ECF Position on Review of the Motor Vehicle Insurance Directive

European Cyclists' Federation

Ceri Woolsgrove, Policy Officer **c.woolsgrove@ecf.com** 13/10/2017

ECF gratefully acknowledges financial support from the European Commission.

Main Points

Within the upcoming review of the Motor Vehicle Insurance Directive (MID) within the Refit Programme the European Commission should exclude Electrically Power Assisted Cycles (EPACs also known as pedelecs) from the Directive, because;

EPACs are not motorised vehicles.

- They are electrically assisted bicycles that give a modest boost to cyclists up hills or into winds
- They are assisted without constant power; no pedal no power.
- The maximum speed and power is that of a fit, regular cyclist
- Type Approval Regulation and Driving Licenses Directive specifically recognise this distinction

Inclusion would act as a barrier to Electrically Power Assisted Cycles

- There is evidence that overly oppressive regulation has seen a decline in EPAC and bicycle use
- The potential health, environmental, and social benefits of shifting medium distance car journeys to EPACs is huge and should be investigated within the Commission Impact Assessment

EPACs are not an overly risky mode of transport

- EPACs and bicycles have a completely different third party liability risk than motor vehicles

Inclusion will increase administrative burden

- Inclusion of EPACs could cause burdens on regulatory authorities, confusion amongst millions of riders, and a patchwork of regulations and rules across the EU; contrary to the Refit Programme
- Most EPACs are already currently insured under personal, home, or travel insurance. Inclusion could criminalise all those who are currently covered
- Inclusion of EPACs would question the context of 'strict liability' legislation in Member States and exclude EPAC riders (like pedestrians and cyclists) from compensation with no (or less) requirement to prove fault
- Relying on Member States to use Article 5 of the Directive to exempt certain vehicles from the Directive could leave a patch work of legislation and uncertainty for users across the EU

ECF Recommendations

ECF recommends a list of vehicles to be excluded from the scope to include EPACs or the following changes to be made in the definition of a 'motor vehicle' in the Directive text

"...any motor vehicle intended for travel on ~~land~~ ***public roads*** and propelled ***solely*** by mechanical power ***or requiring EU type approval conformity*** but not running on rails, and any trailer whether or not coupled"

Executive summary

The Motor Vehicle Insurance Directive (MID) ensures that when a vehicle is insured for third party liability in one of the Member States, this cover must apply in the territory of all Member States. ECF very much supports this Directive as a way of ensuring cyclists that are seriously injured in crashes with motor vehicle will have reliable access to compensation from personal and material damages.

Following a recent decision by the European Courts there is uncertainty over how Member States should be interpreting the Motor Vehicle Insurance Directive. The European Commission will as a consequence be reviewing under the Refit Programme the legislation with a view to clarifying the directive. One of the possibilities is that the Commission will widen the definition of what a motor vehicle is which will include Electrically Power Assisted Cycles. Consequently this will mean that all European EPACs being used on European roads will be illegal unless they have acquired motor vehicle third party liability insurance.

ECF believes that this would be a gross error, that it is an over-regulatory burden on a growing and healthy, environmentally beneficial mode of transport that would create a barrier for users and increase administrative burden on public authorities. It could lead to a reduction in the number of EPAC users and act as a barrier to the continued growth of these bikes. The European Commissions has stated that there would be no environmental, social, nor health consequences if the scope were to be widened. We believe that this is erroneous and that the impact assessment necessary for the Refit Programme will have to review the impact that a barrier to EPAC growth would have.

Ultimately ECF would support an exclusion from the scope of non-type approved EPAC bicycles[1].

The costs to widening the scope to include EPACs

- Stop to the increasing shift of EPACs from motor vehicles on our roads
- Loss of health, environmental and social benefits due to a barrier to an active mode of transport
- Increased administrative burden for public authorities and users
- Continued confusion as to what vehicle is to be included in the Directive, a patchwork of national legislations, and inconsistencies with regards to EU motor vehicle legislation
- Less safe roads with more motor vehicle use and less bicycles

Benefits to widening the scope to include EPACs

- A negligible number of liability claims would be honoured that may otherwise not be honoured

[1] as stated in the Regulation (EU) No 168/2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles

Background

The Motor Vehicle Insurance Directive (MID) 2009/103/EC[2];

- obliges all motor vehicles in the EU to be covered by compulsory third party insurance
- specifies minimum third-party liability insurance cover in EU countries
- ensures that if a vehicle is insured for third party liability in one EU Member State the cover applies across the whole of the EU
- determines the scope of coverage by defining a "vehicle" and also outlining the scope of the cover by requiring that the vehicles be covered by third party liability insurance
- ensures that there is a fund for each country to pay victims of uninsured drivers

Therefore a vehicle that falls within the Directive is required to have mandatory third party insurance. Currently a "vehicle" falling within the MID is defined as;

> "...any motor vehicle intended for travel on land and propelled by mechanical power, but not running on rails, and any trailer, whether or not coupled;"

This has been interpreted by the Member States to mean all motor vehicles on the roads such as cars, vans, lorries, motorbikes, etc. However in 2014 following a court case brought by a Slovenian citizen, Mr Vnuk, the European Courts interpreted the definition of a motor vehicle to be covered by the legislation to include any motor vehicle that is consistent "with its normal function" would require compulsory insurance, on any piece of land[3]. This widens the scope of the Directive; with regards to place this would include all public and private space; with regards to the type of vehicle this would include all vehicles "*propelled by mechanical power*". This would then include, tractors working in fields, fairground rides, motor vehicle sports events, mobility scooters etc. and Electrically Power Assisted Cycles EPACs[4].

Due to confusion with the language of the Directive among Member States, and the unsustainability of the Directive to include every vehicle with a motor on all grounds, the European Commission will be reviewing the Directive under the Refit programme[5]. This programme aims to cut red tape, lessen administrative burden, drop unnecessary legislation, and simplify current policy, and this would be the intention of the review of the MID. There is currently a consultation process underway with a commission amending proposal estimated early 2018.

The options[6] of the Commission regarding vehicle scope (definition of which vehicle to include within the MID) have been put forward as;

1. Including all vehicles within the Vnuk ruling

---

[2] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L0103
[3] http://curia.europa.eu/juris/liste.jsf?num=C-162/13#
[4] It would be up to the Member States to implement the legislation and use the legislation (and any ECJ rulings) to define what vehicles are being referred to.
[5] https://ec.europa.eu/info/law/law-making-process/overview-law-making-process/evaluating-and-improving-existing-laws/reducing-burdens-and-simplifying-law/refit-making-eu-law-simpler-and-less-costly_en
[6] https://ec.europa.eu/info/law/better-regulation/initiative/39849/attachment/090166e5b3f48c10_cs

2. create an obligation for Member States to set up guarantee schemes to specifically cover purely agricultural, construction, industrial, motor sports or fairground activities if otherwise uninsured
3. amend the Directive to "limit the scope only to accidents caused by motor vehicles in the context of traffic (defined as where the use of a vehicle for the transport of persons or goods, whether stationary or in motion, in areas where the public has access in accordance with national law)"
4. A fourth option could be to exclude certain categories of vehicles entirely from the scope of the Directive

EPACs should be excluded from the scope of the Directive

For an organisation representing the users of EPAC bicycles the scope of the vehicle is the most important part of this review. ECF believes that EPACs under 250 Watts of power with an assisting motor that cuts out at 25 km/h as excluded from Motor Vehicle Type Approval[7] should be excluded from the Motor Vehicle Insurance Directive for the following reasons[8];

1. EPACs are not motorized vehicles

- EPACs are electrically assisted bicycles that give a modest boost to assist riders up hills or into winds
- An EPAC's electric motor assists the cyclist but will not work without pedalling; no pedal, no power
- The EPAC is designed to also be ridden without the motor assistance and so when the motor is off or battery drained the bike is literally a bicycle
- The maximum speed is 25 km/h before the motor cuts out, this is the speed of a well-trained, fit cyclist
- The maximum continuous power output is 250 Watt, this is the power output of a well-trained, fit cyclist
- Their technical regulations come through the bicycle working group TC333 in the standardisation bodies CEN, not through Type Approval[9],

EPACs have been classified as a bicycle in many other EU legislations;

- EPACs are not considered motor vehicles within the context of EU Type Approval[10] for Two and Three Wheel Motor Vehicles;

> "This Regulation does not apply to the following vehicles...
> ...pedal cycles with pedal assistance which are equipped with an auxiliary electric motor having a maximum continuous rated power of less than or equal to 250 W, where the output of the motor is cut off when the cyclist stops

[7] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013R0168
[8] Here we do not speak of the so-called 'speed EPACs' or any L-category vehicles which are type approved;
[9] https://standards.cen.eu/dyn/www/f?p=204:32:0::::FSP_ORG_ID,FSP_LANG_ID:6314,25&cs=15471628D918031F2386C2FFB70BED679
We do not include so-called 'speed EPACs' in this document
[10] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013R0168

> pedalling and is otherwise progressively reduced and finally cut off before the vehicle speed reaches 25 km/h."

The vehicle is called a pedal cycle and the rider a cyclist.

- EPACs are not considered motor vehicles within the context of the Driving Licenses Directive 2006/126/EC[11]

> "A 'power-driven vehicle' means any self-propelled vehicle running on a road under its own power, other than a rail-borne vehicle." (Italics added).

This therefore exclude all EPACs that are not self-propelled under its own power, they are assisted; no pedal, no power.

- EPACs are regulated and standardised within the European Standards Organisation (CEN) under working group TC333 which deals with bicycles, and has produced standard EN 15194[12]
- The German Council on Jurisdiction in Traffic stated "cycles with pedal assist and start assist or push assist functions up to 6 km/h should still qualify as bicycles, provided the motor output does not exceed 250 Watt."[13]

Almost all Member States[14] treat EPACs as bicycles with regards to use on the roads, they can use cycle infrastructure, they do not require mandatory helmet use (unless the bicycle requires it), they do not require license, compulsory insurance or number plate. With regards to the impact of the Directive on electric bicycles, we consider that Electrically Assisted Pedal Cycles where the motor does not work unless the rider pedals, do not fall within scope of the definition of a motor vehicle in the Directive as they are not propelled by mechanical power.

We would then prefer Option 4 to exclude certain vehicles, or Option 3 as long as the definition of the scope of the Directive satisfies this exclusion.

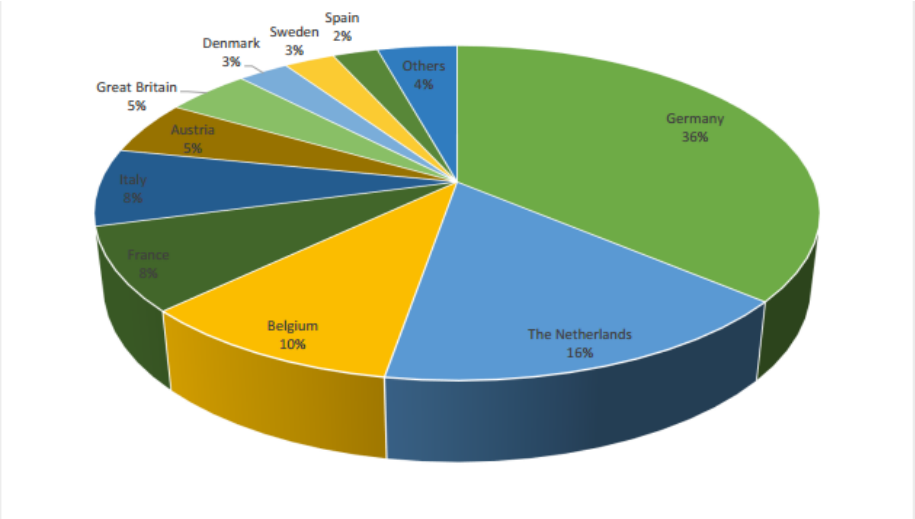
2. Inclusion would act as a barrier to Electrically Assisted Pedal Cycles

If these bicycles were within scope of the Directive we would be concerned that the additional cost and regulatory burden would damage the ambition of ECF and public authorities around the EU to make cycling, EPAC and walking natural choices for their health and environmental benefits. The Inception Impact Assessment from the Commission[15] states that there are no environmental or social consequences to the updating of this Directive. We believe this to be incorrect and if EPACs (or bicycles) were to be included within the Directive there would be environmental, health and social consequences, as well as the increased administrative burden on public authorities, insurers, policy holders and users of these bikes, which has not been considered. Creating a barrier to the continued use of EPACs would also have major consequences, socially, economically, and environmentally. EPACs bring many benefits and negligible costs, particularly when substituting car journeys that the European Commission impact assessment will have to take into account (see Annex on Benefits of EPACs).

---

[11] eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006L0126&from=EN
[12] https://standards.cen.eu/dyn/www/f?p=204:32:0::::FSP_ORG_ID,FSP_LANG_ID:6314,25&cs=15471628D918031F2386C2FFB70BED679
[13] https://www.munichre.com/topics-online/en/2012/02/e-bikes
[14] Two examples that we know of that do not include Malta and Northern Ireland, this is often due to not understanding the power and use of the bikes. See Section 4.
[15] https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-3714481_en

CONEBI (the Confederation of the European Bicycle Industry) claim that the average annual growth rate in the years 2013–2015 for EPAC sales stood at 16%[16]. At this continued rate about 12.3 million units will be sold in 2030 in the EU. This has a huge potential for substituting short, and middle distance, motor vehicle journeys[17]. It has been shown around the EU that around half of all car journeys are under 5 - 7 km[18]. These journeys are traditionally at the outer limit of bicycle/car substitution, however it is very easily within range of electric assisted bicycles. ECF estimate that there is a potential of generating about 103 billion extra km cycled on EPACs by 2030 through an increase in EPAC sales which would represent a 77% growth over current figures (134 billion km). Many public authorities around the EU are viewing the growth of these bicycles as a solution to many urban mobility issues (see Annex)



Country	Germany	The Netherlands	Belgium	France	Italy	Austria	Great Britain	Denmark	Sweden	Spain	Finland	Czech Republic	Poland	Lithuania	Ireland	Luxembourg	Portugal	Estonia	Greece	Hungary	Romania	Slovakia	Croatia	Latvia	Slovenia	Cyprus	Malta	Bulgaria	EU 28
EPAC Sales (x 1,000)	605	273	168	134	124	87	75	45	45	40	20	15	10	4	3	3	3	2	2	2	2	2	1	1	1	1	1	0	1 667
Country share (%)	36	16	10	8	7	5	5	3	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

2016 European EPAC Sales (EU 28)[19]

---

[16] Conebi European Bicycle Market 2017 edition http://www.conebi.eu/?wpdmdl=1717

[17] Marilyn Johnson, Geoff Rose, Extending life on the bike: Electric bike use by older Australians, Journal of Transport & Health, Volume 2, Issue 2, 2015, Pages 276-283, ISSN 2214-1405,
Tim Jones, Lucas Harms, Eva Heinen, Motives, perceptions and experiences of electric bicycle owners and implications for health, wellbeing and mobility, Journal of Transport Geography, Volume 53, 2016, Pages 41-49, ISSN 0966-6923

[18] Half of trips in Oslo are under 50 km Vågane, L., 2006. Bilhold og bilbruk i Norge. Rapport 856. Transportøkonomisk institutt, Oslo
In the UK around 56% of all car journeys are under 8 kilometres
https://www.gov.uk/government/statistics/transport-statistics-great-britain-2016
In Ireland around 75% are under 8 km http://www.cso.ie/en/releasesandpublications/ep/p-nts/nts2016/hwt/
Nantes 50% are under 5 km http://www.ec.europa.eu/environment/europeangreencapital/wp-content/uploads/2011/05/EGCNantesUKChap2-F.pdf

[19] Conebi European Bicycle Market 2017 edition http://www.conebi.eu/?wpdmdl=1717

We anticipate an EU EPAC stock of around 62 million bikes by 2030. Germany, The Netherlands, Austria and Belgium are leading the way in EPAC sales, with Germany the highest at 605.000 EPAC sales[20]. However the latest figures (2016 data) has seen a large jump in French and Italian sales taking off. Outside of these leaders there is almost a non-existent growth of EPACs, the UK, Denmark, Sweden, and Spain lead the next highest sales figures with 75.000 to 45.000, after this there are negligible numbers. So although there is strong growth in some Member States with commitment from their public authorities, all other Member States have seen little to no growth; overall the EU EPAC market remains one with great potential but with still fragile growth.

Motorised transport has little benefits in the field of health, environmental, or social benefits, the only economic benefits come in the form of manufacturing. When the negative externalities of car use are taken into account within social costs then the economic benefits of motor vehicle use are negated or exceeded. However, bicycles and EPACs have many benefits that must be considered if there are to be changes in how the EU wishes to raise the costs to owning an EPAC which in turn have the effect of acting as a barrier to EPAC use. (see Annex for list of health benefits)

Given the relative new arrival of these bikes there is very little data that provides evidence of EPAC reduction in numbers due to regulatory over burden, since public authorities have either welcomed these bikes and seen massive growth or have not seen any growth and are unaware of them. However, in Malta ECF members BAG conducted a bicycle count survey[21] and compared data from 2012 to 2015, in 2012/13 public authorities introduced more stringent regulations for the use of EPACs on the island, this included registration and compulsory insurance, EPACs use fell year on year (84% the first year and then 15% in 2015) even while bicycle use grew. Though figures are small in Malta this is still very instructive, especially as we have seen bicycle use grow there. Anecdotally, Northern Ireland has seen suspension of sales of EPACs[22] due to the strict regulation of EPACs that has been put in place there.

Though there is not a great deal of evidence for us to work with for these new electric bicycles, we do have experience of dealing with barriers to cycling and the effects on cycling numbers, and the difficulty in moving people from habitual car use over short distances to active transport modes. For example compulsory bicycle helmet legislation in Australia saw a major reduction in cycling numbers of 30-40%[23], this was mirrored in other countries[24]

---

[20] http://www.conebi.eu/?wpdmdl=1717
[21] documents available on request c.woolsgrove@ecf.com
[22] http://www.belfasttelegraph.co.uk/news/northern-ireland/halfords-suspends-sale-of-ebikes-in-northern-ireland-due-to-confusing-legislation-36011569.html
[23] http://www.cyclehelmets.org/1020.html#340
Cameron M, Heiman L, Neiger D, 1992. Evaluation of the Bicycle Helmet Wearing Law in Victoria During its First 12 Months. Monash University Accident Research Centre Report 32
Gillham C, Rissel C, 2012. Australian per capita cycling participation in 1985/6 and 2011. World Transport Policy & Practice 2012(May);18(3):5-10
[24] http://www.cyclehelmets.org/1103.html http://www.cyclehelmets.org/1032.html

3. EPACs are not an overly risky mode of transport

"One of the main factors contributing to the increase in global road crash injuries is the growing number of motor vehicles."[25] This will only be compounded by creating a barrier to active modes of transport like cycling and EPAC use. Shifting from motorised vehicles to bicycles and EPACs will lead to a reduction in third party injuries and fatalities. Any intervention (road safety or otherwise) that reduces the numbers of cyclist or EPAC use will almost always have a public health disbenefit due to the huge health benefits associated with everyday active travel[26].

Injury is broadly related to the amount of kinetic energy applied to the human frame, bicycle and EPACs very rarely achieve this requirement. Motorised vehicles need mandatory insurance regulation because they are responsible for the vast majority of fatalities and serious injuries on our roads. Heavy mass and high speeds and power ensure that crashes often involve serious injury or death for the victims. The vast majority of crashes resulting in fatalities and serious injuries involve a motorised vehicle. There are no EU wide data on EPAC crashes, personal damage and causal relationships. However EPAC rider crashes fatality figures themselves can provide us with an idea of how risky EPACs when compared with other modes, such as non-assisted regular bicycles. According to SWOV[27];

> "According to police registration, in 2014 there were 15 fatalities among cyclists on an EPAC or speed-EPAC, and 118 fatalities among cyclists on a regular, non-powered bicycle. Statistics Netherlands data indicates that in 2014 12% of the total bicycle distance was travelled on a EPAC. At an equal crash rate we would have expected 16 fatalities among EPAC riders in 2014; the number was 15. Proportionately, therefore, in 2014 the number of fatalities among EPAC riders was not higher than the number of fatalities on regular bicycles."

According to Dutch data then EPACs would not seem to be an overly dangerous vehicle in and of themselves[28] (remember this data is not for third party crashes though). Moving to Germany and risks of EPAC riders to themselves the UDV German Insurers Accident Research compiled research on the dangers and risks of EPACs[29]. They concluded that the risks and dangers with regards to road safety for these vehicles was low and equivalent to bicycles.

With regards to third party crash data, there is also data from DESTATIS on the impacts of EPAC and motor vehicle crashes on pedestrian injuries and fatalities. Lacking EU wide data Germany is an excellent substitute to see what might happen within the EU over the next 20 years or so. Germany has the highest number of EPACS on the roads, good road safety, and a mix of transport modes. The table below[30] is as near to a comparison of the different modes of transport that we can calculate. Ideally to calculate the risk between the different modes we would require distance or time travelled exposure data, unfortunately

---

[25] http://www.who.int/violence_injury_prevention/road_traffic/activities/roadsafety_training_manual_unit_2.pdf
[26] De Jong, Piet, the Health Impact of Mandatory Bicycle Helmet Laws (February 24, 2010). Risk Analysis, 2012. Available at SSRN: https://ssrn.com/abstract=1368064 or http://dx.doi.org/10.2139/ssrn.1368064
[27] https://www.swov.nl/en/facts-figures/factsheet/EPACs-and-speed-EPACs
[28] However it should be noted that SWOV had a very different opinion of the faster type approved 'speed pedelecs'. These faster vehicles are classified as motor vehicles, and have higher risk and we would agree with this assessment
[29] http://udv.de/en/publications/compact-accident-research/traffic-safety-electric-bicycles-naturalistic-cycling-study?qt-socialtabs=3
[30] Data from DESTATIS. All data available from ECF on request

we do not have this for all the modes of transport[31]. We do have an estimate of the number of vehicles available in Germany[32]. We also have to bear in mind that not all bikes/vehicles will be in use, however with prices of EPACs starting at around 1,500 € and up to 6,000 € there is an incentive for continued use. The table also does not include crashes with bicyclists or other EPAC users.

Accidents involving two parties in Germany in 2016, of which:					
Principal party	**Other party**	**Pedestrian Killed**	**Pedestrian Seriously Injured**	**Estimated vehicle population**	**Pedestrian risk per vehicle[33]**
EPAC	Pedestrian	0	11	3.000.000	1/272.727
Motor car	Pedestrian	483	7.163	44.000.000	1/5.754

The results from this non-rigorous, but still useful calculation, is that a motor vehicle is 47 times "riskier" than an EPAC to illicit possible serious damage payments[34]. This underlines the reason why motor vehicles are treated differently from non-motorised modes.

Finally, if there were to be a compulsory administrative burden on EPAC users and a reduction in the number of riders of EPACs (or bicycles) there is evidence that this could even lead to an increased risk for those riders remaining. There is a well-known inverse relationship between cycling risk for each individual rider and the numbers of cyclists in general on the road[35]. This 'Safety in Numbers' phenomenon is a well-documented phenomenon[36], an increase in cycling numbers will mean a decrease in the risk to each individual cyclist. If there is a reduction in the number of EPAC users (or bicycle riders) it can be expected that there may be an increase in the risk to each remaining rider (either cyclist or EPAC. This would lead to an increase in the insurance costs to the consumer as well as an increase in the possibility of being involved in a crash.

4. Inclusion would increase administrative burden

Extending the scope of the MID to millions of newly in scope bikes would lead to huge administration costs for many Member States. It would also lead to a number of EPAC riders now criminalized, even those who have personal, public or third-party liability rather than motor vehicle third party insurance cover. This would cause burdens on regulatory authorities, confusion amongst millions of riders, and a patchwork of regulations and rules across the EU as some Member States start to use Article 5 and

[31] However motor vehicle insurance in Germany also insures the vehicle, so in one sense we can legitimately compare the risk *per vehicle* and not necessarily per km travelled.
[32] https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/EinkommenKonsumLebensbedingungen/AusstattungGebrauchsguetern/Tabellen/Fahrzeuge_D.html
[33] Note that the pedestrian "liability" risk would be even lower since around 6 pedestrians were seriously injured where it was the fault of the EPAC rider, though of course we would also have to readjust the motor car vehicles, however under strict liability laws the motor car would be liable anyway
[34] ECF has data from DESTATIS on EPAC, bicycle and motor vehicle crash with third parties. Please contact c.woolsgrove@ecf.com
[35] Jacobsen, P.L., 2003. Safety in numbers: more walkers and bicyclists, safer walking and cycling. Injury Prevention 9, 205–209
[36] https://ecf.com/resources/cycling-facts-and-figures/safety-numbers

others do not. The Commission analysis of the MID is under the refit programme which is meant to lighten the load of legislation and administration, not to make further burdens. Measures to reduce bureaucracy and administrative burdens should not be eliminated through creating new bureaucracy. Bringing compulsory motor vehicle insurance to millions of low risk EPACs would not reduce bureaucracy or administrative burden.

If compulsory third party insurance were to be introduced would this mean German authorities for example setting up a licensing and registration system for their estimated 3 million EPACs? The same could be asked of the millions in Belgium, the Netherlands or Austria; all now have many EPACs on their roads. In Switzerland, until recently it was compulsory to have a CHF-5-10 'Velo Vignette' (bike sticker) 'license'. This was a way of trying to achieve 100% bicycle and EPAC liability cover. However, in 2012, the Swiss parliament abolished the licenses[37] due to the huge costs involved for the limited benefits received. Toronto public authorities in Canada concluded that a license system needed for compulsory insurance would cost about 2/3 times as much the revenue[38] and was consequently not considered by public authorities.

Most EPAC riders are motor drivers and most motor vehicle insurance often also covers the driver if he/she causes damage as a cyclist/EPAC. Most household insurance also covers cyclists and EPAC, and many also purchase a specific insurance which also includes third party liability. Many national cycling organizations memberships also include bicycle insurance policies as part of membership. Inclusion of EPACs or bicycles within the MID would move from an already large coverage to criminalizing all these riders and forcing a shift into the MID insurance system with different insurance requirements.

As we have seen there were around 11 pedestrian serious injuries and zero pedestrian fatalities caused by an EPAC in Germany in 2016, the vast majority of these major liability claims would already be covered by personal liability, home insurance or other form of insurance. Compulsory third party insurance would be an overreaction and over-burdensome regulation, and which would give motorists less inclination to move from their car to a less risky form of transport, consequently increasing the risk of third party crashes with a motorized vehicle

EPACs would also lose their privileged position within many countries as the "Vulnerable User" within "strict liability" laws. Pedestrians and cyclists, and so consequently also EPACs, are protected from motor vehicles within strict liability regimes[39]. EPACs if classed as a motor vehicle would, in the event of a crash with a car would lead to the car/motor vehicle no longer being presumed liable[40], if Member States wanted to continue protecting EPAC users within the strict liability regime they would have to reformulate legislation. Every European country except Bulgaria, Cyprus Ireland, Lithuania, Malta, Portugal, Romania, Slovakia, and the UK, has some form of strict liability regime. Within the context of the Refit Directive, the Commission should try to understand how Member States would include EPACs within their strict liability regimes if EPACs were to be seen as motorized vehicles.

---

[37] https://www.pro-velo.ch/fr/pro-velo/actualites/actualites-archives/actualites-archivees/adieu-vignette-velo/
[38] http://www.ottawasun.com/2012/01/13/staff-to-council-no-bicycle-licences
http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=0be4970aa08c1410VgnVCM10000071d60f89RCRD
[39] This is also included within the text of the current MID "Personal injuries and damage to property suffered by pedestrians, cyclists and other non-motorised road users, who are usually the weakest party in an accident, should be covered by the compulsory insurance of the vehicle involved in the accident where they are entitled to compensation under national civil law."
[40] In Germany 2016 there were 2.062 crashes between motor vehicles and EPACs. See Annex on EPAC crash data

Finally, if EPACs were to be included within the MID some or many (or none) member states would activate the Article 5 clause in the Directive. Article 5 allows Member States to nominate vehicles that would not be included within the MID within their national borders[41]. Article 5 should however not be used as a tool by the Commission to deal with defining what exactly is meant as 'vehicle' in the Directive. This review comes under the Refit programme which is intended to make EU legislation simpler, harmonised, and less bureaucratic, creating a patchwork system of national exemptions should be used as a last resort for member states. Creating confusion within the directive with a vague notion of motorised vehicle and then expecting member states to clear up the mess would run counter to the Refit programme. Would strict liability definitions of 'motor vehicle' follow national Article 5 exemptions or EU MID definitions? A bicycle as defined through EU type approval on which Member States are using to define EPACs within their road rules would now be classed as a motor vehicle under another EU legislation, EPAC riders would now longer be classed as victims under strict lability.

There are many unanswered questions about how this would work in practise. There could be legal arguments for banning EPACs on cycling infrastructure, as they are now motorised vehicles. We would have a patchwork of legislation across the EU where a bike was legal in one country and then illegal in another, causing confusion amongst the huge growth in cycling tourism across EU borders and along long distance cycle routes such as the EuroVelo routes[42]. We do not see any clear desire amongst those Member States that have many of these bikes on their territory to see these bikes as motorised vehicles and to fall within the scope of the regulation. Including in the MID would mean 27 or 28[43] Member States going through the process of excluding the bikes, untangling issues relating to strict liability or use on the roads.

ECF recommendations

ECF would recommend that the European Commission;

1. Carefully reconsiders the implications of expanding the scope of the MID to include millions of electrically assisted bicycles within the MID
2. Excludes bicycles from the MID that are not type approved and have a pedal assisted boost

ECF recommends a list of vehicles to be excluded from the scope to include EPACs or the following changes to be made in the definition of a 'motor vehicle' in the Directive text

"...any motor vehicle intended for travel on ~~land~~ ***public roads*** and propelled ***solely*** by mechanical power ***or requiring EU type approval conformity*** but not running on rails, and any trailer whether or not coupled"

[41] So far the Netherlands has exempted "Vehicles which do not pose any danger: Elo bikes= Power Assisted Bikes" and Romania has deemed it necessary to exempt "bicycles and carts". Austria has said that "Electric powered bicycles with a maximum power of 600 Watt and a model-specific maximum speed" are exempt. Luxembourg has exempted "vehicles not requiring Registration". EFTA country Liechtenstein has exempted "lightweight motor bicycle"

[42] http://www.eurovelo.com/en

[43] Perhaps minus the UK

Annex

Member State/cities/regions commitments to cycling and EPACs

- By including urban transport in the 2011 Transport White Paper, the European Commission is now committed to contributing to urban mobility solutions. The development of zero-emission vehicles and the promotion of active transport is a part of this.
- The Austrian cycling Masterplan[44] put forward its commitment to "...bring the importance of cycling as an economic and health factor increasingly into focus, and priorities were defined for the promotion of electric bicycles and for linking cycling to public transport"
- The German National Cycling Plan[45] will be "Including electric mobility/EPACs: The market for EPACs exhibits especially great momentum. The NCP will continue to support the development of this economic factor, which is by no means insignificant for German SMEs. The increasing popularity of EPACs will also have an impact on infrastructure and road safety."
- In the Netherlands, the construction of 675 km of 'Fietssnelwegen' (fast cycle routes) across the country is planned by 2025. Approximately one third of this is already in place. These are being designed with EPACs and longer distanced cycling in mind.
- Spain, the national government has included cycling in its annual subsidy schemes for electromobility during the last years.
- In North Rhine Westphalia, a 100 km long Ruhr fast cycle route is under development at an estimated cost of EUR 187 million. A feasibility study estimated that as much as 400.000 daily car-km could be shifted to cycling if this cycle highway is completed. These infrastructure are examples of many other infrastructure plans and very much aimed at longer distance cycling and in particular the increased EPAC use in these countries
- EU member states and cities are preparing to phase out fossil fuelled vehicles. UK and France have both announced recently their intention to phase out fossil fuelled vehicles by 2040

The following cities and regions have actively been promoting EPAC use and uptake through fiscal incentives or otherwise[46];

Austria

- Styria has started a new grant programme in 2016
- Tyrol, the regional electricity provider Tiroler Wasserkraft offered a grant of 150 € for the acquisition of an e-bike to its customers in 2016
- city of Vienna offered a grant of 30% of the purchase price of an EPAC

Belgium

- The Brussels Capital Region offers a prime consisting of a variety of different sustainable mobility packages to inhabitants who hand in their car number plate and scrap their car. The packages include a subsidy of up to 1010 € for the purchase of an electric bike
- Walloon Brabant offers a purchase subsidy of 20% of the acquisition price
- Ghent can receive a grant for the purchase of an electric bike
- Antwerp offers a subsidy of up to 400 € for buying an e-bike

[44] https://www.klimaaktiv.at/english/mobility/cyclingmasterplan.html
[45] https://nationaler-radverkehrsplan.de/en/federal-initiatives/national-cycling-plan-nvp-2020
[46] All references available at https://ecf.com/groups/report-electromobility-all-financial-incentives-e-cycling

- In Wallonia, several local authorities offer subsidy schemes for the purchase of electric bikes as of September 2016, the biggest one being the city of Namur. Amounts vary between 50 and 200 €

France

- Corsica has introduced a subsidy scheme of 500 € for private inhabitants who buy an electric bike in May 2016
- Paris has a subsidy of 33% of the acquisition price
- Rennes: e-bike renting for one year (150 €); after that: acquisition price of 365 €
- Nantes has a subsidy of 25% of the acquisition price, max. 300 €
- Bordeaux: 25% of the acquisition price, max. 300 € for an electric bike
- Nice: 25% of the acquisition price

Germany

- Tübingen offers a prime to inhabitants who scrap their conventionally powered two-wheeler and buy an electric bike instead. The amount of prime ranges from 200 to 500€
- Munich has started a subsidy scheme for electromobility that includes electric bikes. The subsidy of 25% (up to 500 €) of the purchase price can be granted to private companies and non-profit organisations

Italy

- Friuli Venezia Giulia offers an incentive scheme for private individuals with a prime corresponding to 30% of the purchase price, with a maximum amount of 200 €
- The following Italian cities give subsidies for EPACs
  - Bologna: 300 € for electric bikes
  - Florence: 200 €
  - Venice: 350 - 500 €
  - Modena: 14% of acquisition price, max. 310 €
  - L'Aquila: 10% of acquisition price
  - Catania: 250 €
  - Santorso: 100 €
  - Grosseto: 200 - 250 €

The Netherlands

- Arnhem-Nijmegen granted subsidy of 30% of the purchase price with maximum of 600€

Spain

- government of the Basque Country subsidy of 20% of the purchase price for electric bikes
- Barcelona Metropolitan Area has set up its own annual grant for the purchase of e-bikes, which can be combined with this

United Kingdom

- States of Jersey (technically not a part of the United Kingdom, but a crown dependency), have introduced a subsidy scheme for electric bikes on the island. The amount of the grant is 20% of the purchase price with a maximum of 350 € (equivalent)

Sweden

- In 2017 the Swedish Government presented a budget for 2018 that includes a 25% subsidy for all e-bike sales until 2020

Contribution of cycling and EPACs to EU and global pollution, transport and health targets

- Transport activity is expected to continue to grow and become the largest source of Greenhouse Gas Emissions after 2030. Transport is responsible for about a quarter[47] of EU GHG emissions, growing by about 22 %[48] in 1990-2013, with road transport accounting for over 70 % of those transport emissions. The aim of the EU is to transform itself into a low-carbon economy. This has meant a commitment to a systemic change towards low-emission mobility, which in turn requires clean transport[49]
- The estimated value of air pollution from cars avoided by current levels of cycling is EUR 427 million, shifting to bicycles and EPACs is an important means to achieve the EU air policy objectives of reducing the health impacts of air pollution by 52% in 2030 compared to 2005 and reducing the share of ecosystem area exceeding eutrophication limits to 35%, as stated in the 2013 Communication 'A Clean Air Programme for Europe'[50]
- Bicycles and EPACs contribute to reducing noise pollution in Europe, with an estimated value of EUR 300 million. This helps to achieve the target of significantly decreasing noise pollution in the Union, moving closer to levels recommended by the World Health Organisation, by 2020, as stated in the General Union Environment Acton Programme to 2020 'Living Well, within the Limits of Our Planet'[51]
- Bicycle and EPAC infrastructure require much less space than infrastructure for cars. This leads to reduced construction-related and maintenance costs, because cycling infrastructure costs less and requires minimum maintenance. This saves resources and preserves environmental assets such as soil and water. It also helps to achieve the aim of having no net land take in the EU by 2050 in the 2011 Roadmap to a Resource-Efficient Europe[52]. Another environmental benefit is increased permeable surface areas, meaning higher soil quality and less water pollution, helping to reach the objective of preventing further soil degradation and preserving soil functions stated in the Thematic Strategy for Soil Protection of 2006[53].
- The current estimate of 134 billion km cycled annually provides CO2 savings of 15 billion kg with a value of EUR 2 billion per year. Benefits include CO2 emissions avoided and the associated climate change damages, i.e. the "social cost of carbon". Additionally, cycling prevents the so-called 'rebound effect' from the use of electric cars. The fuel savings due to avoided car traffic linked to current cycling levels in the EU are estimated at EUR 2.8 billion
- Bicycles and EPACs contribute to achieving Commission President Juncker's Priority # 3 'A Resilient Energy Union with a Forward-Looking Climate Change Policy', firstly by reducing high energy dependency. They also help meet targets in the EU 2030 Framework for climate and energy policy adopted in 2014, namely the target of 40% cut in greenhouse gas emissions compared to 1990 levels (specific targets for the transport sector: 20% reduction from 2008 levels by 2030, and a 60% reduction from 1990 levels by 2050) and at least 27% energy savings compared with the business-as-usual scenario. Bicycles and EPACs significantly contribute to 12 of the 17 UN Sustainable Development Goals[54], as presented to the UN Climate Summit COP 21 in Paris

---

47 www.eea.europa.eu/publications/signals-2016/at_download/file
48 www.europarl.europa.eu/RegData/etudes/IDAN/2015/563409/IPOL_IDA(2015)563409_EN.pdf
49 http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1486041303317&uri=CELEX:52011DC0144
50 http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013DC0918&from=EN
51 http://ec.europa.eu/environment/pubs/pdf/factsheets/7eap/en.pdf
52 http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52011DC0571
53 http://ec.europa.eu/environment/soil/three_en.htm
54 http://www.un.org/sustainabledevelopment/sustainable-development-goals/

- Bicycles and EPACs will be key tools to achieve the European Commission's goal of phasing out gasoline- and diesel-powered cars in cities by 2050[55]

Examples of the positive benefits of EPACs;

- ECF study states that for each kilometre cycled, EPACs have Co2 emissions of about 22 grams, in the same range as those of a normal bicycle compared to 271 grams for most cars[56]
- The intensity required on an EPAC is slightly less than that of a bicycle but is still sufficiently high to bring about more than 3 Metabolic Equivalent of Task (MET)[57] for each journey. 3 MET is required for the promotion of health in activity.
- According to a Dutch study, on a weekly basis EPACs cover, for all purposes, on average 22% more kilometres than normal bicycles. For commuters, this difference extends to 75%[58]
- The use of an EPAC also influences the use of other modes of transport, EPACs most often are a substitute for the bicycle (45%) or the car (39%)[59]. A net increase of active transport use.
- EPACs can contribute to a major shift from car use to bike use, a Swiss study showed that 60% of the people within the study who own a car, indicate they use the car "much rarer" or "less frequently"[60].
- EPACs are a way of overcoming some of the barriers to cycling such as hilly areas, long distances, elderly rider population, hot weather, general unfitness[61]. This not only keeps people using active transport, but also entices new users[62]
- The Smart eBikes Project[63] showed that EPACs also keep people cycling for longer, the proportion of their participants who said they would cycle to work at least one day a week rose from 30% to 75% with an available EPAC
- There are many studies on the health benefits of physical activity[64]
- The impact of bicycles on public health is well documented.[65]
- Though there is less effort involved with a EPAC, distances tend to be longer. EPACs also keep people cycling for longer, into older age and when cycling may be more difficult. There are many studies researching the beneficial health benefits of EPACs use[66]

---

55 http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52011DC0144
56 https://ecf.com/sites/ecf.com/files/ECF_CO2_WEB.pdf
57 Intensity of exercise https://en.wikipedia.org/wiki/Metabolic_equivalent
58 TNO, Elektrisch fietsen, Marktonderzoek en verkenning toekomstmogelijkheden, 2008
59 https://ecf.com/sites/ecf.com/files/ECF_CO2_WEB.pdf
60 http://www.news.admin.ch/NSBSubscriber/message/attachments/36765.pdf The average displacement in the study were made by the car (an average of almost 1.000 km per person), public transport (570 km) and "normal" bicycle (420 km)
61 http://www.tandfonline.com/doi/full/10.1080/15568318.2017.1302526
62 http://www.sciencedirect.com/science/article/pii/S0968090X16000747
63 http://www.smart-ebikes.co.uk/
64 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1402378/ http://www.bcmj.org/articles/health-benefits-physical-activity-and-cardiorespiratory-fitness
65 There is a list of resources on cycling health benefits on this page under Benefits Health https://ecf.com/resources/cycling-facts-and-figures
66 http://www.pedegoelectricbikes.com/wp-content/uploads/2016/08/EPAC-Health-Study.pdf https://www.researchgate.net/publication/282752633_Cycling_for_transport_physical_activity_and_health_What_about_Pedelecs

Third party crash statistics; EPAC crashes with personal injury in Germany over three years[67]

Year 2014

Accidents involving two parties, of which:		Crashes	Crashed EPAC casualties			Crashed other casualties		
Main cause	**Participant**		**killed**	**Seriously Injured**	**light injured**	**Killed**	**Seriously Injured**	**light injured**
Pedestrian	EPAC	41	-	9	31	-	3	12
EPAC	Pedestrian	26	-	3	15	-	5	15
Passenger cars	EPAC	883	3	175	706	-	-	12
EPAC	Passenger cars	240	17	61	162	-	1	13
Goods vehicle	EPAC	77	-	12	65	-	-	1
EPAC	Goods vehicle	23	3	8	12	-	-	-

Year 2015

Accidents involving two parties, of which:		Crashes	Crashed EPAC casualties			Crashed other casualties		
Main cause	**Participant**		**killed**	**Seriously Injured**	**light injured**	**Killed**	**Seriously Injured**	**light injured**
Pedestrian	EPAC	34	-	8	22	-	-	11
EPAC	Pedestrian	50	-	8	24	-	7	28
Passenger car	EPAC	1 232	6	256	973	-	-	16
EPAC	Passenger car	330	13	119	194	-	1	16
Goods vehicle	EPAC	101	1	26	74	-	-	-
EPAC	Goods vehicle	19	2	5	11	-	-	1

[67] Data acquired by ECF from DESTATIS for more information contact c.woolsgrove@ecf.com

Year 2016

Accidents involving two parties, of which:		Crashes	Crashed EPAC casualties			Crashed other casualties		
Main cause	**Participant**		**killed**	**Seriously Injured**	**light injured**	**Killed**	**Seriously Injured**	**light injured**
Pedestrian	EPAC	85	1	14	60	-	5	30
EPAC	Pedestrian	58	-	14	25	-	6	35
Passenger cars	EPAC	1 518	12	303	1 205	-	1	15
EPAC	Passenger cars	389	19	141	226	-	-	14
Goods vehicle	EPAC	131	2	35	93	-	-	4
EPAC	Goods vehicle	24	2	9	13	-	-	-