Germany

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Since the last article on Germany in late 2019, many events have affected the worlds communities and economies. It was reported by Deutsche Bundesbank that Covid-19 ended a ten-year run of growth, being only slightly less severe than the 2009 economic downturn. This impacted foreign trade severely with both exports and imports shrinking, leading the government to its first financial deficit since 2011 and having to borrow just over 158 billion Euro.

The supply of natural gas from Russia affected Germany economically, and within the space of around 12 months, led to the cessation of Russian gas purchases due to their invasion and the Noord Stream Gas pipeline project being shelved. Prior to this, Germany imported 34% of its crude, 50% of coal, and 37% of natural gas from Russia.

It was estimated by the German Council of Economic Experts that for the period 2022/23 versus the previous year, German natural gas prices jumped 200% in August, and electricity 265%. This prompted the development of alternative, low carbon energy development in renewables such as hydrogen, and the expansion of the energy infrastructure to allow increased flexibility in energy demand. This, even though energy demand is typically between 2% and 5% of total costs. The use of oil products remains Germanys most important primary energy source at just over 32% in 2022, mainly used in the transport industry having imported 81 million tonnes of crude in 2021.

Germany leads by volume in registrations of alternative powered vehicles in Europe, the production of BEV, PHEV, and hybrid powered vehicles lags, compared to China, which leads in sales and production in this market. They are fast trying to catch up and not lose further market share.

The Auto Industry is also facing increased pressure from the European Union to further reduce emissions, and the latest move to Euro 7 emissions is already seeing resistance from ACEA members who have reduced development in internal combustion engine processes to concentrate on alternative powered vehicles. They have voiced concerns about the true benefits of Euro 7 in ICE engines, based on the time frames put forward. Euro 7 for light duty engines is proposed to enter into force from July 2025 and for heavy duty, July 2027. The major change over Euro 6d, is tests conducted under real driving emissions with a wider application range.

German bus sales increased by 27%, and trucks by 24% in the first half of 2023, with diesel still the dominant fuel type at about 96% market share. This follows a decline in 2022 of truck sales by all fuel types, including hybrid and hybrid electric units. Diesel cars showed the greatest sales reduction at the expense of electric power.

The initiative to alternative power has also meant automotive lubrication experiencing significant changes to lubricating oil viscosities in both engine crankcase, transmission, and gear oils with SAE 0W/5W-20 grades, and 70W/75W-80 grades and lower viscosity ATF fluids. This has also included the development of new, low viscosity fluids and coolants for electric vehicles.

It is believed that ICE powered passenger cars will still dominate for some years, as electric cars are still too expensive, and the infrastructure needs rapid expansion. The bus market can change relatively quickly as can be see in registrations to date, as cities tighten emission pollution laws. In comparison, the heavy-duty diesel-powered truck will remain as the prime energy source for much longer, or until hydrogen and other alternative fuel types become easier to transport and use as safely as fossil fuel. With 2045 being Germany's climate zero target date, the pressure will increase to meet this objective, whilst balancing this expectation with their economic goals and remain competitive.

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