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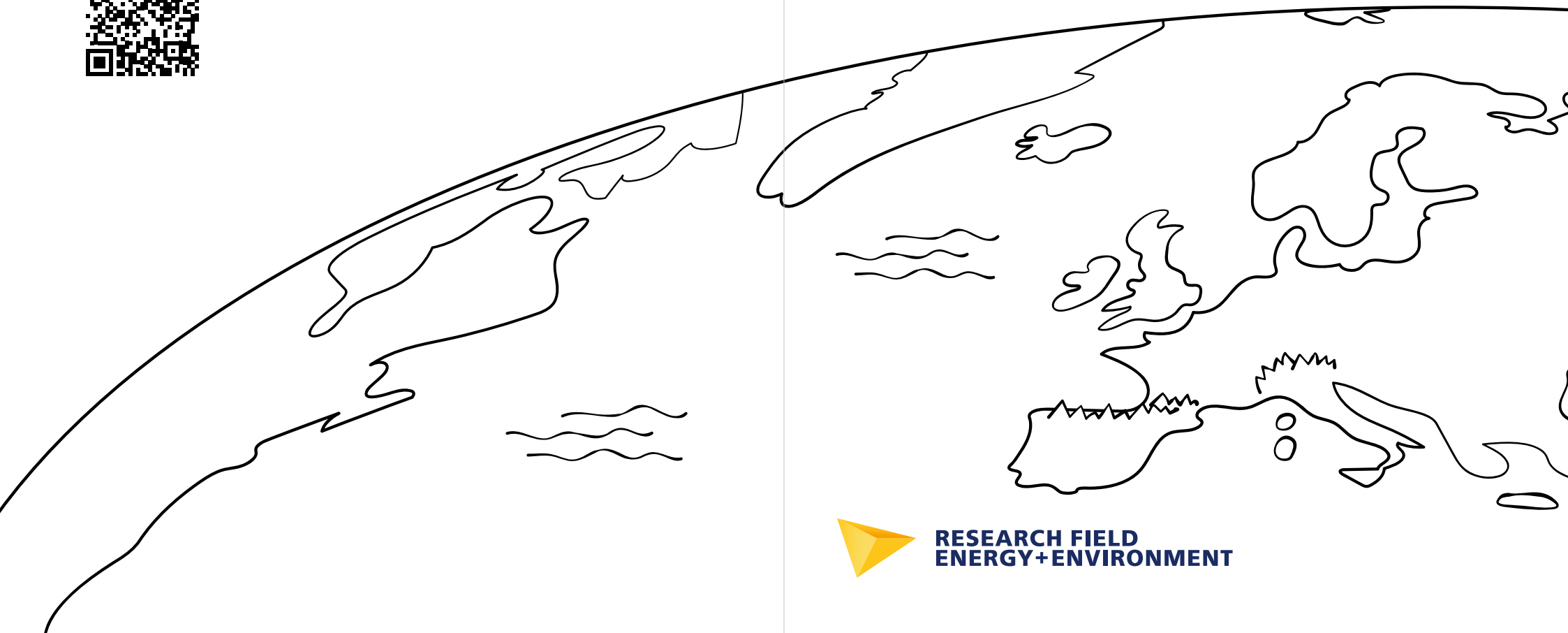


THINK. LINK. DO.



TECHNISCHE
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**A FUTURE CARBON-FREE CIRCULAR ENERGY ECONOMY
FOR COLORING**

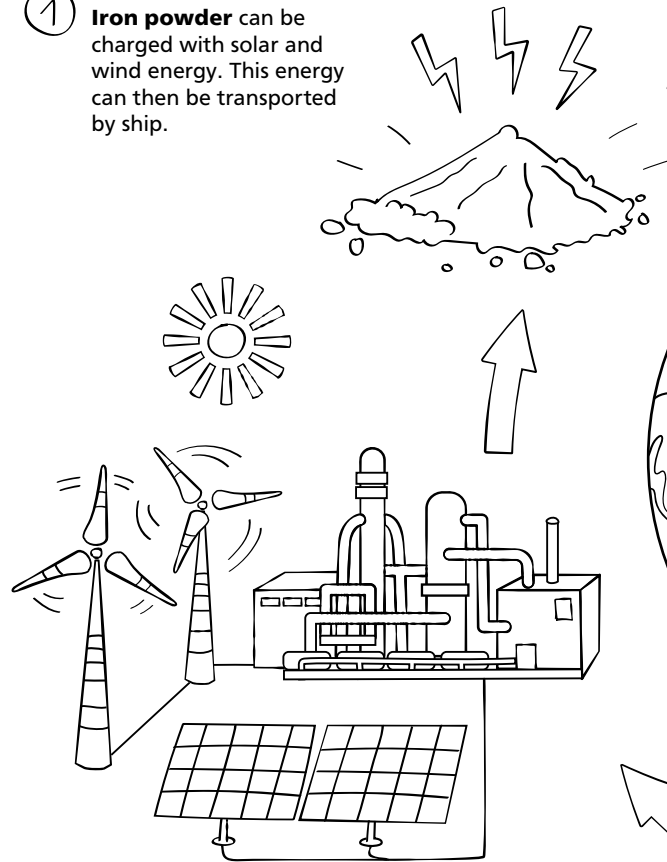


**RESEARCH FIELD
ENERGY+ENVIRONMENT**

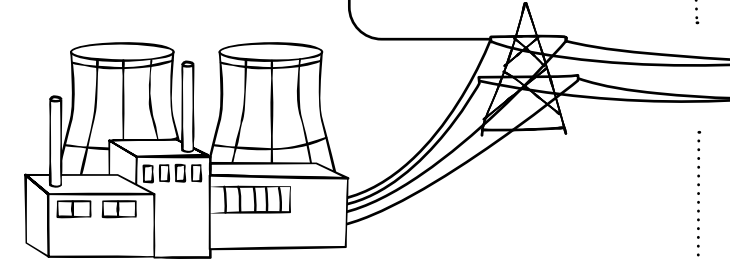
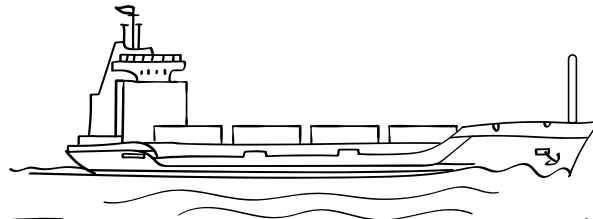
How to store our future energy in a sustainable way.

Solar and wind energy are not always available when and where they are needed. Therefore, this energy must be collected (stored) for later use. Iron is a metal that is particularly well-suited for storing large amounts of energy. It acts like a battery that can store (charge) and release (discharge) energy on demand.

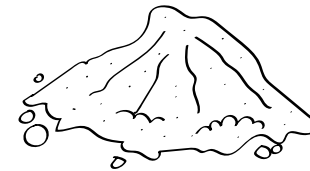
① **Iron powder** can be charged with solar and wind energy. This energy can then be transported by ship.



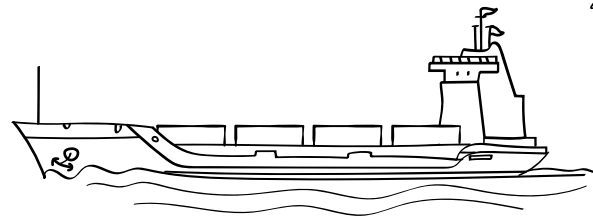
⑤ The **iron oxide powder** is then converted back into **iron powder** using solar and wind power effectively storing the renewable energy.



② In old coal-fired power stations, it is **iron powder** that is burned instead of coal. The energy stored in the powder will be released and can be used for electricity and heat.



③ The energy is released by burning the iron powder, which turns into red **iron oxides**. This is similar to rust.



④ This **iron oxide powder** will be well packed and transported by ship back to places where there is plenty of sun and wind.

