

## **Inquiry into e-mobility safety and use in Queensland**

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## **Addressing the Growing Use of E-Bikes and E-Scooters in Our Community**

The use of e-bikes and e-scooters is becoming increasingly common in our community, and with that shift, we believe it's essential to evolve with the times.

E-bikes and e-scooters offer significant benefits particularly on the Gold Coast, where our hilly landscape makes them practical alternatives to traditional bikes. They promote a healthy lifestyle; help reduce road congestion and are environmentally friendly. While the majority of users are responsible and law-abiding, a small minority continue to misuse these vehicles, leading to safety concerns and a growing need for regulation.

We propose the following considerations to help ensure the safe and responsible use of all bicycles, including e-bikes:

### **1. Mandatory Registration for All Bicycles (Not Just Electric including offroad) with bike VIN's**

- Helps reduce theft.
- Encourages accountability for injuries or damages caused by riders.
- Ensures riders understand and accept responsibility for safe usage.

### **2. Age-Based Restrictions Similar to Motorbike Licensing**

- Ensures riders have the maturity and knowledge to safely operate high-powered e-bikes.
- Prevents young or inexperienced riders from using vehicles that exceed their capability

For example, under 18's can operate bikes maximum 250 watt (hub driven). Bikes above 250 watts can only be operated by persons over 18 years of age (hub). Mid motor e-bikes equipped with Bosch were a direct torque and wheel sensor have a greater control of the wattage which would mean that even though they are considered 250 watts on flat ground, on a hill they can ramp up in torque as these motors theoretically have a 600-watt output. This however does not make them comparable to a hub driven e-bike as the direct torque sensor only multiplies the effort input via a mathematical ratio. Bikes like these are what my son used as he had a muscle tone deficiency and was able to keep up with the family on rides.

Riders under the age of 18 should be limited to operating e-bikes with a maximum output of 250 watts when using hub-drive motors. E-bikes with motors exceeding 250 watts should only be operated by individuals over 18 years of age.

It's important to distinguish between hub-drive motors and mid-drive motors. For instance, many mid-drive e-bikes, such as those equipped with Bosch systems, use direct torque and wheel sensors that regulate power based on rider input. While these bikes are technically rated at 250 watts on flat terrain, they can produce higher torque up to around 600 watts when climbing hills. However, this increased output does not make them

equivalent to more powerful hub-driven e-bikes, as the power is proportionally amplified based on the rider's effort rather than delivered directly by the motor.

These types of bikes can be especially beneficial for individuals with physical challenges. My son, for example, had a muscle tone deficiency and used a mid-drive e-bike, which allowed him to enjoy family rides and keep pace with the rest of us. This highlights the importance of thoughtful regulations that account for both safety and accessibility.

### **3. Education and Safety Campaigns**

- Raise awareness about safe riding practices.
- Teach both riders and drivers how to safely share roads and paths.
- Emphasize the importance of helmets, proper lighting, and reflective gear.
- Provide clear guidance on legal obligations and available protections.

### **Our Personal Story**

Our family consists of both mountain and commuter e-bike users. Most weekends were spent riding together on trails, beachside paths, and designated bike lanes. We always wore helmets, appropriate safety gear and carried sufficient lighting and first aid kits.

Our lives changed forever during one of these outings. On the way home, my husband and youngest son riding together on a commuter e-bike were struck by a car. The driver was allegedly excessively intoxicated, under the influence of drugs and speeding. Tragically, our son was killed and my husband sustained severe injuries.

This heartbreaking event was not caused due to the e-bikes, but by an irresponsible driver. Yet incidents like these continue to affect innocent families across our community. At the same time, we also see young people riding dangerously riding the wrong way on roads, doing tricks in traffic, not wearing helmets, or carrying passengers who are unprotected. E-bikes have even been spotted on freeways, which is clearly unsafe and illegal.

### **Moving Forward**

To reduce these risks, mandatory registration can serve as a valuable tool for parents, giving them greater oversight of their children's actions. Many e-bikes are as powerful as motorbikes, yet are sold without comparable regulations or training requirements.

Parents must also be held accountable. They are often the ones purchasing these vehicles and should be responsible for paying registration or covering any damages or injuries caused by their children while using them. Educate their child of safe ride practices e.g. Helmets, being visible, and not relying on other road users for their safety.

To be clear, we know the majority of users both adults and children are doing the right thing. But the actions of a few are damaging the reputation of responsible families who simply want to enjoy the outdoors or commute cost-effectively and sustainably.

Decision-makers must consider these measures and support the integration of e-bikes and e-scooters into our transport system to help create safer roads and foster a more respectful, informed riding culture in our community.