Power Output | 10 Low CO ₂ Emissions |
| 8 Reliability | 9 Low Pollution |
| 9 Renewability | 9 Safe |

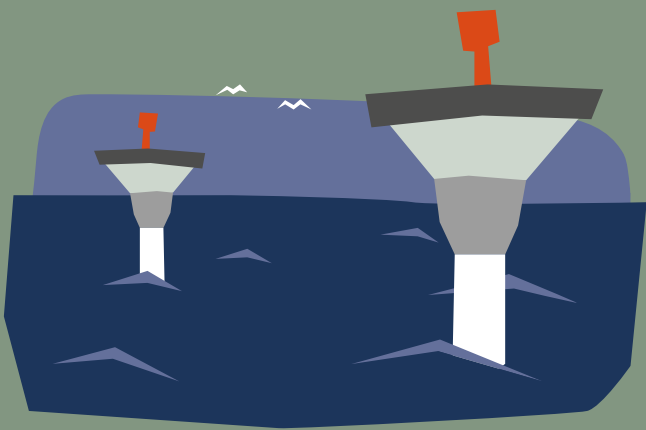
Oil Fired Power Station



Oil is a fossil fuel. Some is used for heating and electricity production but it is mostly used as liquid fuels for transport.

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|----------------|---------------------------------|
| 8 Power Output | 2 Low CO ₂ Emissions |
| 8 Reliability | 1 Low Pollution |
| 0 Renewability | 2 Safe |

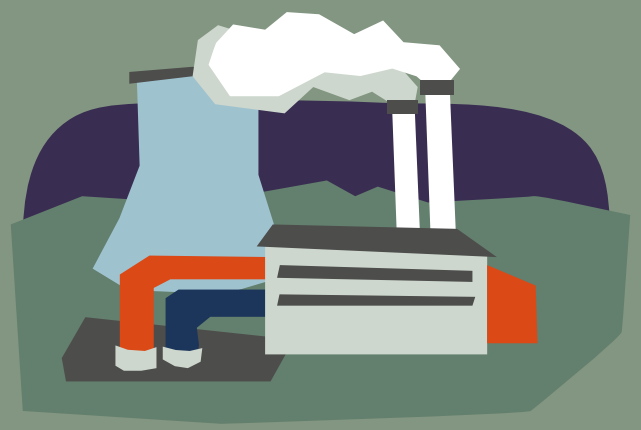
Tidal Stream



Tidal stream turbines are fixed underwater and driven by tidal flows to produce electricity. The UK has some excellent potential sites.

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| 8 Power Output | 10 Low CO ₂ Emissions |
| 5 Reliability | 10 Low Pollution |
| 10 Renewability | 9 Safe |

Geothermal



This uses the heat from deep down in the Earth to turn water into steam which can be used for heating and generating electricity. Drilling down to hot rocks and pumping water through them also extracts heat, this is difficult and expensive.

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|----------------|---------------------------------|
| 5 Power Output | 1 Low CO ₂ Emissions |
| 9 Reliability | 6 Low Pollution |
| 2 Renewability | 8 Safe |