

Cng and Lpg Vehicle Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The CNG and LPG vehicle market is expected to register a CAGR of over 7% over the forecast period.

Manufacturing shutdowns, lockdowns, and trade restrictions during the COVID-19 pandemic negatively affected the CNG and LPG vehicle market. Furthermore, the fall in automotive production and lack of labor significantly impacted the market. However, in the second half of 2020, automotive manufacturers resumed operations due to steadily rising automobile sales in countries with a limited number of COVID-19 cases. Therefore, the market witnessed growth in the second half, and it continued for the year 2021 as well. Further, the stringent emission norms implemented by governing bodies, increasing fuel prices, and rising awareness among customers are driving the demand for alternative fuel-powered vehicles. For instance, in 2021, CNG vehicles recorded sales of 1,63,696 units, up from 41,572 units in 2020 in India.

Currently, global warming has become a major issue worldwide, and the public has begun to realize its ramifications. This has led to sentiment against the use of gasoline and diesel. The emission norms in some regions have become so strict that huge amounts of investment are required to make the vehicles compliant. This has put a lot of financial pressure, especially on the diesel vehicle manufacturers, acting as a major drivers for the CNG and LPG vehicle market.

Another factor aiding the growth of the CNG and LPG vehicles market is the rise in oil prices leading to the corresponding increase in fuel prices. For instance

Key Highlights

According to the IMF, oil prices rose by 12% in 2021 compared to 2020 due to the pent-up demand for oil created by the receding COVID-19 pandemic as the countries slowly opened up, and their economies started to grow again.

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Over the long term, the growth of automotive CNG and LPG can be attributed to the increasing use of alternative fuels in the automotive industry for cost-effectiveness, fuel efficiency, and emission control. The CNG and LPG vehicles are growing rapidly in developing countries, attributed to the lower cost of CNG and LPG over the rising prices of petroleum products. In addition, CNG and LPG vehicles are considered green alternatives to petroleum-operated vehicles.

The growth in the sales of CNG and LPG vehicles can also be attributed to the growth of the adoption of CNG buses for public transportation in the developing markets of India, Mexico, Africa, and Brazil, as the governments in these countries focus on making their public transport sustainable and achieve energy independence by cutting down on the imports of crude oil. For instance,

Key Highlights

In March 2022, Anhui Ankai Automobile Co. of China exported 800 CNG buses to Mexico under the new Xinhua Silk Route Initiative to deepen the cooperation between China and Mexico. These buses will be operated for public transport in the Mexican city of Monterrey.

Several key players are also launching new products to expand their market share. For instance

Key Highlights

In November 2022, Toyota Kirloskar Motor Pvt. Ltd, the joint venture of Toyota Motor Corp. in India, launched the CNG version of their premium hatchback Toyota Glanza in India.

In November 2022, Iveco, the commercial vehicle arm of CNH Industrial, a subsidiary of Stellantis N.V., displayed the CNG versions of S-WAY and Tector trucks at the Fenatran trade show in Sao Paulo, Brazil. Both vehicles will be launched commercially in Brazil by the end of 2023.

The Asia-Pacific region is the largest market for automobiles in the world. The region, despite the sluggish growth in the Chinese market, the largest automobile market in the world, is expected to lead the growth in the automotive CNG and LPG market during the forecast period.

Thus the confluence of the aforementioned factors is expected to produce significant growth in the market of CNG and LPG vehicles worldwide during the forecast period.

CNG LPG Vehicle Market Trends

Adoption of Stringent Automotive Emissions Norms and Rise in Fuel prices

According to United Nations Committee on Climate Change, road transport accounts for 25% of the total greenhouse gas (GHG) emissions, which are the major source of global warming and climate change. Countries all over the world are adopting stringent automotive emissions norms to combat the growing air pollution and improve the health of their citizens through the adoption of clean mobility.

In 2014 the European Union adopted Euro 6 norms, which tax vehicles based on per capita carbon emissions. Thus it required the incorporation of sophisticated exhaust gas recirculation and particulate filter systems in diesel vehicles to meet the stringent Euro 6 norms. This substantially increased the prices of diesel vehicles, making it no longer economically viable for fleet owners to buy

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new diesel vehicles to replace their old fleets. Hence many public transport operators and logistics companies started buying CNG/LNG-powered vehicles to replace their old diesel-powered fleets. This proved to be a significant factor in the rise in sales of CNG/LNG vehicles in Europe. For instance

In November 2021, Iveco won an order to supply 1064 units of CNG-powered S-WAY trucks to Amazon in Europe.

CNG vehicles use methane as the main fuel for combustion. Methane is the cleanest burning hydrocarbon in nature. CNG vehicles emit no unburnt or half-burnt hydrocarbons as tailpipe emissions. Thus the use of CNG as an automotive fuel has been observed to reduce vehicular pollution levels significantly since water vapor is the end product emitted from the exhausts of CNG vehicles.

Electric vehicles are nearly perfect solutions for achieving zero vehicular pollution levels. However, electric vehicles are much more expensive to buy than CNG-powered vehicles, have range issues, and the limited charging network for electric vehicles limits their sales potential in developing countries. Thus many vehicle owners prefer to buy CNG vehicles over electric vehicles in developing countries like India.

However, the cost advantage offered by natural gas vehicles and supportive government policies to encourage the adoption of alternative fuel-powered vehicles is driving the global CNG and LPG vehicle market. For instance,

In November 2022, 1 kg of CNG was priced at INR 78.61 (94 cents) compared to petrol which cost INR 96.72 (USD 1.16) per liter, and diesel which was priced at INR 96.67 (USD 1.16) per liter in New Delhi, India. This substantial difference in CNG and petrol/diesel pricing and the higher mileage of CNG vehicles than petrol/diesel vehicles has almost doubled the sales of CNG vehicles in India over the past few years.

Many governments are also taking major steps to increase the network of CNG filling stations in their countries. This is also projected to increase the sales of CNG vehicles further in these countries.

Thus the combination of all the above factors is anticipated to propel the market for CNG and LPG vehicles worldwide over the next five years.

Asia-Pacific Region is Expected to be the Largest Market During the Forecast Period

Asia-Pacific is forecasted to be the largest market for CNG and LPG vehicles in the world due to the presence of India.

India is predicted to have the largest number of CNG vehicles in the world due to the higher prices of petrol and diesel, the adoption of stringent automotive emissions norms, most of the buses, taxis, and autorickshaws running on CNG, the availability of a large number of CNG/LPG retrofitting kits, higher conversion rates of old petrol and diesel vehicles to CNG/LPG and limited penetration of electric vehicles.

The governing bodies across the country are focused on developing infrastructure for the growth of alternative fuel-powered vehicles. For instance, in July 2022, the Government of India inaugurated 166 new CNG stations across 14 states in the country. The Government also plans to set up 3500 CNG stations in India in the next two years. Such factors are likely to remain prominent market drivers during the forecast period.

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Following Asia-Pacific, Europe and North America are predicted to be the next biggest markets due to lower prices of natural gas and the adoption of stringent emission norms.

CNG LPG Vehicle Market Competitor Analysis

The CNG and LPG vehicle market is highly fragmented and dominated by several global and local players. Some of the major players are Hyundai Motor Company, Suzuki Motor Corporation, Nissan Motor Co., Ltd, Volkswagen AG, and Honda Motor Company. The major companies are launching new products and forming joint ventures to cement their market position. For instance,

In August 2022, Scania, a brand of Traton SE, the Volkswagen Group commercial vehicle division, delivered the country's first dedicated natural gas truck to BridCam Distributors in Gauteng, South Africa.

In January 2022, Iveco Bus partnered with SOTRA in Ivory Coast, Africa, to start the local assembly of CNG-powered Iveco Daily Minibus.

In January 2022, Eicher (VECV) showcased CNG variants of its 4.9 and 5.9-metric-ton trucks, typically used in last-mile delivery operations by fleet owners. While these are the lightest payload trucks VECV offers, the automaker plans to bring in CNG trucks with higher payloads as the footprint of CNG stations is likely to increase in the coming years.

Additional Benefits:

The market estimate (ME) sheet in Excel format
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