

Addenda #60 – August 2024, Update – June 2025

Re: Ch. 11, Vehicle “Electrification” by 2050; Impossible!

*SDG 7 - Ensure access to affordable, reliable, sustainable and modern energy for all*

Addenda #60 showed that a number of car manufacturers have started rethinking their commitment to vehicle electrification plans, as sales of battery-powered cars were not increasing as fast as anticipated. Although EV sales in the U.S. grew 52% and crossed the one million mark in sales for the first time, they represented just 7.6% of the total 15.6 million light-duty vehicles sold in 2023. America set another record for electric vehicle sales in 2024, as consumers bought 1.3 million EVs. Pro-electric vehicle advocates promoted the “record-breaking surge” in EV sales, but the year-over-year increase was just 7.3%, an enormous drop from the previous year’s 52% growth. The unspoken fact remains that 14.558 million (91.9%) of total sales in 2024 were gas or diesel powered vehicles and 98.6% of all vehicles registered in the U.S. were gas or diesel powered in 2024. <sup>[1][2]</sup>

President Bidens 2021 Executive Order 14037 mandated that by 2030, 50% of all passenger cars and light-duty truck sales must be battery electric, plug-in hybrid electric or fuel cell electric vehicles. In 2024, the Biden Environmental Protection Agency announced final standards to further reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027 and being completely “phased in” by model year 2032. The EPA ruling would effectively force auto manufacturers to produce enough zero-emission, fully electric vehicles, to make up as much as 30 to 56 percent of light-duty sales between 2030 and 2032, to be able to reach the required emissions levels. <sup>[3][4]</sup>

The EV Executive Order and the EPA mandate were revoked by President Trump during his inauguration on January 21, 2025. The current “Big Beautiful Bill” making its way through Congress will end tax credits for all new and used EV purchases. These tax credits are the main reason that EV sales were increasing, so the future is looking less positive for electric vehicles and manufacturers. Additional headwinds for EV sales include continued consumer frustration with public charging infrastructure. The 2021 Infrastructure Investment and Jobs Act gave states \$5 billion over a five year period to deploy EV charging infrastructure along the national highway system, public roads and in other public locations. States received an additional \$2.5 billion to allocate towards charging infrastructure as they saw fit.

Due to U.S. Department of Transportation bureaucracy, final rules for the program weren't available until February 2023 and the permitting and approval process was slow and complicated. As of February 2025, just 1,000 projects had been awarded federal grant money through the National Electric Vehicle Infrastructure (NEVI) Formula Program and only 57 charging stations had opened across 15 states. Charging stations that were operational were often unreliable. In the 3<sup>rd</sup> quarter of 2024, 19% of visits to public chargers resulted in a failed attempt to charge the vehicle, with the lowest-performing charging provider having successfully charging just 58% of the time. <sup>[5][6]</sup>

Note: The Trump administration “paused” future NEVI funding in February.

General Motors announced in March that they were investing \$888 million in its Tonawanda Propulsion plant in Western New York, to support the production of the company's sixth generation of small-block V-8 gas engines. GM also announced \$854 million would be allocated to other plants for the same purpose. Previous agreements to invest hundreds of millions of dollars in EV production have now shifted production back toward internal combustion engines. <sup>[7]</sup>

Honda also announced plans in May it will cut back on its previous investment plan for electric vehicle technology in response to its disappointment in the growth of the EV market, even though Honda Global still plans to achieve a goal to "achieve carbon neutrality for all products and corporate activities" by 2050. The cut in investment towards all electric vehicles comes to \$20.558 billion U.S. dollars as Honda now expects global EV sales to fall below its former target of 30%. Instead, Honda plans to invest more money into production of hybrid electric vehicles which combine a conventional internal combustion engine with one or more electric engines, using stored electricity from regenerative braking. <sup>[8]</sup>

Although global EV sales are steadily increasing, U.S. sales have been falling far behind those of Europe and China. Infrastructure for EVs in the U.S. is much less developed than the infrastructure for gas vehicles, which took decades to build, and many consumers are hesitant to purchase EV's due to the limited number of available charging stations. Consumers have also seen the problems EV owners had during extreme weather conditions, when cold weather severely reduced the range of electric batteries and charging during cold weather became problematic. Utility companies are still years away from being able to supply all the electricity required to support the electrification of vehicles, let alone houses and businesses.

Now that government subsidies for electric vehicles appear to be ending, the availability of electric vehicles will be beyond what most consumers can afford. The reduction in selling price due to tax credits were the only reason that many buyers could afford EVs. Even the most enthusiastic middle-income green energy supporters will have a difficult time affording an electric vehicle, especially if auto manufacturers continue to reduce investments in them. Price reduction over time is only achievable when large scale purchasing and production occurs with any product. Until this occurs, electric vehicles will remain a "market niche" with limited production and sales.

#### Addenda #60 Update Sources

1. Electric Vehicle Sales Jump Higher in Q4, Pushing U.S. Sales to a Record 1.3 Million; Cox Automotive, January 13, 2025
2. Electric Vehicles: 2024 Year in Review, Experian Velocity Statistics, December 2024
3. Ref: A Clear and Present Danger, Threat #2, Chapter 11
4. Ref: Addenda #51 – July 2024
5. Status of Federal Implementation of EV Charging Infrastructure; CRD Insight, May 30, 2025
6. Is Public EV Charging Infrastructure Making Progress?, J.D. Power, December 20, 2024
7. GM to invest \$888 million in Tonawanda Propulsion Plant; GM News, May 27, 2025
8. Honda Bucks Trend And Rolls Back EV Plans In Favor Of Hybrids; Forbes, May 20, 2025