



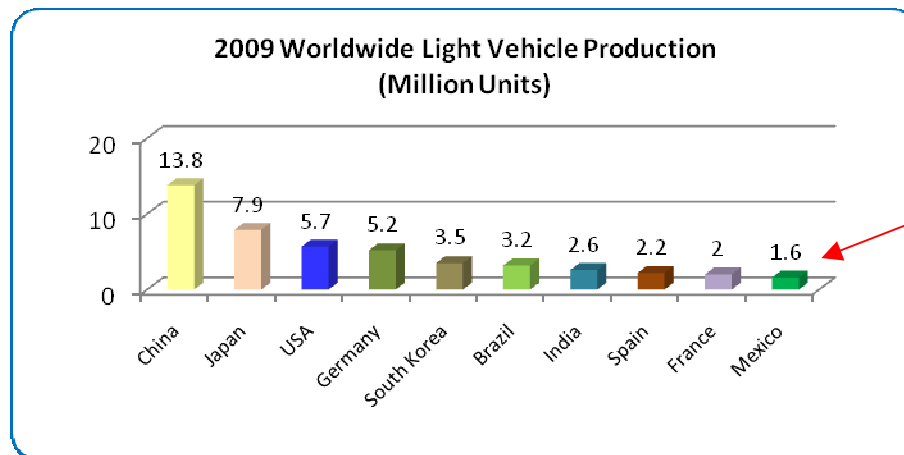
Mexico: Green Technology Trends in the Automotive Industry

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Summary

Mexico ranks as the world's tenth top automotive producer and third in the Americas after the United States and Brazil. The automotive sector in Mexico accounts for three percent of national GDP and 17% of manufacturing GDP. The automotive sector in Mexico offers consumers more than 40 brands to choose from. This sector has recovered from the global economic crisis and drop in sales last year.

The Mexican government issued the "Promotion and Development Law of Bio Energy" in 2008. Since then, Mexico has explored and provided funds to develop the production of biodiesel in the south of Mexico, as a potential project for the future. Other green fuels such as hydrogen, hybrid and electrical are not fully feasible in this market due to different factors such as lack of incentives such as reduction of taxation for green vehicle car purchasers and adequate infrastructure. In the case of electric vehicle recharging stations, the Mexico City Government in charge of environmental issues might implement them in 2011 at shopping malls, coffee shops and other public places.



Source: Secretariat of Economy (SE)

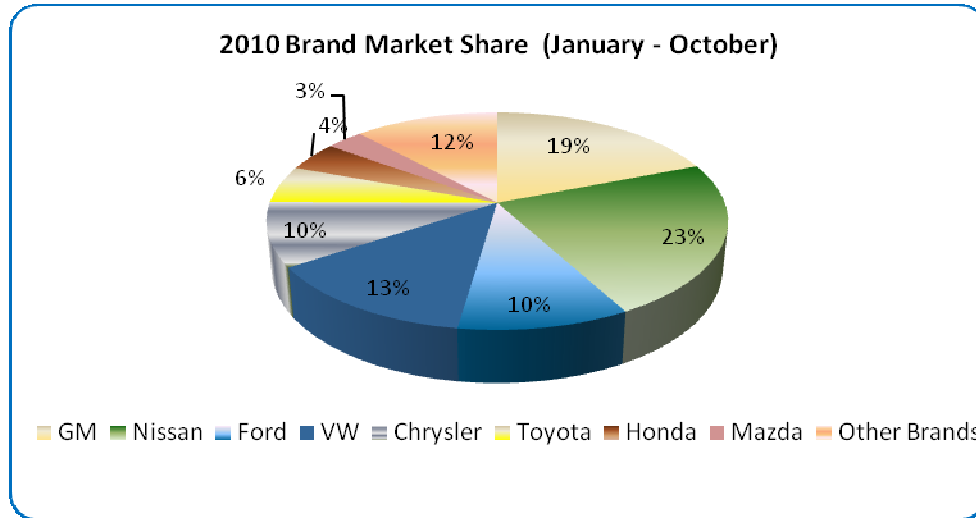
Market Demand

Mexico expects to produce 2 million vehicles in 2010, a growth of 22 percent compared to 2009. Automakers located in Mexico are focusing more on fuel efficiency for gasoline and diesel engines to increase the sale of new cars. They also offer hybrid and electric versions for their consumers. They know that the cost is high for their customers, but they are getting ready for the future and the environmental green trends. Current business strategies have changed such as to reduce the over-capacity of light trucks, to develop power train technologies, and to continue with car styles that have proven successful.

Companies are also developing competitive small and mid-sized vehicles, which must leverage their brands much better than they have in the past, moving them to a global standard for fuel economy and emissions. They are also working closely with the Mexican government to increase new car sales with the implementation of emission controls, standards, and a decrease of local taxation on new cars. Accessories complement the new car models. Some accessories bring comfort to their clients while others are technologically friendly and provide an advantage over their competitors.

Market Data

Mexico produced USD\$ 41.2 billion in auto parts in 2009 compared with USD\$58.3 in 2008. Due to the sector's recovery the Automotive Parts Manufacturer's Association (INA) estimates a production of US\$55.6 billion by the end of 2010. Mexican imports of auto parts reached USD\$ 18.5 billion in 2009 compared with USD\$28.4 in 2008. They numbers for 2010 are also expected to be close to the 2008 numbers. Major imports of auto parts are from the United States with 56%, followed by China with 10%, and Japan and Canada each with 5% respectively. There are currently seven manufacturers of vehicles in Mexico with 20 manufacturing plants generating one million jobs. There is high demand for the following auto parts: electric parts, transmissions, clutch, engine parts, gasoline engines, carpets and seats, suspension, steering and parts, accessories, stamping, car bodies, brakes, cooling systems, among others.



Source: Amda (Dealer's Mexican Association)

Recent Investment Projects

VW spent US\$ 410 million dollars, which is part of their US\$1 billion investment to increase by 25% its local production capacity. The company is developing new products, including the successor of the Beetle for 2011. They have invested US\$550 million for an engine plant in Silao, Guanajuato with an engine capacity of 330,000 units that will be completed in 2013.

Ford has 85 years in Mexico. They re-opened their plant in Cuautitlan in the state of Mexico to produce the Fiesta vehicle with a cost of US\$1 billion dollars in the plant remodeling.

Chrysler and Fiat announced an investment in Mexico of more than US\$550 million dollars to produce the Fiat 500 for the United States and Latin America. In 2012 this vehicle will be fully produced in Mexico and Chrysler is also developing an electric version of it.

Nissan will invest US\$600 million to produce the new Micra for 2011. The early production stage will be in their Aguascalientes plant and aims to produce 50,000 units.

GM has 75 years in Mexico. They plan to expand in the country and hope to strengthen their presence in the compact car segment and manufacturing of transmissions.

Best Prospects

There are some niche sectors more receptive than others to green technologies. Local automakers look for quality products, safety, technology and other components that increase fuel efficiency. There are several examples. One is the usage of natural fibers instead of synthetic fibers in car interior tapestry by using recycled materials for interiors.

Some other products may be lighter in weight, using innovative materials, price competitive, and flexible to adapt them to the client needs. In addition, competitive products that offer advantages such as paints with advanced high-solids technology have opportunity in Mexico and finally plastic parts, harnesses, resins and special steels do well here.

Diesel

This fuel has been used in Mexico for a long time, more for light and heavy vehicles than for subcompact and compact cars. However, automakers are using diesel for some of their models as diesel is a clean fuel that provides fuel efficiency and reduction of emissions and engine cost operations.

Electric Cars

These vehicles were promoted by a Chinese company, Zilent, with not much success in the Mexican market, due to quality issues and safety. Toyota started selling the Prius in Mexico but still not at competitive pricing. However, Nissan will start providing electric cars as taxi fleets to the Mexico City local government in 2011. The Mexico City local government will eliminate taxation and the emission screening process for electric cars to give an incentive to the consumer.

Hybrid Cars

Innovative technologies are needed not only by the manufacturers but also by the mechanics who repair the vehicles efficiently. Light vehicles used in fleets have been successful in integrating hybrid units to reduce 40% emissions and around 20% to 30% in fuel efficiency cost. Even though their cost per vehicle is 80% more than the regular vehicle cost, it has proven to be efficient in maintenance, better brake action, and a softer steering system.

Hydrogen

This new technology is not available in Mexico. Even though this is a 100% clean technology, the production of vehicles that use hydrogen is very costly and still not considered by local automakers. The return on investment for end-users is very long and not cost-effective.

Liquid Gas

This fuel has been used in Mexico only in buses used for public transportation. Some local transportation and private fleet companies use this fuel.

Manufacturing Equipment, Machinery and Other systems

Local automakers maintain and / or upgrade the manufacturing platforms with new technologies such as robots, automatic cutting presses, precision sensors, robotic painting systems, and tools that help them reduce the timing among production lines.

Lubricants

The National Oil Company and the National Institute of Ecology have explored recycling processes for used lubricants and oils with limited success. This market is saturated by foreign and local brands, which cover oils, additives and lubricants.

Accessories

There are several accessories that provide comfort, safety and much more to the vehicles. Some of them are available through the car dealers but others might be offered by distributors that also offer quality products to compete in the aftermarket.

Lighting

There is opportunity for headlights equipped with sensors that provide automatic light adjustments to prevent lack of vision due to light visibility and weather conditions. Fully electric auto-dimming mirrors with assorted features provide comfort to the driver and is another area of opportunity.

Monitor Sensors

Sensors have become popular for vehicles, especially sensors used to help with parking. Engine failure sensors are also used to prevent camshaft or other problems.

Entertainment

There is opportunity for steering wheel functions developed with controls for audio, cruise and air-conditioning control systems to provide comfort to the driver.

Technology

Efficiencies in pumping gas to the vehicle through a cap less fuel filler that has a spring-loaded door to insert the fuel nozzle into the tank is an option that reduces evaporative emissions which normally are released into the environment, when pumping gas.

Safety

Improved safety systems in the vehicle provide more safety to all passengers. Airbags protect people in the front while more stable and impact resistance materials protect all passengers. In addition stability control sensors reduce a car's speed to prevent accidents.

Car Care and Supplies

There are certain products such as car shampoo cleaners and car care supplies that include bio-degradable substances that provide a better usage of natural resources. They also contribute significantly to the reduction of water usage in car washing. This is especially useful for countries such as Mexico that have water scarcity issues.

Key Suppliers

Competition for electronic technology is mainly dominated by Asian countries. However, the United States is still the major supplier of auto parts to the Mexican market with a market share of 56%.

Prospective Buyers

Local automakers or OEMs do purchase from foreign suppliers. However, it is easier for them if the potential supplier has a distributor in Mexico who may already have business relations for related products with them. In addition, the distributor will need to know if the potential supplier sells to the OEM in the United States and if validation and tests have been conducted to become a qualified supplier. The process to sell directly from the United States to an OEM might take a longer time, due to their requirements to do business and comply with their supplier requirements. For innovative green products, U.S. exporters are advised to support distributors in Mexico, especially if there is an educational and marketing piece that would help sell the products successfully.

Market Entry

U.S. exporters are advised to assign regional distributors for their products. It is almost impossible for one company to cover the whole country and very few have several branch offices or outlets to serve other regions. Distributors in Mexico like to do business with companies that support them with printed brochures, training, marketing materials, fact sheets and technical support. Therefore, U.S exporters are advised to develop strong personal relationships before business is done, as Mexican distributors look for long term business relationships and need to trust their potential supplier. U.S exporters are highly recommended to remain flexible in financing options but also to utilize credit insurance to mitigate any risks.

Market Issues & Obstacles

EPA regulations are not applicable in Mexico, though they might be in a few years. Local manufacturers of buses and other vehicles are looking to comply with EPA regulations as they do in the United States, as a way to advance in the Mexican market when these become applicable in the future. There are certain Mexican standards that establish the emission standards for vehicles ranked by weight and fuel (gasoline, diesel or compressed natural gas (CNG)).

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