

Congestion Mitigation and Air Quality Improvement (CMAQ) Program



U.S. Department of Transportation
Federal Highway Administration



Alternative Fuel Vehicle (AFV), Electric Vehicle (EV) and Refueling and Charging Infrastructure Projects

Some alternative fuels are cleaner burning than gasoline and diesel and produce fewer tailpipe emissions. For example, a light-duty natural gas vehicle can produce 80 percent fewer tailpipe emissions than a gasoline vehicle. A light-duty propane vehicle can produce 60 percent fewer harmful emissions than its gasoline counterpart. Electric vehicles (EVs) are classified as zero emission vehicles because they produce no tailpipe or evaporative emissions.

Alternative Fuel Vehicles

CMAQ funds may be used to support projects involving the use of alternative fuels (biodiesel, electricity, ethanol, hydrogen, natural gas, and propane) or renewable fuels, as defined in the Energy Policy Act of 1992 or the Energy Independence and Security Act of 2007. All standard eligibility criteria apply. Aside from fuel acquisitions that are part of a transit operating support effort, the stand-alone purchase of any fuel--alternative or otherwise--is not an eligible CMAQ cost.

For purchase of privately owned vehicles or fleets using alternative fuels, CMAQ funds may be used for only the incremental cost of an AFV compared to a conventionally fueled vehicle. Furthermore, if other Federal funds are used for vehicle purchase, such funds must be applied to the incremental cost before CMAQ funds are applied.

Many times, the incremental cost of purchasing an AFV is offset by Federal and State incentives and rebates offered by the auto manufacturers. Additionally, use of AFVs by high-profile fleets increases public awareness and approval of alternative fuels. This is especially true for public transit and school districts, where low emissions are very important. Operators of private delivery fleets often publicize their use of alternative fuels, even if they are only being tested.

Hybrid Vehicles

Although not defined by the Energy Policy Act of 1992 as alternative fuel vehicles certain hybrid vehicles that have lower emissions rates than their non-hybrid counterparts may be eligible for CMAQ funds.

Vehicle Charging and Refueling Infrastructure

CMAQ funds can be used to support the costs of vehicle refueling and charging infrastructure, including infrastructure that would support the development, production, and use of alternative fuels including EV charging stations that reduce emissions of air pollutants from motor vehicles. New under BIL, CMAQ funds can support nonroad vehicles and nonroad engines used in construction projects or port-related freight operations, and other capital investments associated with the project. Eligibility further extends to the purchase of medium-or heavy-duty zero emissions vehicles and related charging equipment.

Establishing publicly owned fueling or charging facilities and other infrastructure needed for AFVs and EVs is an eligible expense. Fueling facilities can dispense one or more of the alternative fuels identified in Section 301 of the 1992 Energy Policy Act or biodiesel or provide charging for EVs. Additionally, CMAQ funds may be used for projects to support converting or expanding a private fueling facility to support the use of alternative fuels for private fleets through a public-private partnership agreement.

Electric Charging and Natural Gas Vehicles and Infrastructure

A State may obligate funds apportioned for a project or program to establish EV charging stations or natural gas vehicle refueling stations for the use of battery powered or natural gas fueled trucks or other motor vehicles at any location in the State with priority given for Alternative Fuel Vehicle Corridors designated under 23 U.S.C. 151. These stations may not be established or supported where commercial establishments serving motor vehicle users are prohibited by 23 U.S.C. 111.

Examples of Successful Alternative Fuel Projects

Park Forest & Homewood , IL: This five-year project included two parts. The first part was the expansion of the Park Forest Compressed Natural Gas (CNG) facility, including design and construction of a new CNG facility in Homewood to provide 30 fill stations plus 3 filling stations for public access. The project also funded the replacement of 60 diesel powered refuse haulers with 60 CNG refuse vehicles. The vehicles purchased collect refuse and recycling materials, as well as, construction debris in 78 communities in Northeast Illinois. The project cost \$5.2 million (\$4.2 million CMAQ; \$1 million local match).

- *Estimated emission reductions: 0.73 kg/day volatile organic compounds (VOC), 34.26 kg/day nitrogen oxides (NOx), and 0.44 kg/day particulate matter (PM_{2.5})*

Hobart, IN: The City of Hobart, in partnership with the South Shore Clean Cities/Northwestern Indiana Regional Planning Commission Green Fleet Program, installed new facilities to safely service its fleet of compressed natural gas (CNG) vehicles, which are fueled on-site at the city's 12-pump CNG fueling station. The project cost \$725,000 (\$580,000 CMAQ; \$145,000 local match).

- *Estimated emission reductions: 0.37 kg/day VOC, 4.28 kg/day NOx, 0.021 kg/day PM_{2.5}, and 1.78 kg/day carbon monoxide (CO)*

Seattle, Washington: The Washington State Ferry (WSF) Hybrid Electric Ferry Conversion Project is part of a three-phase Washington State Department of Transportation (WSDOT) program to transition to a zero-carbon emissions ferry fleet. This project includes purchase of equipment needed for the conversion of two Jumbo Mark II Class (JMII) vessels to hybrid electric propulsion and integration of battery storage technology into the existing diesel electric propulsion systems.

- *Estimated emission reductions: 854 kg/year NOx, 44 kg/year PM_{2.5}, and 436 kg/year CO*

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For more information, please contact:

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