

# WHY EVs ?

## Driving

Quiet, smooth, reliable, more fun, less fatigue on long trips  
About half the cost to run and maintain compared to internal combustion engine (ICE) vehicle

## Environment

Essential to meet greenhouse gas emission targets  
Power from your rooftop solar for near zero emissions

## Health

Zero noxious tailpipe emissions (no NOx, soot, hydrocarbons)  
Transport health costs in Australia (\$1.5-\$4 billion per annum)

## Economy

Run on locally produced energy, not imported oil  
Improve fuel security  
As cheap as ICEs by about 2025, eventually cheaper

## Support grid, renewables

Charge when cheap renewables are available or with off peak power to make better use of the grid and cut costs  
Two way charging will provide 'battery on wheels' and can shift day time solar to evening peak electricity demand  
EVs can improve grid performance, reduce electricity cost



# WHEN WILL EVs BE WIDESPREAD ?

Six factors affect when EVs will be widespread.

Here is how we are doing... ✓✓✓ means we're there!

## Familiarity



Awareness, accepted as proven technology, ease of use  
Building quickly: 50% said they would consider an EV for their next car in a recent survey

## Adequate range



Minimum 250 km range  
Most new models from 2019 have this  
Long term likely around 400-500 km will be 'normal'

## Variety of models



Hundreds of models overseas; about 35 in Australia  
Oz models at: <https://aeva.asn.au/battery-electric-vehicle-models-bevs/>  
Few/none in some categories (utes, towing, vans, trucks)

## Cost competitive



Whole of life cost now for some heavily used vehicles:  
fuel savings repay extra capital cost  
Purchase cost expected to equal ICE vehicles by about 2025

## Charging infrastructure



Tasmania nearly completely covered by fast chargers (2021)  
Other states/territories: main population areas covered  
Mainland outback / regional areas not well served

## Used cars



Over 80% of buyers buy used cars—mostly ex fleet  
Used car market limited until fleets adopt EVs  
Companies are now importing used EVs from overseas

