

Batteries vs oil

Lifetime material consumption: electric vehicle battery vs petrol fuel burned

Battery electric vehicle: 160 kg of battery cell materials*
(30 kg of battery cell materials after recovery)

Petrol car: 17,000L burned



*Includes Lithium, Cobalt, Nickel, Manganese, Graphite, Aluminium, Copper
Source: T&E in-house calculations

Assumptions: vehicle efficiency and mileage are based on T&E EV/CA. You drive an electric car! Average 80% battery based on CES Online and BNEF.

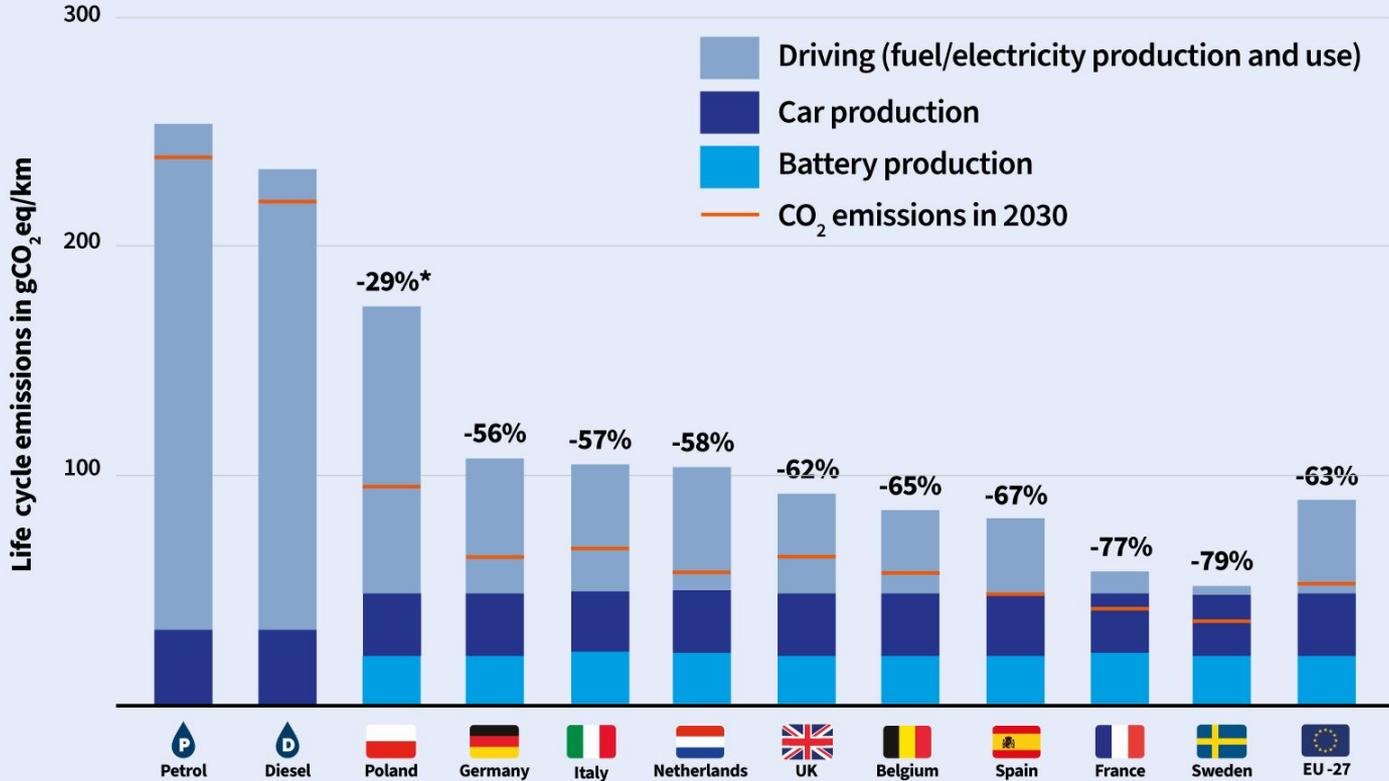


Are electric cars really better than petrols?





Today petrol and diesel cars emit almost 3 times more CO₂ than the average EU electric car



Scenario where average EU electricity is used to produce the batteries and the cars

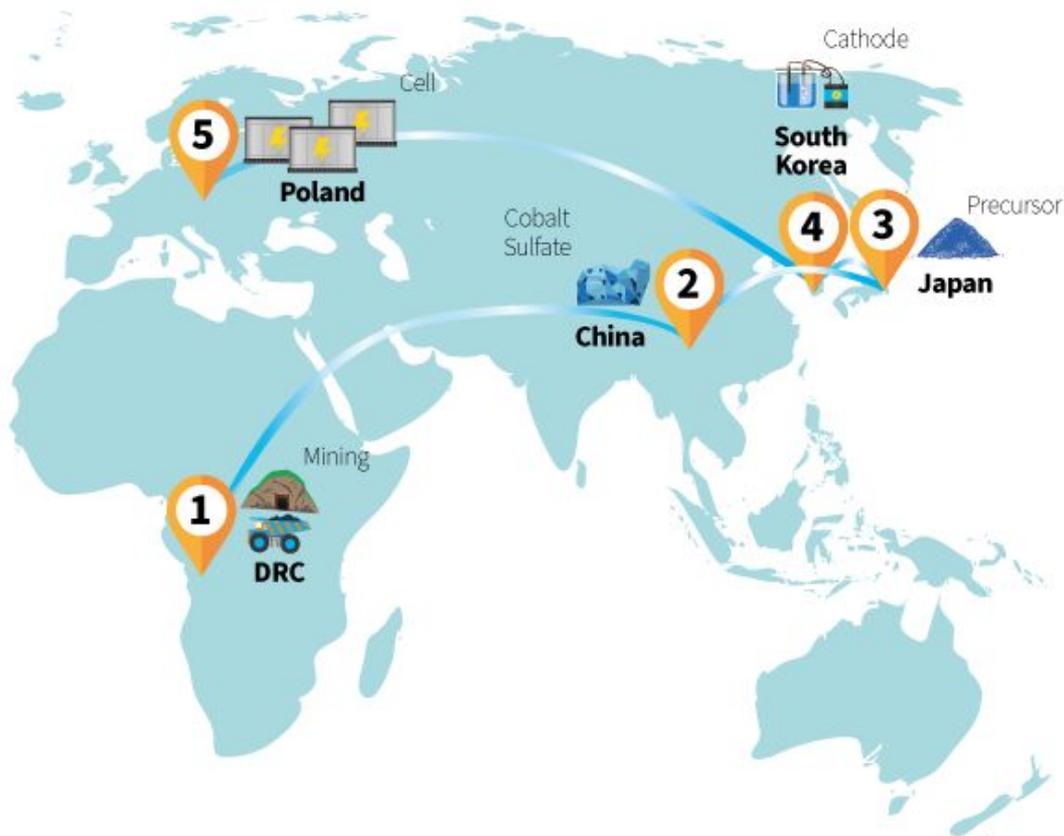


What about metals & mining?

Sample route, Renault



RENAULT



What can Europe do?

Sustainable batteries



**Responsible
sourcing
of materials**

**Sustainable
manufacturing
& circular design**

**Repair,
reuse
& recycle**





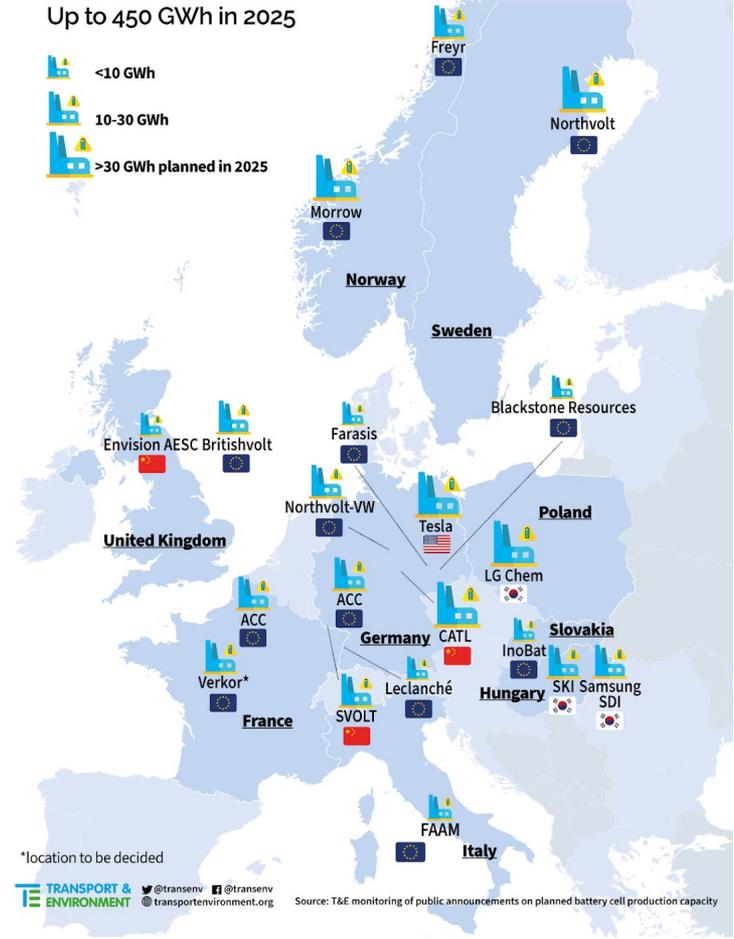
Won't batteries come from China anyway?



Battery production plans in Europe: 20 gigafactories planned

Up to 450 GWh in 2025

-  <10 GWh
-  10-30 GWh
-  >30 GWh planned in 2025



*location to be decided