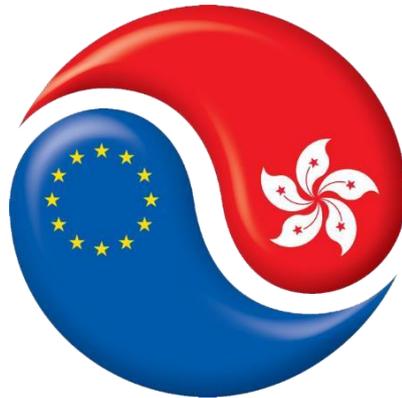


EAC POSITION PAPER

The European Automotive Council (EAC)
of
the European Chamber of Commerce in
Hong Kong (EuroCham)



The contents of this publication are the sole responsibility of the European Chamber of Commerce in Hong Kong and reflect the Chamber's views only.

Introduction

The European Automotive Council (EAC) of the European Chamber of Commerce represents the European passenger car and commercial vehicle manufacturers in Hong Kong. The Council aims to bring forward proposals and be a partner to the Government of the Hong Kong Special Administrative Region of the People's Republic of China, in working together towards a safer, greener, more efficient, more sustainable and more competitive automotive sector. Members of the Council are European vehicle manufacturers, their subsidiaries and/or representative offices.

This Paper expresses the common work and views of the members of the EAC and aims to lead to overall improvements in the target areas.

Table of Contents

Introduction of the EAC.....	3
Table of Contents.....	4
1. Executive Summary	5
2. Sustainable Mobility.....	6
2.1 Introduction.....	6
2.2 Charging Infrastructure.....	6
2.3 EV Subsidy & Incentive Scheme Roadmap	7
2.4 High-Voltage Battery Recycling	7
3. Future-Oriented Type Approval Regulations and Vehicle Registration	9
3.1 Introduction.....	9
3.2 Type Approval Regulatory Framework	9
3.3 Vehicle Registration	10
3.4 Monthly Registration Data	10
4. Commercial Vehicles	12
4.1 Introduction.....	12
4.2 Advanced Driver Systems and Vehicle Dimensions	12
4.3 Electric Light Vehicles & Charging	12
4.4 Alternative Fuels	13
4.5 Recommendation.....	13

1. Executive Summary

This positioning paper shares the view of the European Automotive Council (EAC) on key developments in the automotive arena and includes several recommendations for the attention of the Government of Hong Kong.

Sustainable Mobility

Transition to more sustainable mobility plays a key role in supporting Hong Kong's pursuit of cleaner air and carbon emissions reductions, which will contribute to a higher quality of life for its citizens. Significant progress has been made in the development towards higher penetration of electric passenger vehicles in Hong Kong's car park; largely thanks to the supportive subsidy- and incentive-scheme implemented by the Hong Kong Government as part of the Roadmap on Popularisation of Electric Vehicles.

Sufficient and well-planned charging possibilities are a key enabler for the transition towards electric mobility. Therefore, the EAC encourages the Government of Hong Kong to allocate adequate funding to continuously develop a comprehensive charging infrastructure covering public, semi-public and private charging solutions. This will ensure sufficient charging capacity in line with the growing electric vehicle car park and is a key prerequisite for a broad acceptance of electric vehicles.

Besides sufficient and intelligent charging infrastructure, a comprehensive and sustainable shift to e-mobility requires clear guidelines and long-term planning on all mobility aspects. The European OEMs will continue to develop and launch more and more state-of-the-art electric vehicles to serve a broad range of customers. An early announcement by the Hong Kong Government of the subsidy- and incentive-scheme roadmap beyond March 2024 will greatly support a robust and stable development of electric vehicle registrations. Additionally, the EAC would welcome the Government of Hong Kong to take a leading role in the planning and development of a High-Voltage Battery (HVB) recycling ecosystem, supported by an effective and owner-oriented incentive system.

Future-oriented Type Approval Regulations

The EAC would like to draw the attention of the Hong Kong Government to developing future technology trends in the automotive industry. Advanced Driver Assistance Systems (ADAS), E-mobility-related technologies (e.g. new HV-Battery technologies) and driver-supporting Visual Display Units (VDUs) are developing at an increasing pace. More and more features, supported by highly accurate sensors and cameras, find their way into the standard equipment of our vehicles. These technologies improve the safety and efficiency of driving and are crucial steppingstones in the roadmap towards autonomous driving. This will contribute to an improved overall mobility in the city and a reduction of vehicle accidents on Hong Kong's streets.

To support a faster penetration of respective vehicle features the EAC recommends the Hong Kong Government and its relevant Bureaus to review and update the type approval regulatory framework, with special focus on latest state-of-the-art ADAS, HVB and VDU technologies. This will reduce the need for individual additional applications and exemptions and thereby could significantly enhance process efficiency and reduce lead time. At the same time, the EAC kindly asks the Hong Kong Government to budget and allocate adequate resources to the relevant type approval-handling departments, in order to ensure a more efficient homologation process.

Finally, the EAC encourages the Hong Kong Government to consider adopting the UNECE type approval regulations; a well-established and broadly accepted regulatory framework. This will ensure that Hong Kong can enjoy the same efficiency and transparency benefits as multiple other leading markets.

The European Automotive Council would welcome to be part of the discussion with the Government of Hong Kong on these crucial topics.

2. Sustainable Mobility

2.1 Introduction

The Hong Kong Government's efforts to promote electric vehicles (EVs) have been successful, as evidenced by the significant increase in EV-registrations over the past years. The market shift towards EVs will be supported by the European OEMs' continuous development and the launching of more and more state-of-the-art electric vehicles to serve a broad range of customers. This will undoubtedly support Hong Kong's pursuit of cleaner air and carbon emissions reductions, which will contribute to a higher quality of life for its citizens. In order to ensure a comprehensive and sustainable shift to e-mobility, clear guidelines and long-term planning on all future mobility aspects are required. The areas that warrant further government attention include ongoing development of charging infrastructure, a clearly communicated roadmap on EV-supporting policies and incentives, and the development of a comprehensive High-Voltage Battery (HVB) recycling ecosystem with a user-oriented incentive scheme.

2.2 Charging Infrastructure

There is an urgent need for a systematic planning for the adequate quantity and quality (e.g. technologies and locations) of the charging infrastructure. The key objective should be to meet the demand of an ever-growing electric vehicle (EV) car park. A mechanism to regularly review the planning and actual status of the charging infrastructure should be in place to better cope with the dynamic development of EV registrations.

To further accelerate the deployment and optimize the utilization of all the charging infrastructure, the EAC encourages the Hong Kong Government to take the following ideas into consideration. These measures focus on both Private (home/residential) as well as Public/Semi-Public (Offices/Commercial Buildings) car parks.

- Simplification and standardisation of installation approval processes, including the Quality Seal/Certification of electricians/installation companies.
- One-off subsidies to owners of companies/office buildings and/or residential properties who finish installation of chargers in their properties for their associates and tenants. The aim of those subsidies is to lower the Capital Expenditure (CapEx) and attract Charging Point Operators (CPOs) to run and operate those charging points. The rationale behind this proposal is that low CapEx means CPOs only have to cover their Operating Expenditure (OpEx) to break-even. In addition to one-off subsidies, the Government could consider more favorable depreciation rules on those installed charging pillars or other tax benefits.
- EV-ready mandates for the new-builds and renovation of buildings together with an update to the building code on wiring, power capacity, accessibility and the number of chargers and target ratios for parking lots with charging points.
- Concerns regarding property insurance coverage and possible additional insurance loading due to fire risk etc. should be addressed by the Government.
- Review and potentially update existing relevant regulations and ordinances. For example, the update of the Cap 374C Road Traffic (Parking) Regulations to guarantee charging of an electric vehicle on any parking lot with the required infrastructure, or to allow parking owners/operators to charge the energy used during parking (in kWh) to the vehicle owners.
- Set up of an up-to-date centralized database of all charging points and their status. Data accessibility should be guaranteed to all OEMs for their customer apps and/or in-vehicle navigation systems.

The EAC requests the Hong Kong Government to allocate adequate funding to implement and execute the presented ideas and thereby ensure the continuous development of a comprehensive charging infrastructure covering public, semi-public and private charging solutions. This is a key prerequisite for a broad acceptance of electric vehicles.

2.3 EV Subsidy & Incentive Scheme Roadmap

The comprehensive EV subsidy & incentive scheme have shown to be highly effective over the past years. Significant progress has been made in the development towards higher penetration of electric passenger vehicles in Hong Kong's car park. The implementation of the Hong Kong Government's Roadmap on Popularization of Electric Vehicles is largely on track. The EAC expresses its appreciation to the Hong Kong Government for the executed extension decisions of the EV-subsidies; especially the "One-for-One Replacement Scheme" is impactful as the First Registration Tax concession strongly encourages eligible private car owners to buy a new electric private car and at the same time deregister and scrap their older combustion engine private car.

A clear and transparent communication of the subsidy- and incentive-scheme roadmap is a prerequisite for an ongoing robust and stable development of electric vehicle registrations. The European OEMs will continue to introduce a wide range of high-quality EV models to the Hong Kong market. This requires significant investments by the OEMs and the authorised Distributors/Dealers. Business success strongly relies on solid and long-term pipeline planning to ensure that supply fits market demand to the highest possible degree. Furthermore, consumers will benefit from clear planning premises for their EV-transition decision process. Thus, for the above outlined reasons, the EAC requests the Hong Kong Government to make an early announce the EV subsidy- and incentive-scheme planning beyond March 2024.

2.4 High-Voltage Battery Recycling

Within the Roadmap on Popularisation of Electric Vehicles, Hong Kong has announced to no longer allow new registration of fuel-propelled private cars including hybrid vehicles in 2035 or earlier. As of 2022, thanks to generous tax reductions, Hong Kong customers embrace BEVs, and the number of BEVs on the road is sharply increasing every month.

However, there is currently no appropriate solution for the recycling of the large quantities of traction batteries once these BEVs reach the end of their lifetime (10+ years). Whilst this is not a short-term problem (most BEVs come with an 8-year warranty by the manufacturer), the EAC expects that larger quantities of BEV will start to retire in the late 2020s. Long term, assuming an average battery weight of 500kg and a passenger car market of 30-40k units a year, an annual battery recycling volume of 15,000-20,000 tons will be necessary. This estimated volume is before considering any commercial BEVs, trucks or electric buses which also may be powered by batteries in increasing numbers and need an appropriate recycling solution.

The EAC is calling for a reliable recycling solution for BEV vehicles in Hong Kong. Due to the high fragmentation of the market, no single brand alone can reach the necessary scale for an economically viable local battery recycling process. Obviously, the EAC members today in Hong Kong already have end-to-end recycling processes in place which ensures to fully guaranty the 8-years (and typically up to 160.000 km) HVB warranty vis-à-vis its customers. However, the current process is based on exporting the end-of-life batteries or HVB-modules in small quantities to authorized overseas recyclers and cannot be scaled to thousands of vehicles.

To address this issue, with leveraging economies of scale, and to ensure the full recycling or re-use of all BEV traction batteries, the EAC proposes to implement a centralized scheme in analogy to the successful WPRS scheme for electronic products. The Transport Department is the central (and only) source of data regarding all Vehicle Identification Numbers (VIN) and their respective registered owners in Hong Kong. Motor vehicles importers and dealers are not in a position to keep up-to-date owner data. Any BEV vehicle in this register that has been licensed at least once in Hong Kong would qualify for recycling under the scheme. Instead of the physical labels used in the WPRS scheme, identification of eligible vehicles could be done in a more environmentally friendly and efficient way: digitally via the Transportation Department's database.

For execution of the scheme and to ensure compliant and environmentally friendly recycling (or reusing, repurposing, etc.), the Transport Department should tender for one or more professional recycling partners to handle the collection and recycling process for all BEV vehicles in Hong Kong.

As the high-voltage battery raw materials are very valuable, the EAC expects the net recycling costs (i.e. gross recycling expense minus value of recovered raw materials) to be minimal. Any costs beyond the value of the raw materials could be financed upfront through the First Registration Tax. In that way, costs for the eventual recycling and disposal of the vehicle are born by the person licensing the vehicle for the first time in Hong Kong (i.e. the main user of the vehicle). This also removes any (financial) hurdle for the last owner of the BEV, who simply can deliver the vehicle for recycling at a designated collection point(s). This approach would ensure the highest possible return rate of end-of-life BEV vehicles & HVBs to authorized recyclers.

EAC Recommendations:

- **The EAC recommends the Hong Kong Government to allocate adequate funding to implement and execute the presented ideas and thereby ensure the continuous development of a comprehensive charging infrastructure covering public, semi-public and private charging solutions.**
- **The EAC recommends the Hong Kong Government to make an early announcement regarding EV subsidy- and incentive-scheme planning beyond March 2024, as this is a prerequisite for a robust and stable development of electric vehicle registrations.**
- **The EAC recommends that the Hong Kong Government takes a leading role in the planning and development of a High-Voltage Battery (HVB) recycling ecosystem, supported by an effective and owner-oriented incentive system.**

3. Future-Oriented Type Approval Regulations and Vehicle Registration

3.1 Introduction

The automotive industry is actively developing new technologies and driving trends toward more sustainability, driver-supporting and autonomous driving. Advanced Driver Assistance Systems (ADAS), E-mobility-related technologies (e.g. new HV-Battery technologies) and driver-supporting Visual Display Units (VDU) are developing at an increasing pace. More and more features, supported by highly accurate sensors and cameras, find their way into the standard equipment of our vehicles. These technologies improve the safety and efficiency of driving and are crucial steppingstones in the roadmap towards autonomous driving. This will contribute to an improved overall mobility in the city and a reduction of vehicle accidents on the streets of Hong Kong. Furthermore, they can guide drivers on their way through the city on the fastest and safest way; leading to less exhaust gases/energy consumption, a better flow of traffic and less traffic congestion. Ultimately, these systems can help to make Hong Kong a cleaner and even more livable city.

3.2 Type Approval Regulatory Framework

The majority of the safety features included in Driving Assistance Packages (ADAS) or Visual Display Unit (VDU) are regulated by various EU certificates (e.g. R13-braking, R79-steering effort, etc.) as well as by the requirements of European Statement of Principles and the EU Commission Recommendation 2008/653/EC. This entails that no additional applications or exemptions are required on these items on top of the vehicle type approval processes.

Many new or even common features are not covered or clearly defined in the Hong Kong Type Approval Regulation process. Individual extension approval is required for each combination of different features for the same model, whereas in the EU all optional equipment is covered under a single type approval certificate.

The relevant type approval teams within the Transport Department are greatly supporting the exemption applications of the OEMs. Nevertheless, the EAC recommends the Government of Hong Kong to review and update the type approval regulatory framework, with special focus on latest state-of-the-art ADAS, HVB and VDU technologies. This will reduce the need for individual additional applications and exemptions, and thereby could significantly enhance process efficiency and reduce lead time.

Due to the rapid advancements in technologies, vehicle updates will happen more and more frequently. Especially on EVs, there are regular improvements in e.g. the efficiency and performance of the battery, the e-motor and the on-board charger. As under the current type approval regulatory framework all these updates require a new type approval, the EAC requests the Hong Kong Government to allocate adequate resources to the relevant type approval-handling government departments in order to ensure an efficient homologation process. This will support a faster penetration of respective features and technologies.

Based on the current procedure, a new type approval is always required for any technical changes such as e-range improvement with upgraded e-motor or battery. This inefficiency discourages manufacturers from bringing in more updated technologies to the market. In comparison, the EU allows for technical changes on the existing type approval certificate and an extension type approval is only required with the updated Whole Vehicle Type Approval (WVTA) certificate provided by the OEMs.

Therefore, the EAC asks the Hong Kong Government to consider adopting the UNECE type approval regulations; a well-established and broadly accepted regulatory framework. This will ensure that Hong Kong can enjoy the same efficiency and transparency benefits as many other leading markets.

In support of improved safety, mobility, and efficiency of driving, the latest in-vehicle information and communication systems (Visual Display Units /VDU) are equipped with safety aspects and designed to avoid distracting the driver. The focus areas are:

- Relieving the driver of secondary activities by granting the opportunity for passengers to interact with the UI (User Interface)
- Stronger separation of driving tasks and auxiliary operations
- The front passenger to support the driver via the CDD (Co-driver display) which subsequently leads to the reduction of the driver possibly getting distracted

In Europe, the VDU is allowed to display non-navigation information with vehicle speed limit up to 5km/h. However, in Hong Kong, non-navigation information is restricted to be displayed in the VDU, no matter whether vehicle is in motion at any speed or even standstill. The EAC encourages the Hong Kong Government to adopt the type approval practice from Europe and review the local type approval requirement (Reg. 37 of Cap.374A) on the Visual Display Unit (VDU) and the Co-Driver Display (CDD).

3.3 Vehicle Registration

Every month, on average 3,000 vehicles are newly registered in Hong Kong, sometimes even significantly more depending on seasonal patterns and model launches. Until today, this first registration process has been mostly manual with printed documents, signatures, and payment by cheque.

Advancing digital solutions are used in many industries to improve efficiency, transparency, user friendliness as well as to reduce the required place and the amount of hardcopy paper, which is beneficial for the environment. The EAC recommends the HKSAR Government to digitalize the entire vehicle registration process through the electronic application and submission of supporting documents (possibly with Electronic Authentication and Digital Certificates). This would enable online registration 24 hours a day and seven days a week, increasing flexibility and efficiency, and reducing travel time and intensity.

Also, the EAC recommends the Hong Kong Government to explore additional, more flexible payment possibilities for the First Registration Tax, beyond the rather cumbersome payment by cheque. This would not only increase efficiency and user experience, but could also reduce the administration costs of the Transportation Department.

Based on the digital process, the Hong Kong Government could provide an online tracking tool to monitor the registration status (incl. one-for-one application approval status). This would greatly increase transparency for vehicle owners and reduce the number of inquiries. To further simplify the process and increase convenience, the Government could permit individuals to authorize registered distributors and other car retailers to handle the electronic application and submission, whereby authorization could be made through the uploading of an authorization form. The EAC believes that this would increase efficiency as applications could be submitted in batches by experienced professionals.

3.4 Monthly Registration Data

The vehicle industry is very dynamic, while supply chains are very long. Efficient market development requires the best possible matching of supply and demand in the market. Early, comprehensive, and transparent availability of market data is critical to steer the business.

Since late 2017, the Transport Department provides a monthly registration report, which is typically made available in the second half of the following month. The EAC appreciates the provided transparency of new vehicle registrations in Hong Kong as OEMs and retailers are actively using this data to steer the business.

Enabled by the aforementioned digitalized registration process, the EAC requests for the online reporting of real-time registration data including new vehicle first time registrations, vehicle ownership changes (used car market) and vehicle deregistrations to monitor total the total cars parked.

The EAC would be happy to further discuss details on registration data and process digitalization in order to explain and specify data needs.

EAC Recommendations:

- **The EAC recommends the Government of Hong Kong to review and update the type approval regulatory framework, with special focus on latest state-of-the-art ADAS, HVB and VDU technologies. This will reduce the need for individual additional applications and exemptions and as a consequence could significantly enhance process efficiency and reduce lead time.**
- **The EAC recommends the Hong Kong Government to allocate adequate resources to the relevant type approval-handling government departments in order to ensure an efficient homologation process. This will support a faster penetration of technologies that improve the safety and efficiency of driving in Hong Kong and are crucial steppingstones in the roadmap towards autonomous driving.**
- **The EAC recommends the Government of Hong Kong to consider adopting the UNECE type approval regulations; a well-established and broadly accepted regulatory framework. This will ensure that Hong Kong can enjoy the same efficiency and transparency benefits as multiple other leading markets.**
- **The EAC recommends the HKSAR Government to digitalize the entire vehicle registration process through electronic application and submission of supporting documents and requests an online tracking tool to monitor the registration status (incl. one-for-one application approval status).**
- **The EAC recommends the HKSAR Government to explore additional, more flexible payment possibilities for the First Registration Tax.**
- **The EAC requests for the online reporting of real-time registration data including new vehicle first time registrations, vehicle ownership changes (used car market) and vehicle deregistration to monitor the total cars parked.**

4. Commercial Vehicles

4.1 Introduction

Electrification and Advanced Driver Assistance Systems (ADAS) are advancing as quickly on commercial vehicles as on passenger cars, bringing similar challenges as noted above, while the size and weight limits for commercial vehicles affect the productivity rate of trucks with repercussions on their environmental impact.

The Hong Kong weight and dimension regulations are out of step with European and global trends, reducing the opportunities for the Hong Kong logistics industry to maximise efficiency while sometimes **even** adding **extra** costs for special adaptations. There may also be missed opportunities to standardise with Mainland China to optimise some cross border operations.

4.2 Advanced Driver Systems and Vehicle Dimensions

In general, Hong Kong weight limits are some two tonnes less than Europe. Many trucks that work to their load capacity (such as construction trucks) are therefore being under-utilized in Hong Kong. With road friendly suspension, (for example air suspension) reducing road damage, there are opportunities to review these regulations which would result in fewer trucks being needed on Hong Kong's roads.

As a matter of urgency, by excluding certain items from the overall length and width of vehicles, it can help speedy introduction of advanced driver assistance systems (ADAS) which will contribute greatly to increased vehicle safety on large commercial vehicles.

According to the recent trend, the number of articles and products transported are increasing along with a decrease in density of the freight moved, leading to a higher need for volume capacity. In order to embrace the demand for greater volume capacity, in 2011 the European Commission revised Directive 96/53/EC of July 1996, specifically with regard to the weights and dimensions of road vehicles. The purpose was to improve energy efficiency and road safety.

In Hong Kong there are several dimensional regulations that are out of step with European and global trends. For example, the lengths of articulated trucks, the axle spacing on four-axle trucks, minor fittings (such as grab handles) and ADAS equipment being included in Hong Kong overall dimensions, and the anomaly that vehicle width is allowed up to 2.55m on franchised buses but not on non-franchised buses, coaches, or trucks. While specific exemptions may be granted by the Transport Department, these have to be applied on a case-by-case basis taking time and resources from both the applicant and the TD.

4.3 Electric Light Vehicles & Charging

The EAC appreciates the release of the official "Roadmap on Popularization of Electric Vehicles", which shows a clear roadmap and initiatives to promote electric vehicles and charging infrastructure, including electric Commercial Vehicles. The EAC would like to see this expanded to further encourage the switch to electric LCVs. Therefore, the EAC encourages the Government to formulate more policies, in addition to the Pilot Green Transport Fund, to further motivate the replacement of Light Commercial Vehicles to Electric Vehicles.

The EAC encourages the Government to support or participate in charging infrastructure setup. In particular, for commercial vehicles, it is important **that** there is support for charging infrastructure setup covering industrial and other commercial vehicle operating areas, **including** compatible charging standard infrastructure with Mainland China **in order** to enable cross border transport by Electric Vehicles.

4.4 Alternative Fuels

The EAC wishes to open discussions on alternative fuels, in particular biodiesel and biogas. Alternative fuels are becoming commercially viable, as these can potentially fill the gap in the years before the electricity generation in Hong Kong is by non-fossil sources.

4.5 Recommendation

The EAC would like to propose the following recommendations for the consideration of the Hong Kong Government:

To review the current weight and length regulations in Hong Kong and align them, wherever possible, with the EU regulations, in order to allow for a better utilization of trucks, thereby reducing their number on the road while allowing for the optimal and safest technical solutions. In the first instance, allow Road Friendly Suspension (RFS) equipped vehicles to have extra loading allowances in Hong Kong with a First Registration Tax (FRT) reduction similar to the Environmentally Friendly Vehicles Scheme.

The review, as a matter of urgency, to exclude certain items from the overall length and width of vehicles, so as not to restrict and to simplify the speedy introduction of advanced driver assistance systems (ADAS) which will contribute greatly to increased vehicle safety, as also shown in the Council of the European Union's Directive 1230/2012.

Formulate more policies, in addition to the Pilot Green Transport Fund, to further motivate replacement of Light Commercial Vehicles with Electric Vehicles.

To support or participate in charging infrastructure setup covering industrial and other commercial vehicle operating areas including compatible charging standard and infrastructure with Mainland China in order to enable cross border transport by Electric Vehicles. Furthermore, to partake in open discussions on the introduction of alternative fuels, in particular biodiesel and biogas.

EAC Recommendations:

- **The EAC recommends the Government of Hong Kong to review and update the Advanced Driver Systems and Vehicle Dimensions requirement to maximize the utilization of trucks' usage and safety.**
- **The EAC recommends the Government of Hong Kong to release clear roadmaps to popularize electric commercial vehicles, which includes charging infrastructure, and charging network expansion plan both locally and for cross-borders transports to Mainland China.**
- **The EAC recommends the Government of Hong Kong to formulate more policies in addition to the Pilot Green Transport Fund.**