**Questions Related to New Energy Vehicle Assembly Plant Project**

**1, The status of China's development in the new energy automobile industry and its position in the international new energy automobile industry.**

Did you know that Chinese automobile technology is developing very fast? Note some background information:

In 2010, China became the world's largest automaker.

In 2016, Chinese car production was about 28 million units > Japanese car production. American car production. South Korean car production.

China produced 700000 new energy vehicles in 2016, the world's largest, more than any other country.

In 2017, China produced 860000 new energy vehicles, the largest in the world, surpassing other countries' total production of new energy vehicles.

In 2018, Beijing's latest production standards for electric vehicles were well above European standards.

Starting in 2016, China's electric vehicle manufacturing technology is ahead of the world, and it will issue China's V standard (Europe's V technology is the same). In 2020, China will use the standard Europe's sixth largest in order to reduce the production of petroleum-fueled vehicles. To promote the development of new energy vehicles, China will stop manufacturing petroleum-based vehicles in 2025, and all new energy vehicles will be produced. At present, the automobile factory in China has basically realized the automation of the automobile production.

**2, Category of new energy vehicle**

EV types according to maximum speed and range: slow speed EV( under 50Km/h), middle speed(60-95Km/h) and high speed( above 100Km/h)

EV types according to power: pure electric car( with Li battery and hydrogen battery, hybrid car(gasoline, diesel or CNG + electric power)

EV types according to usage: passenger EV( sedan, suv and bus), business EV(van, MPV) and logistic EV(cargo truck)

**3，Cost of EV manufacture**

Taking the electric bus for example: if the manufacture cost of diesel bus just 1, the cost of electric bus with same length would be 4 times of diesel bus and the cost of hybrid bus would be 3 times of its combustion type bus.

Taking the passenger EV for example, if the cost of petroleum combustion passenger car would be 10,000 USD, the low speed pure electric car’s cost also be 10,000 USD, the middle speed one would be 20,000 USD and high speed one would be 30,000-40,000USD, and hybrid passenger car manufacture cost would be 20,000-30,000USD.

**4, Why has China become the world's leader in the development of new energy vehicles?**

A, The Chinese government attaches great importance to the development of electric vehicles as a strategic opportunity to overtake the western developed countries.

B, As the second largest economy, China has a strong national strength, to develop new energy vehicles as a national strategy, invested a lot of money, new energy car consumers to provide huge government subsidies (50 percent).

C, After 40 years of reform and development, China has achieved tremendous economic and technological development.China has the industrial foundation of the entire industrial chain necessary for the development of new energy vehicles.

D, China's huge new energy electric vehicle market, provides the necessary conditions for China to become the world leader in the development of new energy vehicles.

**5, About the traditional petroleum fuel vehicle and new energy Electric Vehicle assembly Plant Project**

A,   Conventional petroleum fuel vehicles and new energy Electric vehicle assembly plant production lines are basically the same, if reasonable arrangement they can be co-production.

B， We will develop fuel and fuel vehicle models of the same type, maximizing efficiency

C, If SKD assembly lines, the cost of equipment will be 0.5-0.8 million USD; if CKD model of lines equipment, the cost will be 1-1.2million USD.

1. **Customized new Energy electric vehicles**

New Energy electric vehicle manufacturing cost is high, technical parameters are not higher the better, especially high-speed electric vehicle cost is very high, should according to market requirements, to develop suitable for the market electric vehicles

The South Asian market should be dominated by medium-and low-speed vehicles. In fact, we are not able to fully fuel the standard requirements of electric vehicles, with the development of electric vehicle technology, the gap will be reduced

1. **The battery power charging instructions:**

Low speed electric vehicles generally only support slow charge mode;

The low-speed four-wheel electric vehicle is a modern new energy vehicle. Its advantage is that it is not affected by soaring oil prices and is mainly powered by electricity. Therefore, the battery of the low-speed four-wheel electric vehicle is the core. Therefore, the correct charging method is very important. Determine the battery life. When charging the battery with a charger, plug in the charger's output plug, and then plug in the AC input plug. After charging, unplug the AC power supply, then unplug the charger output plug. In general, excessive discharge and overcharge of batteries are harmful. So charge it, don't overdo it. Electricity. The service life of low-speed four-wheel electric vehicle battery is related to its discharge depth. Lead acid batteries, in particular, cannot run out of electricity for long periods of time. Therefore, in order to extend the low-speed four-wheel electric vehicle service life, must maintain the battery, correctly charged.

High-speed electric vehicles not only support slow charge mode, but also support fast charge and quick change, more convenient.

Charge operator through training before operation. First, switch the switch on the corresponding charging pile knob of the distribution cabinet, the charging pile is electrified, the charging gun is connected to the charging port of the car, and the black switch is confirmed to fasten, (after fastening, the display screen inside the car will automatically light up). Click the touch screen operation screen "start charging", select automatic charging mode, and then swipe the card (stay at the card for 3 seconds). Check the charging information in the car to make sure the charge is started. It is forbidden to start the vehicle during charging to prevent damage to the vehicle and charging pile. After charging is over or in advance, finish charging by swiping the card, then unplug the charging gun and cover the charge Put the gun cap on the charging post hook. Close the distribution box for charging pile knob switch off before leaving. If abnormal charge or other circumstances should be reported to the doorman security, and report to the relevant leaders. Untrained personnel are prohibited from operating. If the charging pile is damaged by the untrained personnel or not according to the prescribed operation, compensation shall be made according to the price.

**8, About battery maintenance and lithium batteries:**

In order to extend the service life of a lithium battery as long as possible, we must do the following: when charging, select the right charger, supply the battery with the right voltage and current. When making lithium battery customization or purchase, we should customize or purchase the lithium battery with reasonable protection board to prevent the battery or charging line from abnormal electric power, break the circuit and protect the lithium battery if it is found abnormal. Pay attention to the temperature in daily use. If the temperature is too high, contact the manufacturer in time to avoid failure and irreversible damage. At low temperature, the capacity of using lithium battery will decrease. This is a normal phenomenon (usually below 30 degrees below zero), don't worry.

**9， About low speed electric vehicle range booster.**

The range-increasing device of electric vehicle is to install a small generating set on the low-speed electric vehicle. Charge the battery pack through a small generator set. Typically, when the battery is running out of battery power, start a small generator set to keep the electric vehicle moving. The drawback is that it adds 60 decibels to the weight of the car and to the noise of the small generator set. The advantage is that the range of electric vehicles can be extended.

**10, About hybrid cars.**

In a broad sense, a hybrid vehicle (Hybrid Vehicle) is a vehicle whose driving system consists of two or more single driving systems that can operate at the same time. The driving power of a vehicle is provided by a single driving system, either individually or jointly, depending on the actual vehicle driving state. A hybrid vehicle is generally referred to as a hybrid electric vehicle (Hybrid Electric Vehicle, HEV),) that uses a traditional internal combustion engine (diesel or gasoline engine) and motor as its power source. Some engines are modified to use alternative fuels, such as Compressed natural gas, propane and ethanol fuels, etc. With more and more strict measures of environmental protection in the world, hybrid electric vehicles (HEVs) have become a key point in vehicle research and development because of their characteristics of energy saving and low emission, and have already begun to be commercialized. The electric power system used in hybrid cars includes high-efficiency enhanced motors, generators and batteries. Batteries include lead-acid batteries, nickel-manganese hydrogen batteries and lithium batteries, and should be able to use hydrogen fuel cells in the future.

**11, Without substantial support from the local government, why is it difficult to make a profit on the production of new energy electric vehicles?**

Mainly for the following reasons:

A, Countries around the world are encouraging the development of new energy vehicles and trade liberalization policies, countries generally implement low or duty-free electric vehicles, so the entire car and parts of the tariff gap-assembly plants the main source of profit has disappeared.

B, National policies encourage the development of new energy vehicles, providing cash subsidies to manufacturers and consumers of electric vehicles.

**12, Tesla company fund chain breaks, why Tesla will go bankrupt. Why did Tesla move to China?**

Tesla company has been burning money, the company has no profit, capital chain is very tight. Tesla has recently moved to Shanghai, China, for the following reasons:

A, the Chinese government has a 50% subsidy to consumers of new energy vehicles.

B, China has a new energy vehicle manufacturing industry chain supporting system, related technology and talent.

C, China has a huge market of 1.4 billion people.

**13, The reality of the electric car industry, why say, in the less developed countries to promote new energy vehicles is a dream? Why is a new energy electric vehicle a luxury?**

Insufficient purchasing power, limited consumption level, insufficient market demand to support the development of industry;

Policy guidance, but the actual conditions can not be met, such as the implementation of standards, charging facilities and battery recycling policy;

The mileage of the single charge is difficult to match with the fuel vehicle, and it can not meet the needs of the users.

The time of single charge is too long, and it is inconvenient to use.

Because R & D and manufacturing costs are high, retail prices are four times the price of conventional fuel vehicles;

High-speed electric vehicles are expensive and have low use value, so they are difficult to be popularized.

**14, Why are new energy electric buses more suitable for developing countries?**

-The following are the reasons for our efforts to promote pure electric passenger cars in developing regions:

-In China, we have mature production technologies and standards (EU No.6 2025) in pure electric vehicles and there are buses in every capital city.

-At the bus line terminal, we can build convenient and suitable charging and charging facilities.

-Environmentally friendly, cost effective, government subsidies and recognition.

-Financed by the Import and Export Bank of China through buyer's credit.

**15，About Battery Recycling and Environmental pollution?**

A, Battery Recycling

The industrialization technology is not mature: the key technology of industrialization is missing, the recovery and utilization depends on the traditional technology, the equipment is not standard, the standardization is not realized, the production is not large scale, and the cost is high.

The recycling network is not perfect: the power battery recycling enterprises are few, the main body is less, the recycling channel is not perfect and so on.

The supporting system is not perfect: the related management standard and standard system of power battery recycling enterprise are not perfect, the technology research and development of power battery recycling, fiscal incentive and other supporting policies are not perfect.

Lack of innovation in business models: sustainable power battery recycling models are hard to start, and new energy car companies and power battery companies have yet to open up BMS data to power battery recycling companies. The integration of resources and cross-boundary coordination required for business model innovation is difficult to achieve.

Environmental problems arising from the collection, storage and transportation of waste batteries: accidents such as explosions may be caused during centralized storage and transportation; waste batteries may leak, corrode containers, means of transport, etc.; during storage, A large number of heavy metals may dissolve into the soil and other phenomena. Environmental pollution in the process of disposal: harm and collection of waste batteries to environment and human health, treatment and disposal methods are closely related to environmental pollution in the process of recycling and utilization of waste batteries: optimal disposal of waste batteries, The disposal scheme is recycling, but serious environmental pollution may occur in the process of recycling.

B, Environmental pollution

The main harmful substances contained in the battery include a large number of heavy metals and electrolyte solutions such as acids and bases. Among them heavy metals mainly have mercury, cadmium, lead, nickel, zinc and so on. Cadmium, mercury and lead are substances that are harmful to the environment and human health; contain waste acids, Potential environmental pollution problems caused by waste batteries of waste alkali and other components of waste electrolyte, which mainly include lead-acid batteries and cadmium nickel batteries used for waste car batteries, as well as pollution of the environment by heavy metals, There is environmental pollution caused by electrolyte, which is short-term and long-term.

**16，The difference between Lead-acid Battery and Lithium Battery**

A, nominal voltage different lead acid battery unit nominal voltage: 2.0 V; lithium cell nominal voltage: 3.6V B: internal materials different lead oxide, metal lead, The electrolyte is concentrated sulfuric acid: lithium positive and negative electrode is lithium cobalt acid / lithium ferric phosphate / lithium manganese, graphite, organic electrolyte

C: different lead acid battery 30WH/KG: lithium battery 150WH/KG

D: different lead acid battery in use: automobile start, Electric vehicle batteries: lithium batteries: mobile phones, computers, electric tools, now also used in electric vehicle batteries

E: electrical characteristics are different Lead acid battery can not discharge large current, short life: lithium battery can discharge large current, good life span

**17，Can the used batteries of electric vehicles be recycled and reused?**

As a convenient means of transportation in modern society, electric vehicles are widely accepted by people, and gradually replaced by motorcycles, bicycles and other means of transportation. With the large increase of electric vehicles, the use of batteries, the energy supply equipment, is bound to increase by geometric multiple. The service life of electric vehicle battery is only 1 ~ 2 years. Most batteries, especially lead-acid battery, have to be replaced after one year of service. How to deal with the batteries of electric vehicles after they are old? Lead and lead oxides in lead-acid batteries can pollute the environment and endanger human nervous system, digestive system and hematopoiesis. Li-ion batteries contain toxic substances such as lithium hexafluorophosphate, which will pollute the environment and ecosystem. Heavy metals such as cobalt, manganese, copper and other heavy metals will also harm mankind by the accumulation of biological chain. Therefore, the waste lead-acid, lithium-ion electric vehicle power batteries can not be stacked, discarded or dismantled, should be sent to the production enterprises or specialized recycling agencies for recycling. The potential environmental hazards of waste lead-acid batteries are serious due to their long period and high concealment, and the improper treatment may cause secondary pollution. In addition, in order to prevent some maintenance stations from retrofitting used batteries Assemble "fill with old", should send waste batteries to the original factory for recycling safer.

If you have any questions, please you inform us soon !