dvrpc Alert

The **Alert** newsletter provides monthly updates on transportation and air quality planning activities within the Delaware Valley.

January 2025

Climate Change

EPA Report Shows Historic Improvements in Fuel Efficiency for Light-Duty Vehicles

On November 25, 2024, the United States Environmental Protection Agency (EPA) released its latest Automotive Trends Report, which shows that the average real-world fuel efficiency of new light-duty vehicles (LDVs) for sale in the United States has reached an all-time high, while the average rates of carbon dioxide (CO_2) emissions per mile have reached an all-time low. The report states that the average fuel efficiency for all model year 2023 LDVs is 24.9 miles per gallon (mpg) for gasoline-powered vehicles and 27.1 mpg for all vehicles including equivalents for battery and plug-in hybrid electric vehicles.

This year marks the 50th anniversary of the Automotive Trends Report, which has been published by EPA every year since 1975. The report uses emissions test results collected from federal laboratories and automakers as part of government programs such as the Corporate Average Fuel Economy (CAFE) standards. This gives the report's authors data on every LDV sold by a major automaker in the United States since model year (MY) 1975. Remarkably, the fuel efficiency of the nation's new LDVs has more than doubled since MY 1975 when the new car or light truck consumed a gallon of gasoline every 13.1 miles on average. The report credits much of these gains in fuel economy to cumulative effects of decades of technological development in the automotive industry for both gasoline-powered internal combustion engines (ICE) and electric vehicles.

A major development for ICE vehicles has occurred in how fuel is delivered to the engine. When emissions and efficiency standards were first introduced in the 1970s and 1980s, nearly all vehicles used carburetors to inject a mixture of fuel and air into the engine's cylinders and valves with fixed timings to control the flow of air and exhaust into and out of the engine. In contrast to those of modern vehicles, engines designed with carburetors and fixed-valve timing are mechanically simpler but also inflexible and inefficient. Today, the majority of vehicles combine variable valve timing and direct fuel injection with advanced onboard computers to fine-tune the engines' operations and maximize fuel efficiency given current driving conditions. Many ICE vehicles sold today also use engine start/stop technology that allows the engine to turn off and quickly restart to avoid idling while stopped. Furthermore, 15 percent of MY 2023 vehicles feature cylinder deactivation technology that allows the vehicle to turn off individual engine cylinders, effectively shrinking the engine's displacement when full power is not needed.

Vehicle electrification has had a positive impact on emissions from the transportation sector, especially in recent years. The report found that the increasing adoption of electric vehicles has accelerated the downward trend in vehicle emissions, already decreasing average CO_2 emissions by 11 percent per mile. This trend is expected to continue as electric vehicles increase their share of vehicle sales in the United States.

Save the Date

Wednesday

February 5, 2025

NJ DEP Green Acres Grants

Applications Due

For more information visit: dep.nj.gov/grantandloanprograms/green-acres-nonprofit-acquisition-grants/

Monday

March 31, 2025

DVRPC New Jersey Transportation and Community Development Initiative

Application Period Closes

For more information visit: https://www.dvrpc.org/tcdi/

Electric Vehicles

NJDOT Awards Contract for Electric Vehicle Charging Stations at 19 Locations

On December 12, 2024, the New Jersey Department of Transportation (NJDOT) announced it had awarded a contract to add 76 DC fast charging (DCFC) ports at 19 locations across the state as part of the federal National Electic Vehicle Infrastructure (NEVI) Program which aims to establish a national network of DC fast chargers along interstates and other highways designated as Alternative Fuel Corridors (AFCs).

To be eligible to receive part of the $5 billion in federal NEVI funding, states were required to develop a plan detailing how they would implement charging on the AFCs and have the plan approved by the Federal Highway Administration (FHWA). For an AFC to be considered "built out," there must be an eligible charging station within one mile of an interchange with the highway at least every 50 miles along the corridor. Eligible DCFCs must have at least four ports, each capable of simultaneously delivering 150 kilowatts of power as well as meeting requirements for reliability, accessibility, and other criteria. In contrast to the Pennsylvania Department of Transportation, which identified gaps in charging stations and solicited offers to fill each one separately, NJDOT awarded a single contract worth $20.96 million to Joseph M. Sanzari, Inc, a Hackensack-based construction company, to complete all AFCs along NJDOT-maintained interstate highways. Separately from the Department of Transportation, the New Jersey Turnpike Authority will handle contracting for stations along the New Jersey Turnpike and Garden State Parkway, while the South Jersey Transportation Authority will provide chargers along the Atlantic City Expressway. According to NJDOT's AFC zones map, the southern portion of the state will host 6 NEVI-funded stations along interstate highways: four along Interstate 295, one along Interstate 195 in Mercer County, and one along Interstate 76 or 676 in Camden County. NJDOT also specified that eight of the 19 stations statewide will be located in disadvantaged or overburdened communities.

The NEVI Program was established by the Infrastructure Investment and Jobs Act (IIJA) of 2021 with the goal of creating a convenient and equitable network of chargers that gives people the confidence to buy and drive electric vehicles, especially in areas where charging opportunities are currently sparse. The IIJA, also known as the Bipartisan Infrastructure Law, also created the $2.5 billion Charging and Fueling Infrastructure (CFI) Discretionary Grant Program that can be used to fund a broader range of projects that might not be eligible for the NEVI Program. For example, projects installing Level 2 chargers or those not on a designated AFC are eligible to compete for CFI funds. The NEVI program also differs from the CFI program in that its funds are distributed to all states via a formula, whereas the CFI Program is federally competitive. Under the NEVI funding formula, New Jersey was allocated a total of $104 million over five years to build out its AFCs. Once the state has fast chargers meeting NEVI standards either operational or under construction along all its corridors, FHWA will certify the state's AFCs as "fully built out," after which any remaining NEVI funds may be used for charging projects elsewhere in the state.

According to the Joint Office of Energy and Transportation's most recent quarterly update, there are 126 operational charging ports at 31 stations in nine states funded by the NEVI program. Additionally, conditional awards or agreements have been made for over 3,560 DCFC ports at 890 stations in 35 states.

New Jersey Surpasses 200,000 Electric Vehicle Registrations

On December 10, 2024, two days before the announcement of the statewide NEVI contract, New Jersey Governor Phil Murphy released a statement celebrating surpassing 200,000 electric vehicle registrations in the state. According to the press release, nearly 208,000 electric vehicles, including battery-electric and plug-in hybrid vehicles, were registered with the state's Motor Vehicle Commission. This represents more than double the number of registered electric vehicles in the state from just two years prior. The statement highlighted the Murphy Administration's work promoting vehicle electrification which, it says, "has implemented some of the nation's most progressive programs to incentivize purchases of EVs and ensure the availability of charging infrastructure to help consumers overcome 'range anxiety.'" This includes $600 million in incentives through programs such as the Charge Up New Jersey rebate, Clean Fleet EV Program, and Diesel Modernization Program.

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