



**Infrastructure Victoria  
Evidence Base Advice  
Automated And Zero Emissions  
Vehicle Infrastructure Report**

**MAV Submission**

**31 August 2018**

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*Infrastructure Victoria Evidence Base Advice, August 2018 has been prepared by the Municipal Association of Victoria (MAV) for discussion with member councils..*

*The MAV is the statutory peak body for local government in Victoria. The MAV engaged with councils across Victoria to assist the Association undertake this work. The MAV would also like to acknowledge the contribution of those who provided their comments and advice during this project.*

*While this paper aims to broadly reflect the views of local government in Victoria, it does not purport to reflect the exact views of individual councils.*

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## 1 Executive summary

The Municipal Association of Victoria (MAV) welcomes the opportunity to provide input to the Infrastructure Victoria *Evidence Base Report: Advice on Automated and Electric Vehicles Infrastructure*.

Victorian councils have a strong interest in supporting a smooth transition to automated (AV) and electric vehicles (EV), and within local communities to support innovation, investment and community confidence. Victorian councils recognise the need for the State Government to ensure the development of high quality and safe infrastructure to support the future introduction of AV and EV onto the road network.

Some councils already have, or are introducing EV into their fleets including Moreland, Monash and Yarra City Councils and Benalla Rural City Council.

It is essential for local governments and communities to be fully engaged in the planning, establishment and operation of new technologies. Councils are both statutory transport bodies and planning bodies, and manage 85 per cent of the road network across Victoria.

## 2 Introduction

The Municipal Association of Victoria is the peak representative and advocacy body for Victoria's 79 councils. The MAV was formed in 1879 and the *Municipal Association Act 1907* appointed the MAV the official voice of local government in Victoria.

Today, the MAV is a driving and influential force behind a strong and strategically positioned local government sector. Our role is to represent and advocate the interests of local government; raise the sector's profile; ensure its long-term security; facilitate effective networks; support councillors; provide policy and strategic advice; capacity building programs; and insurance services to local government.

With AV and EV poised to have a significant impact on markets, public policy and the community, it is important to explore a range of questions. It is also important to clarify and develop well informed insight into the potential benefits and impacts of the introduction of EV, and the different levels of AV across Australia. The introduction of these new vehicles is also particularly important for councils to consider as road authorities, infrastructure providers, fleet managers and representatives of their local communities.

As advances in transport technology continue, it is critical that councils are consulted on the implications, and are able to shape outcomes and take up the opportunities offered by future transport through the use of AV and EV.

Due to the relatively new policy spaces occupied by AV and EV, it should be appreciated by Infrastructure Victoria there are likely to be differing levels of knowledge and views on such vehicles across the local government sector.

### 3. Response To Consultation Questions

#### **Consultation Question 1 – *Are Infrastructure Victoria key assumptions correct? If not, why?***

The MAV appreciates that given the high degree of uncertainty surrounding automated and zero emissions vehicles, Infrastructure Victoria made a range of conservative assumptions to develop their evidence base, and test the implications of their scenarios.

The MAV understands that some of these assumptions do not have a clear evidence base due to research not as yet existing, and the low global take up of AV. However, the reasoning provided for each of the assumptions appears sound.

#### **Consultation Question 2 – *Is IV's analysis of the findings correct? If not, why?***

Considering the current uncertainties associated with the potential introduction of EV and AV (in particular), the MAV appreciates that at this stage assumptions made about infrastructure requirements cannot be definitive.

The MAV supports many of the findings across a wide range of issues and scenarios, which are analysed by Infrastructure Victoria within the evidence base report. However, some analysis of the findings made regarding the transport network and road assets, traffic congestion, community acceptance and drop off points, pose particularly complex questions for councils.

**Transport network and road/charging assets:** IV research suggests roads are not likely to be changed to accommodate driverless vehicles, apart from good quality and regular maintenance, and ensuring lines and signs can be 'read' by these vehicles. However, there is no distinction made here between arterial and local road. As managers of 85 per cent of the road network across Victoria, councils would suggest that the current road infrastructure may not be sufficient to support the operation of AVs, particularly highly automated vehicles. There may be a need to upgrade road infrastructure in a systematic way across the road network (and off-road where relevant), than the evidence base currently suggests.

Local councils do not have the capacity to upgrade existing infrastructure to the requirements of AV, including updating line markings and traffic signage. AV need clear lane markings to navigate road networks and stay within the confines of a single lane. These road markings are not currently present on the majority of the local road network. The Private Drive scenario suggests that maintenance regimes may need to change as high levels of automation will be more heavily dependent on roads being of a good quality with clear lines and signs, and no pot holes.

The level of service required on rural council country roads to upgrade them to cater for safety needs of AV could be particularly significant. It should be noted concerns from rural councils are likely to be quite different to those from more populated metropolitan councils, due to the different character of their roads. Many rural municipalities have a majority of unsealed roads, and even sealed country roads can often be narrow in width (single lane) with gravel shoulders. Conditions on these roads are changeable and often unpredictable, and drivers require a high degree of situational awareness. The MAV requests further consideration is given to these environments by Infrastructure Victoria as part of the development of future scenarios.

There is currently no clarity around who would be responsible for overseeing and paying for any upgrade of existing road infrastructure which may be required. This would need to be factored into councils' future Road Asset Management Plans (RAMPS), or similar policies. Section 40(2) of Victoria's Road Management Act specifically provides that there is no duty on road authorities to upgrade a road, or to maintain a road to a higher standard than the standard to which the road is constructed. There is good reason for this provision given the limited resources of councils in comparison to the size of the road network.

The ICT infrastructure outlined by the evidence base report such as adjusted traffic signal locations, timing, vehicle to person (V2P) and vehicle to cyclist (V2C) technologies, including how this ICT would link with altered travel patterns, will likely have a cost implication for councils.

Electric vehicle charging should also be considered further following analysis included within the Electric Avenue scenario. Although the evidence base research states that it does not see range being an issue for EV considering the length of the average journey. The MAV is aware that some councils believe that range anxiety is higher than the evidence base suggests, and needs to be recognized as a key barrier to the use and adoption of EV in Victoria. The location of current charge points across Victoria, particularly in rural areas, is currently extremely limited.

Furthermore, within the context of metropolitan areas, councils may seek to encourage EV charging to be off street where there is excess parking, not on the street which councils believe should be prioritised for footpaths, bike lanes and trees. However, on-street EV charging facilities are not always considered appropriate within CBD council areas, nor is it seen as the role of local councils to facilitate the refueling of private vehicles. The business community in local areas may object to the re-purposing of on-street parking.

**Traffic congestion:** a corresponding increase in congestion outlined within the Electric Avenue and Private Drive scenarios would require councils and their road infrastructure managers to plan and manage a significant increase in additional traffic. Increased congestion presents a potential tension for some councils with their main transport objectives which include a shift away from car use towards sustainable transport modes. Councils would be unlikely to support any measures which reduce pedestrian and cyclist access, and be resistant to pressure to change a locality to accommodate private vehicles, even shared ones.

**Community acceptance:** local councils play a key advocacy role with the local communities they serve, and can help to mitigate public concerns and influence public attitude. As communities start to look for more opportunities to input their feedback and views around the uptake of both EV and AV, local councils will be sensitive to this. If for example, the Fleet Street scenario was to become a reality, with a shared fleet of EV and AV and no private vehicles, local councils would play a key role in enabling community acceptance on this scale.

The potential benefits such as saved lives, increased road safety and less congestion could be promoted to communities by their local councils. However, this is dependent on the assumption that EV/AV would not be used as sole occupant vehicles. At the appropriate time, it is important that development of consistent communication guidelines are developed by the State Government, with the input of local councils from an early stage.

Some councils are already considering the **drop off and pick up implications** of AV, and the potential conversion of on-street parking and taxi zones. Councils will also need to consider where parking and taxi zones are allocated to align with their individual mode share targets, and

ensure there is no conflict with priority bike networks or public transport routes for example. An important consideration for communities will be the use and location of drop off and pick up points near homes, jobs and services to reduce conflicts on local streets and support active travel on foot or bicycle. Otherwise the proposed safety benefits of EV and AV travel will conflict with promoting sedentary travel and associated health impacts. EV charging infrastructure may also need to be considered within the context of these zones if likely to also be utilised by AV. Overall, the variability of local streets must be appreciated, and the broader role they play within a community to enhance local amenity, public open space and links with urban nature.

**Consultation Question 3 - What further research into AV/EV might be required beyond what IV have already completed or identified?**

The MAV will stay engaged with the work of the National Transport Commission on safety assurance for automated driving systems regulation impact statement. The MAV has also been working with the State Government and VicRoads to develop the Autonomous Driving Scheme permit system, which will be managed by VicRoads. The development of both policy areas and their contributions to future research and insight, will be a key consideration in addition to research delivered by Infrastructure Victoria.

Australia does not as yet have an overarching policy framework to regulate the EV market with all the States and Territories currently implementing different policies to encourage development of the industry. The MAV would advocate for a coordinated policy response to be developed by all levels of government, including local government.

With reference to points made in consultation question 1, the MAV would welcome the research results of the work AustRoads and Standards Australia are doing (due in 2019) to develop a consistent and uniform approach to line markings in Australia, as well as investigating technologies to prolong the life of line markings to be shared with councils. The MAV would also agree with the conclusion of Infrastructure Victoria within the Electric Avenue scenario, that more information is needed to guide the installation of battery EV charging infrastructure.

MAV supported a workshop - EV Ready Local Government Fleets - on 29 August which was the first part of a project run by ClimateWorks, the Electric Vehicle Council and the MAV, aimed at enabling greater electric vehicle uptake in local government fleets. By participating in this workshop, councils have the opportunity to participate in a four month program that will help them to get electric vehicle ready. The programme included a tool to help councils understand the emissions and financial impacts of increasing EV uptake in their fleet; assistance developing a long-term electric vehicle target for councils and advice on electric vehicle purchasing and connections to car companies.

**Consultation Question 4 - What are the local or international trends government should be monitoring to help inform future decisions on AV/EV?**

The MAV is currently working with Transport for Victoria, VicRoads, the National Transport Commission and Infrastructure Victoria to monitor and inform the research and policy work each is currently delivering around EV and AV. The MAV would highlight the importance that the Australian and State Governments ensure a joined up approach, and continue to engage with councils.

The MAV also suggests that lessons can be learned from Europe, in particular regarding the

strong adoption of EV, and to continue monitoring developments internationally around AV. The UK, France, Norway, the Netherlands, Germany and China are just a few countries that have announced they will ban new diesel and petrol cars, or are considering doing so in favour of EV. The potential ICT infrastructure that is being considered and trialled internationally, where cyclists and pedestrians passively broadcast their location and planned route so that AV can adjust their behavior, will be particularly important in contributing to future policy to ensure the safety of pedestrians and cyclists.

**Consultation Question 5 - *What key decisions need to be made about the infrastructure required for AV/EV?***

The MAV would highlight the need for clarity around government budgets to pay for the new or altered infrastructure which may be required such as road and energy network upgrades – and a consistent approach to roll out across the state. With regards to councils, consideration will need to be given to potential revenue loss that councils may face in the future from parking charges, as highlighted in the Private Drive scenario.

Councils could also find they have to fund additional responsibilities in relation to road management and significant additional planning considerations regarding possible changes in the use of public and private transport. The implications of population movement to outer suburbs e.g. Frankston and Sunbury, should a Fleet Street scenario become a reality, will also impact on councils serving those areas. There also needs to be consideration of the role land-use planning and building standards will play in facilitating a transition to a new transport system and its supporting infrastructure. Councils will play a key role in the design, support and enforcement of these conditions.

Another infrastructure consideration of particular significance to councils is the potential location of charging infrastructure on council land. Councils manage roads, car parks, public lighting and public buildings – all infrastructure that can be used to install and manage EV charging stations.

## 4. Conclusion

New laws and regulations will have a big influence on the introduction of EV and AV, but working with councils can help to shape them for the benefit of local councils and their communities. Infrastructure Victoria should note the potential and significant infrastructure costs for local councils.

The rates and level of adoption will vary as will the type of technology, but this is something that councils may be able to influence through the services they provide, their purchasing power and through their community and economic leadership roles. It should be noted the significant role councils are placed to deliver around fostering community acceptance and mitigating public concern towards the introduction of AV across Victoria. Councils will also have to take a view on whether to encourage the adoption of new technology through their decisions on infrastructure.

Whatever decisions councils take they will need to be confident that there is strong safety assurance in place for automated driving systems to protect both their communities and road infrastructure investments.

State Government should continue to give councils the opportunity to consult on the implications of EV and AV as technology, supporting policy and regulations evolve at state and national levels.



