

Cycle Ontario Alliance Policy: Power-Assisted Bicycles

Approved 2004 December 3 by the Cycle Ontario Alliance Board of Directors

Position and Rationale

Velo Ontario Cycling Alliance supports the legal use of Power-assisted Bicycles as defined by Transport Canada on Ontario roads, in the same manner as existing bicycles are now allowed.

(Reference: Canada Gazette Part II, Vol. 135, No. 8, 2001-04-11. "Regulations Amending the Motor Vehicle Safety Regulations (Power-assisted Bicycles)", P.C. 2001-483, 29 March 2001 (<http://canadagazette.gc.ca/partII/tempPdf/g2-13508.pdf>))

Transport Canada's class of Power-assisted Bicycles is intended to have very similar performance characteristics as standard human-powered bicycles (e.g. typical top speed of 32 km/h), and similar handling characteristics.

The use of power assist can make cycling more practical where it would otherwise be overly challenging by human power alone, including ascending long or steep inclines, moving into strong headwinds, encountering frequent stop signs, or commuting for long distances. These are all conditions encountered by cyclists throughout Ontario. Given the limitations of even the most advanced current battery systems, and that many people desire to ride bicycles for the exercise-related health benefits, human power will continue to be an important motive power for bicycles, including power-assisted bicycles. With power-assist available to them, more Ontario residents may chose a bicycle, and may cycle more often for transportation.

Velo Ontario Cycling Alliance recommends that the Ontario government amend the Highway Traffic Act (HTA) and related regulations to permit the legal use of this Transport-Canada defined class of vehicles.

Operators should have the same rights and responsibilities when operating power-assisted bicycles as those that are strictly powered by human power.

It is also noted that consistency with other jurisdictions in Canada is important because manufacturers will not develop a vehicle for use only in Ontario. Seven jurisdictions in Canada now allow the use of power assisted bicycles (including Ontario's neighbours, Manitoba and Quebec) with regulations similar to the treatment of bicycles.

Specific positions on possible regulatory issues are listed below.

Definition

Velo Ontario Cycling Alliance generally agrees with the Transport Canada, Federal Motor Vehicle Safety Act definition of a power-assisted bicycle, which has been researched and user tested, and is designed to be similar to the operating characteristics of a human powered cycle. If The Province of Ontario specifically references the Transport Canada vehicle class, then legislation and regulations may not need to be updated if the Transport Canada definition changes, saving future time and effort.

Hand cranks - Consideration should be given to identifying hand cranks, as well as pedals in (a) above to allow power-assisted cycles to be extended to those with physical limitations. Hand cranks are included in the British Columbia definition of power-assisted bicycles.

Provincial Legislation/Rules of the Road/Enforcement

Consistent with Human Powered Cycles

Jurisdictional regulations for power assisted cycles should be as consistent as possible with regulations for bicycles and tricycles. For example, lighting requirements, reflectors and the rules of the road, and traffic offences and penalties should be the same as for non-motorized cycles. As a power-assisted bicycle is similar to a human-power-only bicycle, there is little justification for inconsistency.

Operator Requirements

a) Age - An age limit for an operator to start use of a power-assisted cycle should be set at 14 or 16 years. Power-assisted bicycles are generally heavier and require additional physical strength to safely manage. CCMTA recommends a limit of 14 years while MTO proposes and 4 other provinces use a minimum age of 16 years.

b) Helmet - A certified and properly worn and fitted bicycle helmet offers some protection from head injuries to the operator of power-assisted cycle, as it does for the operator of a regular bicycle. The regulations should be the same for both.

It is essential to have consultation with the public and all interest groups prior to making any legislated or regulatory decision on mandatory helmet use. The decision-making process must take into account other factors such as the need for adequate education and skills training for all road users, enforcement resources, and marketing and regulatory reviews, that minimize the actual coinsurance of cycling crashes.

c) Testing, Licensing, Registration and Insurance - The operator of a power-assisted cycle, similar to the operator of a cycle, should not be required to hold a motor vehicle drivers' license, take a written test, obtain a vehicle registration or plate, nor have vehicle liability insurance. Proper education and cycling skills training in the operation of the bicycle as a vehicle driven in traffic should be stressed and promoted.

Equipment Standards

a) Motor - As noted in the definition, the motor of a power- assisted cycle must be an electric motor, with safety features. Small gas engines are noisy, polluting and smelly and do not enhance the cycling experience of those nearby.

b) Clutching or Gear Shifting - Gear shifting must be allowed by the operator after the motor assist system has been engaged. It is entirely reasonable for the operator of a power-assisted bicycle to change gears to establish the proper pedaling cadence or to gear down in advance of a stop in order to be able to restart safely, without wobbling. Furthermore, the use of an existing bicycle gearing and chain to transmit motor power can lead to the use of a lower power motor and lower cycle weight, both desirable features.

Wheels

c) Dimension Limits – There should be no limitations on the dimension of wheels on a motor assisted cycle (e.g. wheel size, tire width, wheel base). This would unduly prohibit innovation, and restrict retrofits of acceptable existing adult bicycles. It would also disallow some existing adult cycles that would benefit most from a power assist from having this feature (e.g. tandems, cargo bikes). A wheel size should not be used as a proxy for minimum required age of an operator to operate a power-assisted bicycle.

Weight

d) A maximum weight specification should not be included unless it clearly allows tricycles and cargo bicycles to be power-assisted. It should be remembered that this is a power *assisted* bicycle and the market will prefer lighter cycles, because the cycle will also be human-powered much of the time.

Brakes, lights, bell

e) A motor assisted cycle must be equipped with brakes, lights and a bell in exactly the same manner as required for a human powered cycle. Power-assisted bicycles are similar to regular bicycles; therefore, there is no reason for these safety requirements to differ, if the requirements for bicycles do not change. Equipment requirements for power-assisted bicycles in Ontario that differ from other jurisdictions could lead to commonly available equipment not being available in Ontario, or at a higher cost.

The sections of the HTA referring to bicycles need to be reviewed. For example, the current braking requirement for a bicycle in the HTA, although easily checked by a police officer, is largely meaningless in terms of actual stopping ability. We suggest that the braking requirement (and other sections) be updated as part of a future overall review of the HTA with respect to poorly worded and outdated bicycle-related sections.

Securing of drive system and equipment and insulation of electric terminals

f) It is important that the motor drive system and all energy storage devices of a motor assisted cycle must be secured to prevent movement in any direction relative to the motor assisted cycle when the motor assisted cycle is operating. In addition,

all electrical terminals on a motor assisted cycle must be fully insulated or covered as conductors may carry large enough voltages or current to harm the operator or a person touching the bicycle.

Tampering

Modification to modify the characteristics of a motor assisted cycle within the constraints of the Transport Canada vehicle class should be allowed. The underlying premise of the Transport Canada class of vehicle is that it performs like a human-power-only cycle, thus can piggyback on existing legislation and regulation.

After-market kits

After-market motor kits to transform a cycle into a power assisted cycle should not be restricted, provided that they meet the requirements for power assisted cycles set out by Transport Canada. This allows innovative applications of power-assisted cycles and early adoption; the range of commercially available models is likely to be quite limited. The provincial regulations should not be onerous.

Manufacturer must issue warnings about appropriate and safe applications of the Kit.

Consumer awareness and safety education

These important items should be supported and encouraged, to provide basic safety information about power assisted cycles to their customers. As noted in the definition, jurisdictions should make any necessary regulations that require retailers to affix a label on power assisted cycles, or on a power assisted cycle kit. The province should provide additional resources to ensure that safe cycling education, promotion, and marketing is provided throughout the province, not only for power assisted cycles but all cycles.

Serial Numbers (Anti-Theft)

As part of consumer awareness initiatives, owners of electric bicycles may be advised to record the serial number or engrave an identifying set of characters (e.g. drivers license number) on their power assisted bicycle if a serial number is not apparent. Bike theft is a major problem and many owners cannot identify their bicycle in order to reclaim it when recovered.

Shared multi-use paths and sidewalks

Operation of power assisted cycles on shared multi-use paths and sidewalks should be regulated in the same way as human-powered cycles.

Post-implementation monitoring

MTO should monitor the safety of power-assisted bicycles following their legalization.

END