Electric bicycles - e-Bikes - EPACs

An e-bike is a bicycle with an electric motor that assists the rider when pedalling. It has the same basic features as a regular push bike, with the added bonus of electric assistance when the rider chooses to use it.
E-bikes support people to ride over longer distances, carrying children and other loads, and attract people who might otherwise not consider cycling for their trips to local shops, schools or work.

Electric bikes have been on the roads for years. But they haven't taken off in Australia to the extent that they have in Europe.

E-bikes represent the largest, most rapid uptake of alternative fuelled vehicles in the history of motorisation[1].

Australia's harmonisation of e-bike regulations in 2017, adopting the European Pedelec standard EN15194, coupled with growing market interest, has resulted in a flourishing Australian e-bike sector[2]. E-bike:

- sales have increased by approximately 500% in Australia since 2017 but are limited due to the worldwide demand[3].
- sales in 2019-20 were 48,000 units and have nearly doubled each year since 2017[4].
- lower common barriers to cycling, including overcoming topographical challenges, physical limitations of rider and arriving at work without perspiring[5].
- riders on average receive about 75%-80% of the health benefits compared to non e-assisted riders over the same trip, but receive more benefits overall as they tend to ride more often and further[6].

E-bike riders ride more frequently than conventional bike users and each trip is significantly longer than conventional bike journeys. E-bike users also report replacing car trips more often, helping to reduce congestion, emissions, parking pressure and other negative impacts associated with car use[7]. E-bike ownership reduces car use to an even greater extent than regular bicycles.[8]

E-BIKES AS WORKHORSES - AusPost Case Study

E-bikes roll out of Post Offices across Australia's cities and towns every day. The fleet of 2,500 e-bikes make more than 2.5 million deliveries every day, stopping and starting up to 1,500 times each. Each bike averages 10,000km per year with zero serious accidents or deaths in the last decade.[9] With almost 200kg load capacity, it exceeds the (motor) 'Postie bike's capacity by 50kg!

E-bikes make riders feel safer - Not only do riders feel safer riding an e-bike than they do riding a pedal bike, the percentage of people who feel safer on an e-bike is even greater when they are women, over 55, or have physical limitations. Riders also feel more confident they will finish a journey so are willing to start it![10]

TYPES OF ELECTRIC BIKES
E-bikes fall under one of two categories, pedelec (power assisted pedal bicycle) and power on demand (throttle based).

EPAC: Electric Power Asisted Cycle assist only when pedalling. Max power 250 watts, max assisted speed 25km/h. Most often city bikes, mountain bikes and cargo bikes.[11]

POWER ON DEMAND: Power on demand or throttle based electric bikes can be used while pedalling or throttle only. Max power 200 watts, max assisted speed is not limited. Very important for disabled/accessible bicycles.[12]

We Ride! AUSTRALIA

Electric bicycles - e-Bikes - EPACs

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