



USDOT CMAQ Program

Southeast Diesel Collaborative
Annual Conference
September, 2017

CMAQ & Title 23: *What and Why?*

Section 149: *The CMAQ program is established for transportation projects that contribute to the attainment or maintenance of the national ambient air quality standards for ozone, carbon monoxide, or particulate matter.*



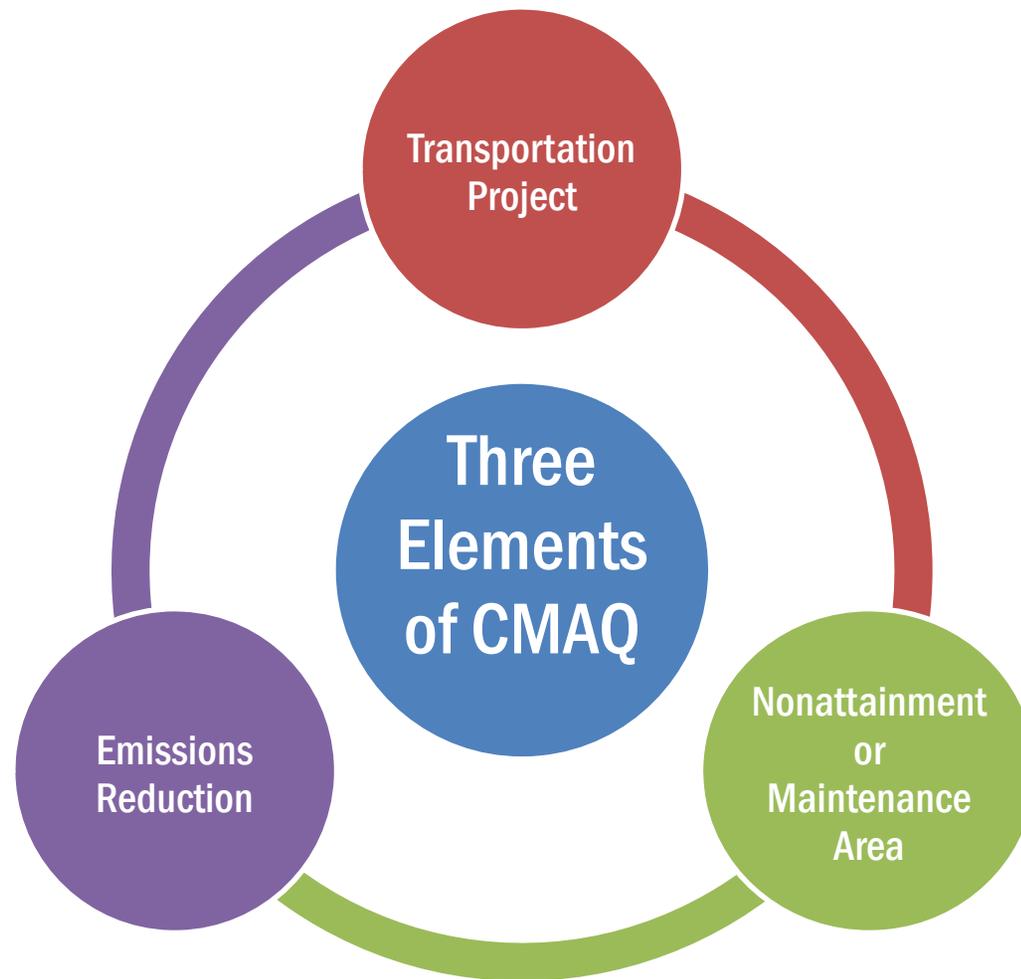
Interim Program Guidance under MAP-21

- Effective November 12, 2013
 - Explains the program requirements under MAP-21
 - Includes project types that may be eligible for CMAQ
 - Covers roles and responsibilities of MPOs, State DOTs and USDOT
 - Discusses annual project reporting
- Revised Interim Guidance on CMAQ Operating Assistance issued July 2014
- http://www.fhwa.dot.gov/environment/air_quality/cmaq/

CMAQ & Project Selection

- Project selection is NOT a Federal role—23 U.S.C. 145
- Processes vary at the State & local level
- FHWA encourages a competitive approach
- DOTs & MPOs should consult with each other and State and local air quality agencies
- Contact State DOT and appropriate MPO

Basic Eligibility



Projects to Date.....

- Over \$30 billion, 34,000 projects, since 1992
- CMAQ Public Access System
https://fhwaapps.fhwa.dot.gov/cmaq_pub/
- Wide range of eligible projects
 - Diesel retrofits and engine replacements
 - Anti-idling facilities, APUs
 - Traffic flow improvements
 - Freight & intermodal operations
 - Transit improvements
 - Bicycle and pedestrian projects
 - Demand management
 - Shared ride services
 - Carsharing
 - Alternative fuels



FAST Act Summary - Continuation

- Diesel retrofits
- Construction equipment and vehicles
- Traffic flow Improvements
- Carsharing
- Electric vehicle recharging and natural gas vehicle refueling infrastructure

FAST Act Summary - New

- Connected Vehicle – CV
- Vehicle to Infrastructure – V2I
- Verified technologies for non-road vehicles and non-road engines that are used in port-related freight operations
- Eligibility for electric vehicle and natural gas vehicle infrastructure and adds priority for infrastructure located on the corridors designated under 23 U.S.C. 151 (the Secretary shall designate national electric vehicle charging and hydrogen, propane, and natural gas fueling corridors) https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/
- Amended Eligible use for PM2.5 set aside

FAST Act Summary - New

- EV, Hydrogen, Propane and Natural Gas Corridors
- FR Notice 7/22/2016 “Fixing America's Surface Transportation Act-Designation of Alternative Fuel Corridors”
- 34 nominations from State and local officials
- Designations identified 55 corridors spanning 35 States basis for a national network of alternative fuel corridors
- https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/resources/afc_handout/index.cfm

FAST Act Summary - New

- EV, Hydrogen, Propane and Natural Gas Corridors cont.
 - One of two designations were then assigned to each nominated highway segment:
 1. Signage Ready - there are a sufficient number of facilities on the corridor to warrant signage alerting drivers of the availability of alternative fueling stations
 2. Signage Pending - the corridor does not have sufficient alternative fuel facilities to warrant highway signage at this time.
 - Designation status for each fuel type were based on the following criteria:
 - EV charging¹ facilities at 50 mile intervals along designated EV corridors.
 - Hydrogen fueling facilities at 100 mile intervals along designated hydrogen corridors.
 - Propane fueling facilities at 150 mile intervals along designated
 - Compressed natural gas (CNG) and liquefied natural gas (LNG) facilities at 150 mile intervals and at 200 mile intervals along designated CNG and LNG corridors, respectively.

Alternative Fuel Infrastructure

- Publicly owned fueling facilities and infrastructure
- Convert or expand private fueling facilities
 - Via public-private partnership
- Electric vehicle charging or natural gas refueling stations any location in State
- Nuances with public private partnerships



Alternative Fuel Vehicles

- Purchasing alternative fuel vehicles, school buses, transit vehicles
- Converting to alternative fuel
- Alternatives to diesel engines and vehicles
- Hybrids
- Nuances with public private partnerships.



Alternative Fuels Infrastructure Financing

- Report On Innovative Financing To Support Alternative Fuels Infrastructure, March 9, 2017
- Report to Congress previously in November 2015 this report updates focus from FAST Act
- https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/resources/report_to_congress/index.cfm
- Discusses current efforts of DOE and the FHWA to identify barriers to greater private investment in alternative fuels infrastructure, and describes current traditional and innovative financing mechanisms that could be used to help address them.

Alternative Fuels Infrastructure Financing

- “To date, development of an AFV refueling network has relied extensively on government funds, provided as traditional grants. Given the level of investment needed to build out such a network, direct government spending alone is unlikely to support the desired growth of the AFV market. Private entrepreneurial spending, however, faces clear hurdles.”
- "Because the cost of installing new refueling infrastructure is high and the adoption of AFVs is uncertain, private investment is risky and relatively unattractive."

Alternative Fuels Infrastructure Financing

- Guide to Federal Funding, Financing, and Technical Assistance for Plug-in Electric Vehicles and Charging Stations, July 2016
 - <https://energy.gov/sites/prod/files/2016/07/f33/Guide%20to%20Federal%20Funding%20and%20Financing%20for%20PEVs%20and%20PEV%20Charging.pdf>
- Alternative Fuels Innovative Finance Toolkit – ODOT and FHWA
 - <http://altfueltoolkit.org/>
 - Innovative Financing
 - <http://altfueltoolkit.org/alternative-fuels-innovative-finance-toolkit/#workshop>

Traditional Sources of Transportation Funding

- **Congestion Mitigation and Air Quality Improvement Program (CMAQ)**
 - Massachusetts Department of Energy Resources (DOER) Clean Vehicle Project: Using \$400,000 in CMAQ funding to encourage the expansion of DC Fast Charging infrastructure across the state.
 - City of Chicago Drive Clean Station Program: Using \$1,450,000 in CMAQ funding to increase the availability of public CNG fueling and recharging stations in the Chicago area
- **Transportation Investment Generating Economic Recovery (TIGER) Grants**
 - Oregon DOT's Electric Vehicle Corridor project: Received \$2 million TIGER grant to deploy DC fast charge stations along the length of the I-5 corridor in Oregon
- **Infrastructure For Rebuilding America (INFRA) Grants**
 - <https://www.transportation.gov/buildamerica/infragrants>

Innovative Sources of Transportation Funding

- **Section 129 Loans:** State loan that support projects with a dedicated revenue stream (tolls, excise taxes, sales taxes, etc.)
- **State Infrastructure Banks (SIBs):** Provide projects direct loans with attractive interest rates, with the revenues from repayment and interest used to fund additional loans.
 - Vermont's SIB offers loans of up to \$100,000 for the construction of electric vehicle charging stations and natural gas refueling stations with an interest rate of 1%.
- **Transportation Infrastructure Finance and Innovation Act (TIFIA):** Credit assistance in the form of direct loans, loan guarantees, and standby lines of credit.

Other Financing Tools

- **Energy Service Company (ESCO) Model**
 - Business that develops, arranges financing for, and installs projects to improve energy efficiency
 - PennDOT - Public-Private Transportation Partnership Office announced opportunity for the private sector to develop CNG fueling stations at public transit agencies
- **Green Banks/Clean Energy Banks**
 - Quasi-public or public financing institutions leverage limited public dollars to attract significantly more private capital for investment
- **Clean Energy Bond Finance Markets**
 - “Green bonds” - promote climate and environmental sustainability benefits

FHWA's Pooled Fund Program

- The Transportation Pooled Fund (TPF) Program allows State DOTs and the FHWA to create synergy by:
 - Leveraging resources
 - Avoiding duplication of effort
 - Joining forces on planning and research projects of mutual interest
- State DOT or FHWA must sponsor and serve as lead for TPF projects
- TPF website - <http://www.pooledfund.org>



What Can I Do?

- Nothing is 100%, i.e., No Silver Bullet
- Communicate with Project Developers – Possible Project Additions?
- CV and I2V the Future - Georgia CV Project
- Port of Savannah – All Electric Cranes – Why?
- Big Selling Point is Cost Savings
- Need a Champion to Get Things Done
- Examples?



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