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CARS AND ECOLOGY

In today's world, environmental damage caused by cars and the push for electric vehicles (EVs) is a pressing issue. Many believe EVs are a sustainable alternative, but are they truly more eco-friendly than gasoline cars?

Early automobiles used ethanol, which was more sustainable than gasoline. However, John Rockefeller’s Standard Oil, along with Prohibition, led to the dominance

of gasoline. By 1920, General Motors introduced tetraethyllead to boost octane levels, despite its toxicity. This led to widespread pollution, with evidence showing lead poisoning in workers and the environment. Research by Clair Cameron Patterson and legislative efforts by Edmund Muskie eventually led to the removal of leaded gasoline by the 1990 s.

In 1948, the Donora Smog incident in Pennsylvania and the Great Smog of London in 1952 highlighted the deadly effects of air pollution, leading to the 1955 Air Pollution Control Act. By the 1960s, studies showed that 83 million cars significantly contributed to air pollution. Muskie, as a senator, played a crucial role in advancing environmental policies, including the Clean Air Act, which led to the adoption of catalytic converters. However, these converters were incompatible with leaded gasoline, accelerating the push to remove lead additives. Moreover, studies show that the use of gasoline with tetraethyl lead had long-term negative effects on human health, lowering IQ levels and increasing crime rates.

Environmental concerns grew globally, leading to the introduction of emissions standards like Euro 6, with Euro 7 on the horizon. The aim is to reduce emissions to zero, which is impossible with internal combustion engines. However, modern gasoline and diesel engines already produce fewer particulates than brake pads and tires combined. As a result, EVs are promoted as the ultimate solution, but are they truly green?

Lithium, essential for EV batteries, requires extensive mining, with major reserves in Chile. Extracting one ton of lithium requires processing 250 tons of rock or 750 tons of salt solution, consuming 1,900 tons of fresh water, worsening local water shortages. Additionally, 63.3 % of electricity used for EV charging still comes from fossil fuels, mainly coal. Since 2000, this percentage has only dropped by 1.5%.

Battery disposal is another issue. Only 5 % of used batteries are recycled, with the rest ending up in landfills, poisoning soil and vegetation. Recycled materials are impure and more expensive than freshly mined resources, making battery recycling inefficient.

All in all, some environmentalists argue that modern gasoline engines might be less harmful than EVs. In addition, true environmental change will only happen when sustainability becomes financially profitable.