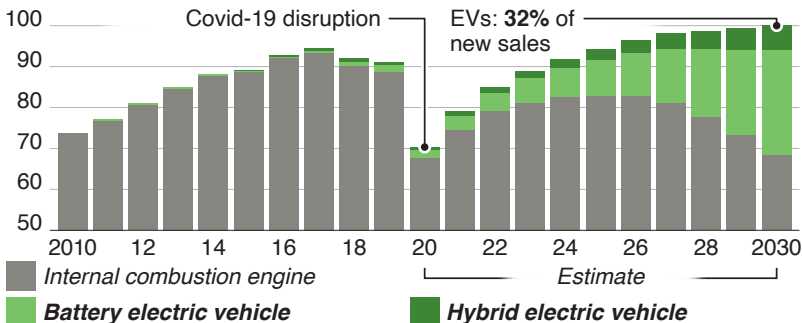


# Electric vehicle sales set to soar

Global sales of electric vehicles (EVs), estimated at 2.5m units in 2020, are forecast to grow to 31.1m by 2030, around a third of all new vehicle sales. But skilled labour shortages may hamper progress

## FORECAST GLOBAL CAR AND LIGHT-DUTY VEHICLE SALES (million units)



**Battery makers racing to keep pace with shift to EVs, but development hampered by shortage of research and engineering specialists**

## WHY SOLID-STATE BATTERIES MATTER

### PRESENT Lithium-ion battery (Li-ion)

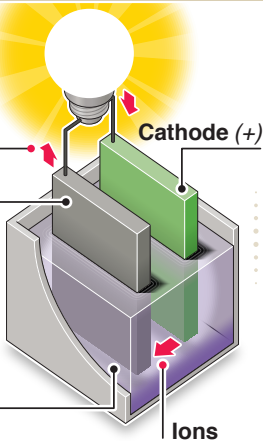
**Electrons**

**Anode (-)**

**Cathode (+)**



**Liquid or gel electrolyte:**  
Highly flammable

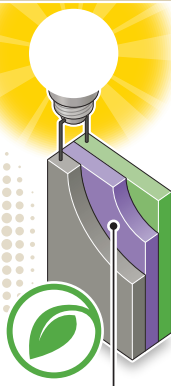


### FUTURE

**Solid-state battery:**  
More powerful than Li-ion

**Battery:**

Charged **ions** travel from **cathode** to **anode** through **electrolyte**. Free **electrons** pass from anode to cathode, powering device



**Solid electrolyte:** Smaller and lighter than liquid or gel. Sodium-based – less harmful to environment and less likely to catch fire

**EV with solid-state battery:** Range of **500km** per charge (*more than double Li-ion fuel cell*), and fully rechargeable in **10 minutes**. Can power EV for **380,000km** before degrading, and requires no cooling system