Electric vehicles have become more and more popular and said to be a new type of vehicles which replace the conventional vehicles. In this article, the key issues of electric vehicles from multiple perspectives regarding environmental, economic, professional, health and safety, and legal will be discussed and answer the question of whether electric vehicles paving the way to a greener future.

For the environmental perspective, electric vehicles have the potential to reduce greenhouse gases emissions and air pollution. However, the environmental benefits of electric vehicles depend on the source of electricity used to charge them. If the electricity comes from burning fossil fuels, such as coal and natural gas, which will emit greenhouse gas and cause global warming, the environmental benefits of electric vehicles may be limited. However, if the electricity comes from renewable energy such as solar power or wind power, which do not have negative impact to the environment and the environmental benefits can be significant.

Another environmental consideration is the production and disposal of batteries used in electric vehicles. The mining and processing of raw materials used in batteries can result in the release of toxic chemicals and the destruction of habitats. The disposal of used batteries can also lead to environmental contamination. However, the advances and improvement in battery technology and recycling programs can help mitigate these impacts in the future.

For the economic perspective, the cost of electric vehicles has traditionally been higher than that of conventional vehicles due to the cost of batteries and the development of hardware and system. However, as battery technology improves and production scales up, the cost of electric vehicles is expected to decline, making them more affordable for consumers. Also, consumers have lower operating costs than conventional vehicles, as electricity is cheaper than gasoline or diesel fuel, which save more cost for the consumers over the lifetime of the vehicle.

However, the transition to electric vehicles could also have economic impacts on the fossil fuel and conventional vehicles industry, which has traditionally been a major source of jobs and revenue. The shift towards renewable energy and electric vehicles may lead to job losses in the fossil fuel and conventional vehicles industry.

For the professional perspective, electric vehicles present opportunities for professionals in mechanical, electrical, electronic and chemical engineer to learn skills and knowledges in areas such as battery technology, power electronics, and software engineering, which help the development of related technology.

However, the transition from conventional vehicles to electric vehicles will presents challenges for professionals who are in conventional vehicles industry and not familiar with electric vehicles technology. The mechanics and service technicians who may not be trained in the maintenance and repair of electric vehicles, as well as the automotive engineers who may not have experience designing electric vehicles components.

For the health and safety perspective, electric vehicles can help improve the safety compared to traditional internal combustion engine vehicles. One advantage is that electric vehicles have fewer moving parts, reducing the risk of mechanical failure and increasing reliability. Another advantage is the absence of a fuel tank and combustible fuel can reduce the risk of fires and explosions.

However, there are some safety challenges that electric vehicles need to face. The systems used in electric vehicles pose a potential electrocution hazard to drivers and passengers, which may cause serious injury and accidents. Furthermore, the high systems create risks for electrical and fire hazards when operating or improper maintenance, which is also a serious safety concern.

For the legal perspective, electric vehicles raise several regulatory and liability issues. One major regulatory issue is the need for standards and regulations governing the safety of electric vehicles, including standards for the design, manufacture and testing of electric vehicles components, as well as regulations governing the installation and operation of electric vehicles charging infrastructure. Without appropriate safety standards and regulations, the development of electric vehicles could be hindered by concerns over safety.

Another regulatory issue is the need for consistent regulations governing the use of electric vehicles on public roads, including registration, licensing, and insurance. In many countries, these regulations are still in the process of developing, and inconsistencies between different countries can create barriers to the adoption of electric vehicles.

Electric vehicles have the potential to pave the way to a greener and more sustainable transportation system, but there are also some problems needed to be solved and challenges needed to be tackled. With the development and advance in technology, electric vehicles can have a better future.