

**THE  
FUSION  
CLUSTER**

# **FUSION FOR ALL TEACHERS' PACK**

**Turning fusion from theory into practice.**



# FUSION FOR ALL

## Activity Instructions

### You will also need:

- \* The “What does a FUSIONeer do?” cards visible to students  
(printed copies or on laptop/tablet screens in each pair or group)

### You may also like:

- \* The ENERGY OPTIONS cards as printed copies  
(which have additional information to the energy options slides in this slideshow)



# Question 1

What would you do with an unlimited energy source?

## You will also need:

- \* The “What does a FUSIONeer do?” cards visible to students  
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## You may also like:

- \* The ENERGY OPTIONS cards as printed copies  
(which have additional information to the energy options slides in this slideshow)

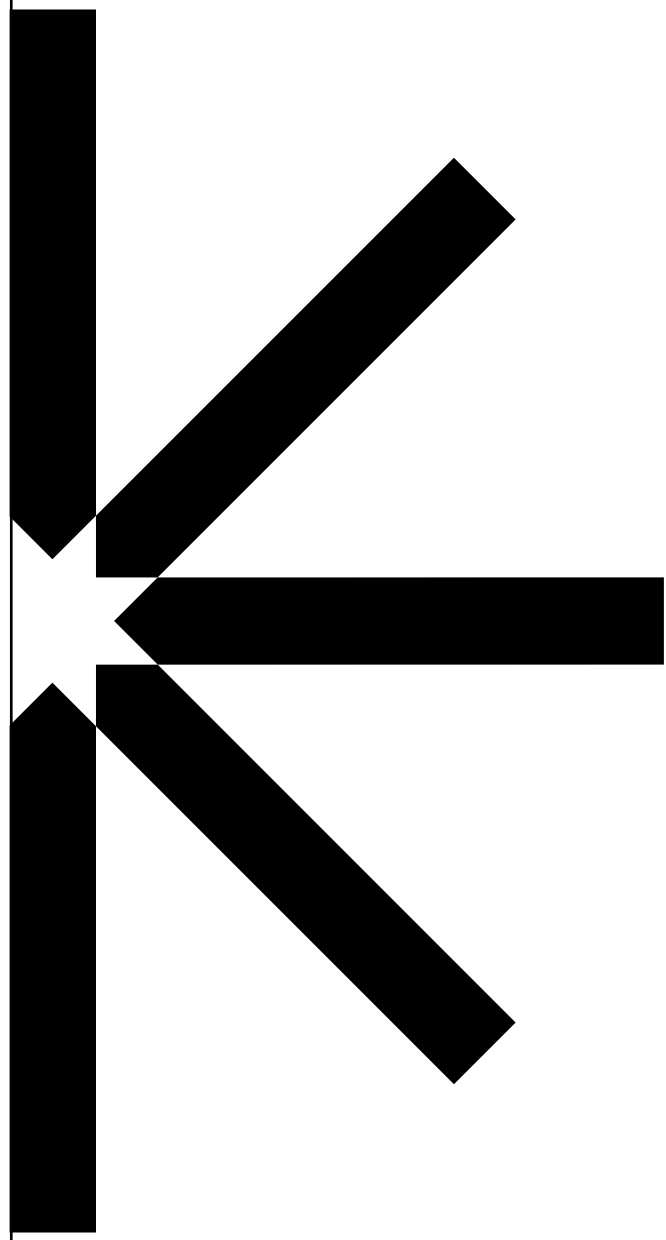


# Question 2

Let's get real.

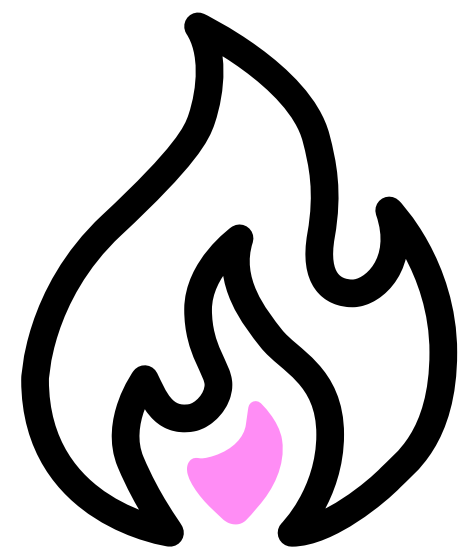
Do you think there's a realistic way to power your dreams?

Let's take a look at some real-life energy options...

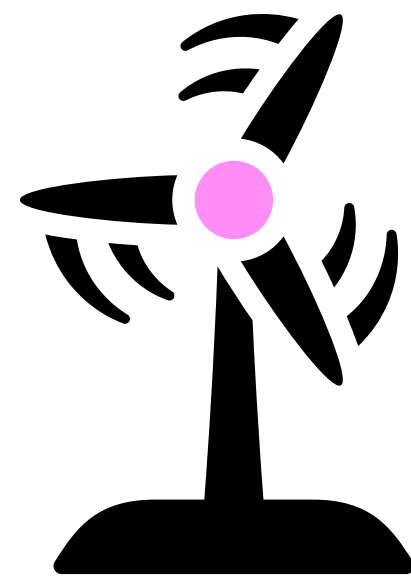


# Energy Options

There are many technologies that can be used as a source of energy to power our lives. Which would you choose?



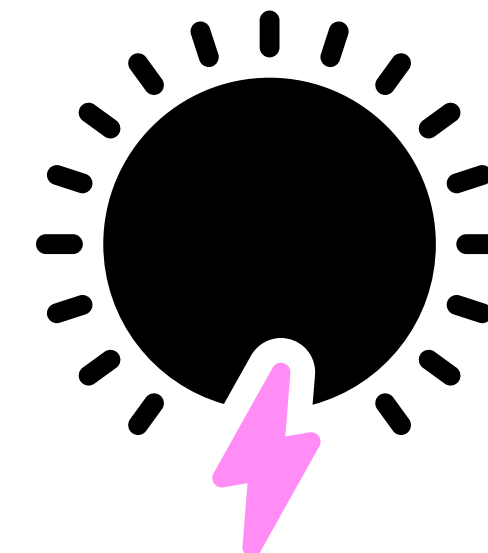
Fossil Fuels



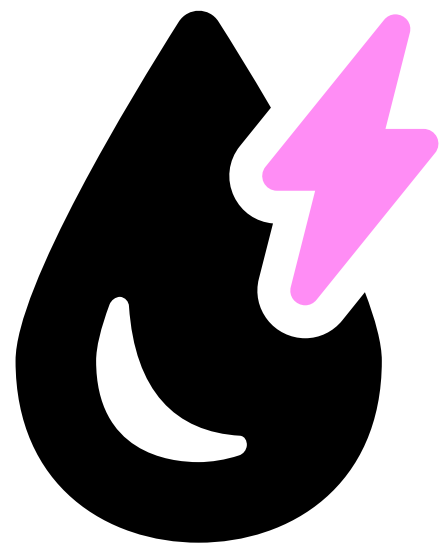
Wind



Biomass



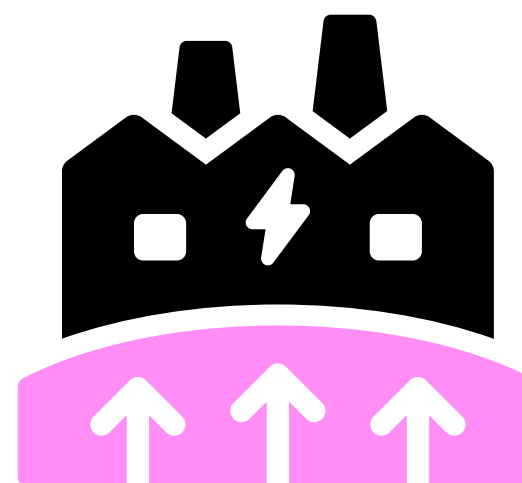
Solar



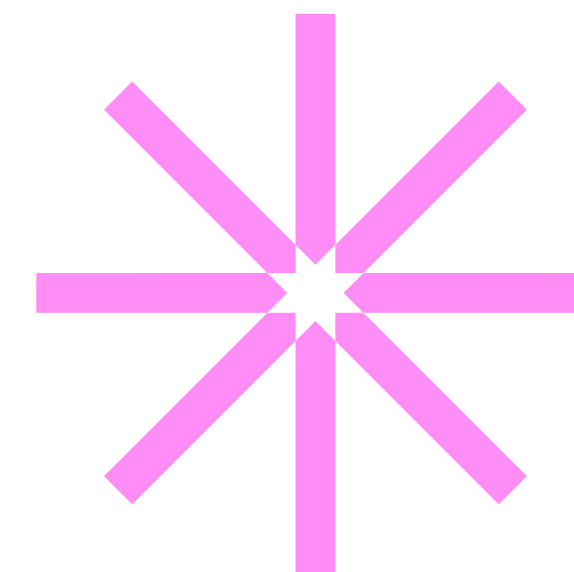
Hydropower



Nuclear



Geothermal



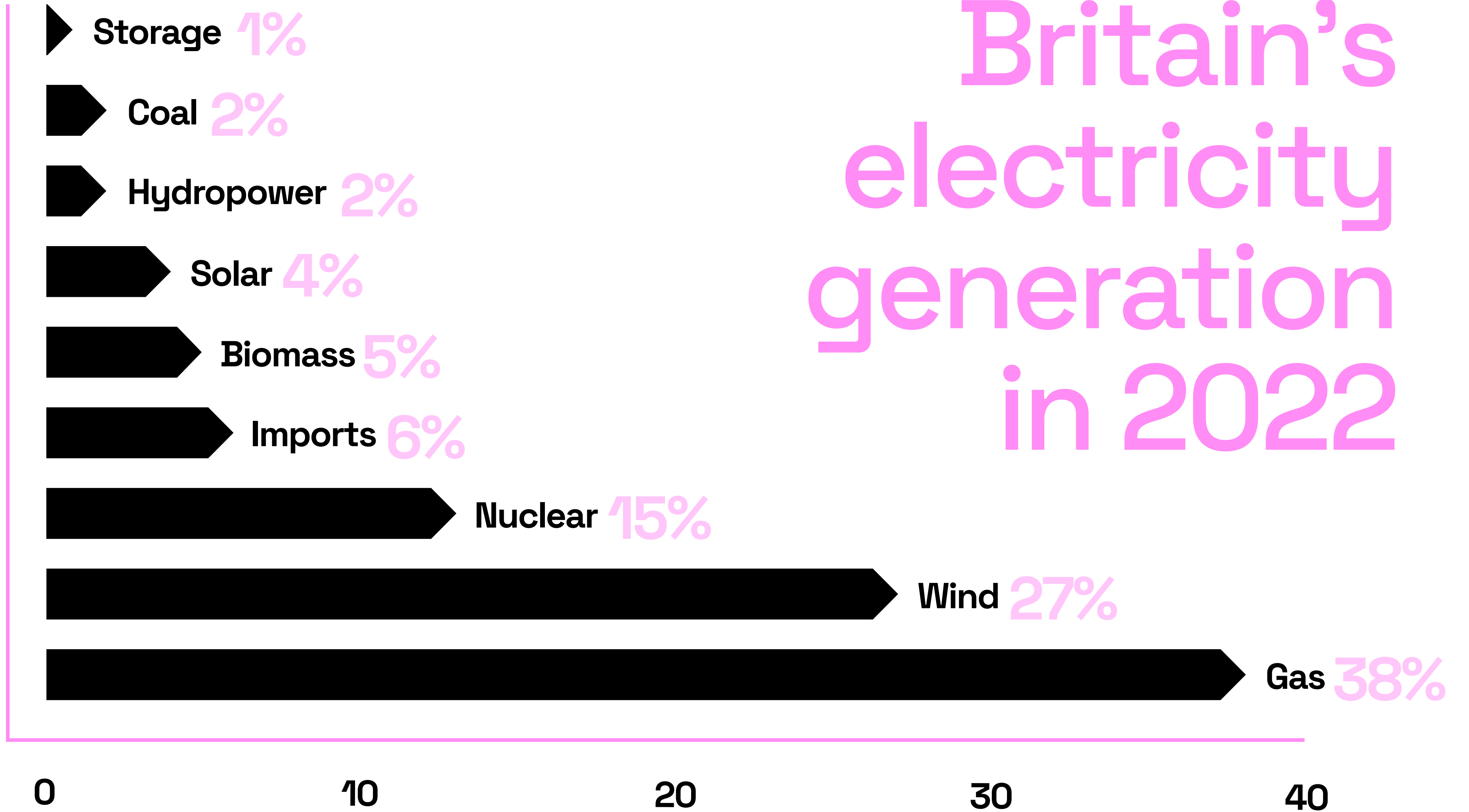
Fusion



Are all these sources renewable?

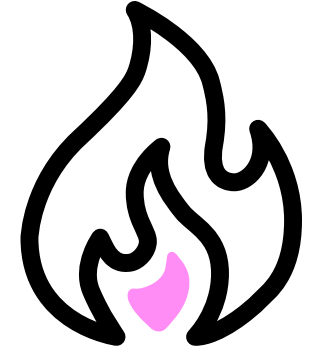
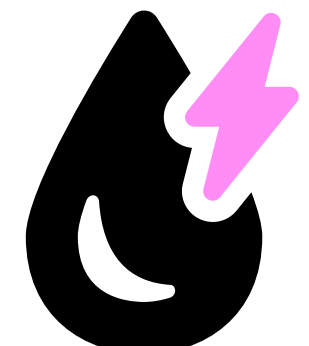
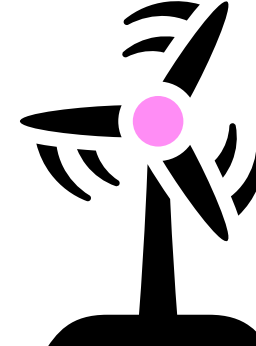


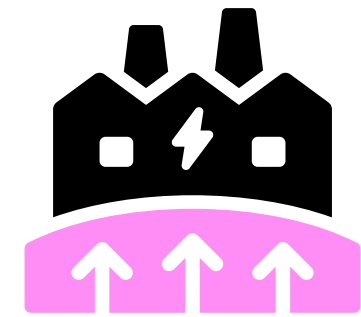
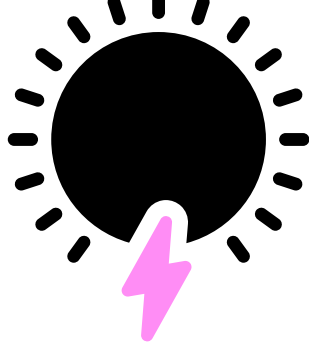
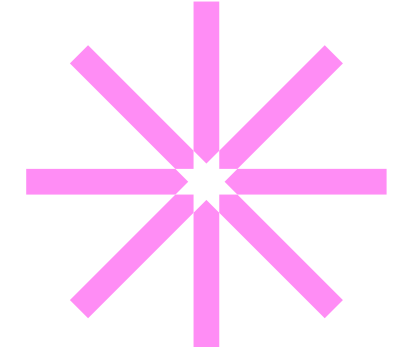
Do they release greenhouse gases (GHG) like CO<sub>2</sub>?

Do they produce other harmful waste?



# Britain's electricity generation in 2022



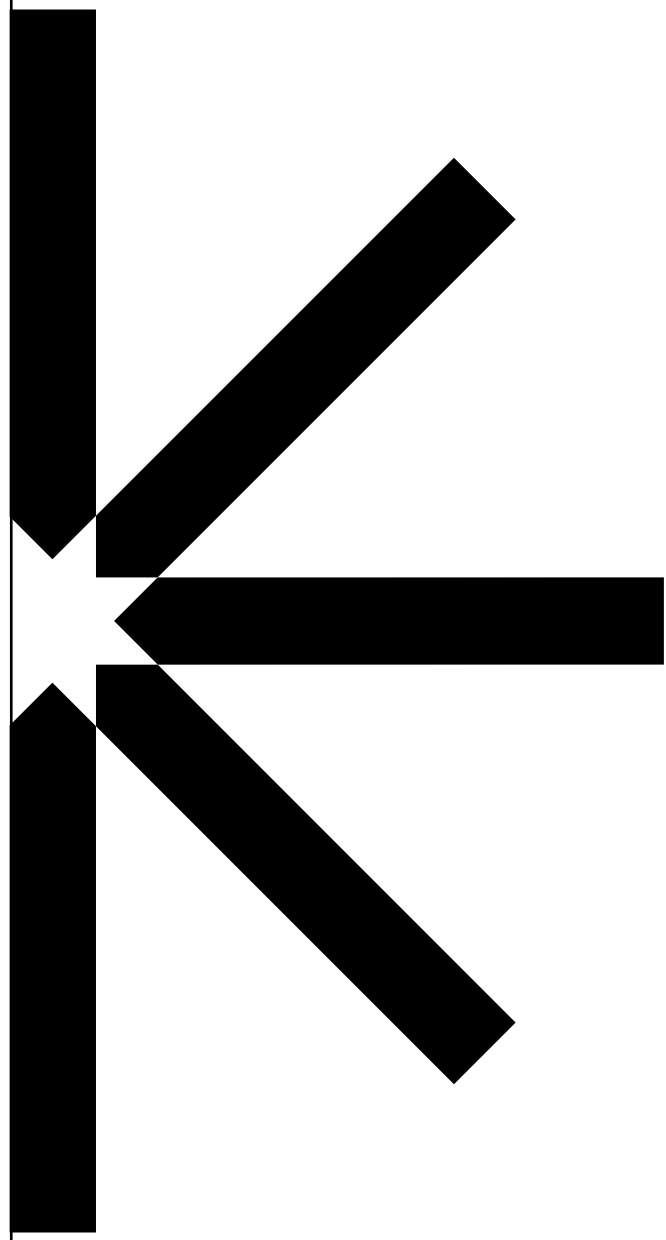
 <b>Fossil Fuels</b>	<p><b>GHG emissions:</b> High to very high</p> <p><b>Renewable:</b> Non-renewable</p> <p><b>Harmful waste:</b> Particulates*, oil spills</p>	 <b>Hydropower</b>	<p><b>GHG emissions:</b> Very low</p> <p><b>Renewable:</b> Renewable</p> <p><b>Harmful waste:</b> None</p>
 <b>Wind</b>	<p><b>GHG emissions:</b> Very low</p> <p><b>Renewable:</b> Renewable</p> <p><b>Harmful waste:</b> None</p>	 <b>Nuclear</b>	<p><b>GHG emissions:</b> Very low</p> <p><b>Renewable:</b> Non-renewable</p> <p><b>Harmful waste:</b> Needs careful disposal</p>
 <b>Biomass</b>	<p><b>GHG emissions:</b> Medium to high</p> <p><b>Renewable:</b> Renewable</p> <p><b>Harmful waste:</b> Particulates</p>	 <b>Geothermal</b>	<p><b>GHG emissions:</b> Low</p> <p><b>Renewable:</b> Renewable</p> <p><b>Harmful waste:</b> Very little</p>
 <b>Solar</b>	<p><b>GHG emissions:</b> Low</p> <p><b>Renewable:</b> Renewable</p> <p><b>Harmful waste:</b> None</p>	 <b>Fusion</b>	<p><b>GHG emissions:</b> Very low</p> <p><b>Renewable:</b> Renewable</p> <p><b>Harmful waste:</b> Very little</p>



# MAIN ACTIVITY

Your part in the energy sector.

What skills and qualities do you have?





# Are you...

initiative finding

detail-oriented observant

determined optimistic

teammaker

fearless

approachable

lateral-thinking

supportive

creative

adaptable

enthusiastic

practical

dedicated

inventive

cooperative

friendly

communicative

collaborative

improving

resilient

specialist

curious

people-focused

problem-solving



# MAIN ACTIVITY

Your part in the energy sector.

- \* **Read through the cards entitled “What does a FUSIONeer do?”.**  
These people all have jobs linked to fusion – a promising energy source for the future.
- \* **Choose one profile in particular.**  
Try and find someone whose skills and personal qualities sound a bit like you.  
What skills do you have in common with the profile you picked?

