

CHAPTER 1

INTRODUCTION

1.1 PROJECT BACKGROUND

Electric Vehicles is a vehicle that got a power from electricity that has been stored in the vehicle in the battery through the use of one or more motors. The number of motor is depending on the size/weight of the vehicle. Normally when people mention about EVs, what they actually mean is electric car, but generally EVs can be electric motor, train, bicycle, and so on. EVs has already been in industries since mid-19th century but due to the high cost, low top speed, and short travel range compared to the vehicles that use combustion engine which has lower cost, higher top speed led to the decline in their use. After the beginning of 21th century, the concern over the problem that related to the hydrocarbon-fuel vehicles that cause pollution to the environment and eventually will cause damage to the earth has growing. This makes the interest in EVs among people has increased.

Nowadays, gas as a fuel for all vehicle that have engine is becoming prohibitively expensive, and since it is not a renewable resource, everyone is becoming worried about the future and what the vehicle of the future will be powered with. So, we build the three-wheel electric vehicle to overcome this problem. Most three-wheeled electric vehicles run on engines that consume pretty much the power to achieve the distance. Many three-wheelers which exist in the form of motorcycle-based machines are often called trikes and often have the front single wheel and mechanics similar to that of a motorcycle and the rear axle similar to that of a car. Often such vehicles are owner-constructed using a portion of a rear-engine, rear-drive Volkswagen Beetle in combination with a motorcycle front end. Other trikes include ATVs that are specially constructed for off road use. Three-wheeled automobiles can have either one wheel at the back and two at the front, Morgan Motor Company or one wheel at the front and two at the back such as the Reliant Robin. Due to better safety when braking, an

increasingly popular form is the front-steering "tadpole" or "reverse trike" sometimes with front drive but usually with rear drive. A variant on the 'one at the front' layout was the Scott Sociable, which resembled a four-wheeler with a front wheel missing. Three-wheeler cars, including some cycle cars, bubble cars and micro cars, are built for economic reasons: in the UK for tax advantages, or in the US to take advantage of lower safety regulations, being classed as motorcycles.

As a result of their light construction and potential better streamlining, three-wheeled cars are usually less expensive to operate. Three-wheeler transport vehicles known as auto-rickshaws a common means of public transportation in many countries in the world, and are an essential form of urban transport in many developing countries such as India and the ` . Auto-rickshaws are a form of novelty transport in many Eastern countries. These three-wheel vehicles have been around the century, which is early automotive pioneer Karl Benz developed a number of three-wheeled models. One of these, the Benz Patent Motorwagen, is regarded as the first purpose-built automobile. It was made in 1885. In 1896, John Henry Knight showed a tri-car at The Great Exhibition. In 1897, Edward Butler a inventor made the Butler Petrol Cycle, another three-wheeled car. A Conti 6 hp Tri-car competed in 1907 Peking-to-Paris race sponsored by a French newspaper, *Le Matin*. This three-wheel vehicle much prettier same function with motorbike and car but difference in engine which is it used electric to move. So, it can call as eco-friendly vehicle. Simply put, in a way three wheeled vehicle are a perfect combination of the affordability and versatility of motorbikes and the safety and reliability of four wheeled cars of today.

1.2 OBJECTIVE

1. To develop three wheel electrical vehicle (tadpole design) that more balance than two wheel vehicle
2. To ensure that EV can be drive by battery system.