ELECTRIC VEHICLES and the 3 BIG PROBLEMS INDUSTRY STILL FACES TODAY

To improve energy efficiency and performance, it's important that car manufacturers choose the right electrical components.

54%

of new car sales will be EVs by

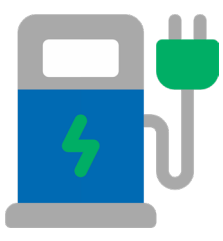
2040

190km

is the average range for a new EV

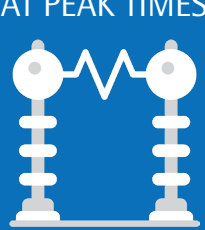
14,000

charging points exist across the UK, but more are needed

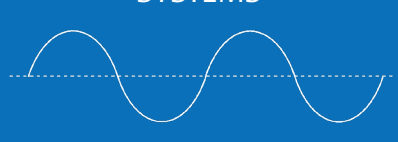


1. CHARGING INFRASTRUCTURE

MORE CHARGING POINTS MEANS HIGHER LOADING ON THE GRID, ESPECIALLY AT PEAK TIMES

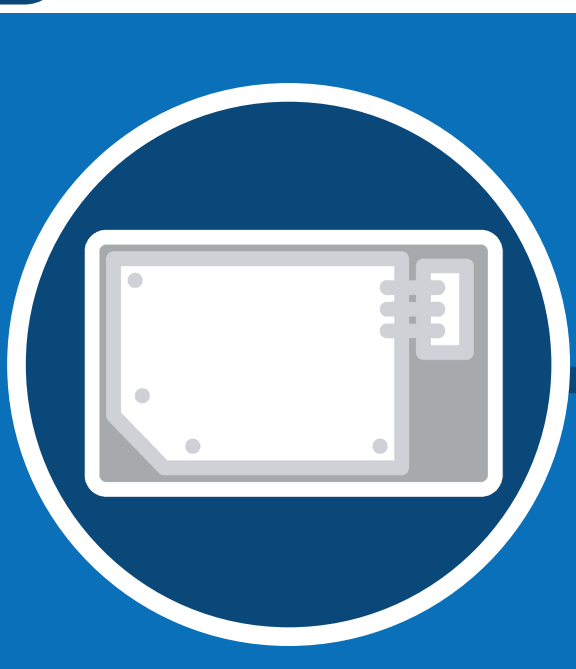


TO SOLVE THIS, POWER GRIDS WILL NEED BETTER FREQUENCY CONTROL SYSTEMS



POWER LINE FILTERS REDUCE ELECTRICAL NOISE CAUSED BY AC TO DC CONVERSION FOR CHARGING

2. BATTERY TECHNOLOGY

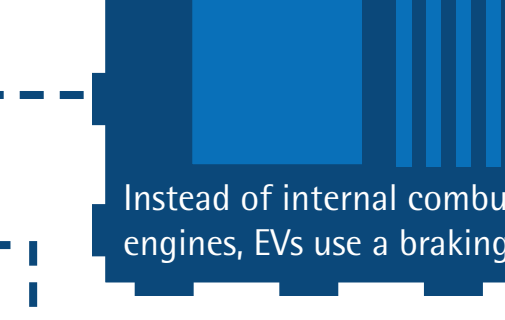


Much like charging points, EV batteries use electrical components to convert the current from the stored DC to functional AC power.

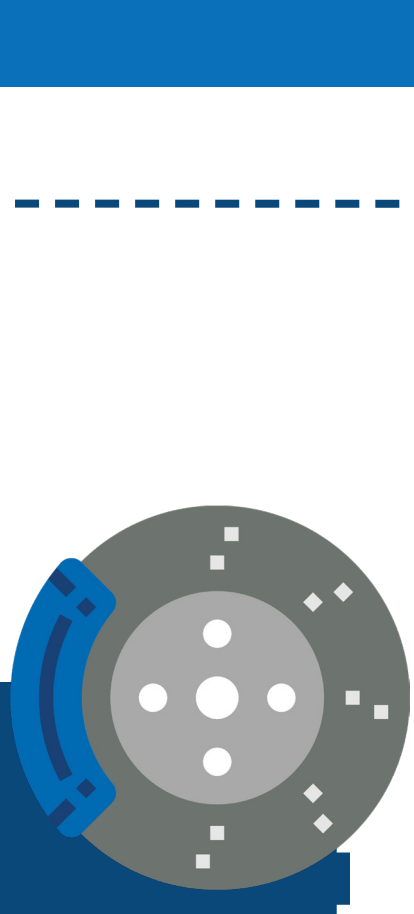
In a well optimised system, such as for Formula E vehicles, this can all be condensed into one electric motor system.

3. BRAKING RESISTORS

1. Instead of internal combustion engines, EVs use a braking chopper.



2. This converts the energy generated by high speed braking on the motorway.



3. Integrating a water-cooled braking resistor such as the REOHM D330 allows the braking energy to be dissipated as waste heat, recovered to heat the cabin in cold weather, or regenerated to increase range.

REO

Are you a design engineer, electrical engineer or automotive manufacturer working on an EV? Find out how REO UK can help you by visiting www.reo.co.uk.

WE'VE ALSO GOT A GREAT WHITEPAPER ON THE EV MARKET, DOWNLOAD IT FOR FREE HERE.