



Electric vehicles – pros and cons

PRO: ELECTRIC VEHICLES ARE ENERGY EFFICIENT

Energy efficiency refers to the amount of energy from the fuel source that is converted into actual energy for powering the wheels of a vehicle. Electric vehicles are far more efficient than gas-powered vehicles: electric vehicle batteries convert 59 to 62 percent of energy into vehicle movement while gas-powered vehicles convert between 17 and 21 percent. This means that charging an electric vehicle battery puts more energy towards actually powering the vehicle than filling up at a petrol station.

PRO: ELECTRIC VEHICLES REDUCE EMISSIONS

Emission reduction, including reduced usage of fuel, is another pro for electric vehicles. Because they rely on a rechargeable battery, driving an electric vehicle does not create any exhaust emissions, which are a major source of pollution. In addition, the rechargeable battery means much less money spent on fuel, meaning energy can be sourced domestically.

It costs less than half as much to travel the same distance in an electric vehicle than a conventional vehicle.

PRO: ELECTRIC VEHICLES ARE HIGH PERFORMANCE AND LOW MAINTENANCE

Electric vehicles are also high-performance vehicles; the engines are not only quiet and smooth but require less maintenance than internal combustion engines. Electric vehicles are overall newer than their gas-powered counterparts and are often more advanced in terms of technology.

CON: ELECTRIC VEHICLES TRAVEL LESS DISTANCE

Electric vehicles have a shorter range than gas-powered vehicles on a fully charged battery, compared to a gas-powered full tank of fuel. This may be an issue when looking at electric vehicles if you frequently take long journeys, as the availability of charging stations needs to be taken into account.

CON: ELECTRIC VEHICLES TAKE LONGER TO REFUEL/RECHARGE

Fuelling an all-electric vehicle can also be an issue. Fully recharging a battery can take up to 8 hours. Therefore, electric vehicle owners have to plan much more carefully, because running out of power cannot be solved by a quick stop at the fuel station.

CON: ELECTRIC VEHICLES AND BATTERIES ARE EXPENSIVE

The battery packs within an electric vehicle are expensive and may need to be replaced more than once over the lifetime of the vehicle. Electric vehicles are also generally more expensive to buy than gas-powered vehicles. However, the fuel cost and maintenance savings can help to offset this cost overall.

PROS AND CONS OF PLUG-IN HYBRID ELECTRIC VEHICLES

Many of the same benefits of all-electric vehicles also apply to plug-in hybrid electric vehicles. PHEVs are great vehicles for reducing emissions and reducing fuel usage. For short trips, your PHEV may not need to switch away from its all electric motor, in which case the car emits no exhaust emissions. Even more, PHEVs use 30 to 60 percent less fuel than conventional gas-powered vehicles. If the electricity is sourced from renewable resources, the amount of greenhouse gas emissions can be reduced even further.

PHEVs also make great vehicles for those who cannot commit to a fully electric vehicle because of driving and recharging needs. While AEVs are limited to their battery range, the fuel backup in a plug-in hybrid means that when the battery runs out the vehicle can continue to run and even recharge the battery by using fuel. PHEVs usually have a better fuel economy than their conventional gas-powered counterparts.

Much like an AEV, one of the hurdles to owning a PHEV is the amount of time it takes to recharge the battery. While PHEV batteries are smaller on average than those found in AEVs, a charger may still take several hours.

Another factor to consider is cost: like AEVs, PHEVs have a higher price tag than many gas-powered vehicles. There are fuel and maintenance savings, plus as the availability of these vehicles become more mainstream, the cost of purchase will likely come down.