

CMAQ Project Funding Category Summary

Transportation Control Measures (TCM's):

1. Public transit improvements:

- New facilities construction (e.g., lines, stations, terminals)
- New vehicles and equipment (e.g., diesel engine retrofits, bus, rail, van, or signal communications systems)
- Fuel (conventional or alternative – for new or expanded transit service)
- Operating assistance (three-year maximum):
 - New transit service routes
 - New type of service
 - Service to new geographic area
 - Expansion of existing service (additional hours; reduced headways)
 - Labor
 - Maintenance
 - Related administrative expenses
- Transit fare subsidies (discounted rates or free)
 - Should be incorporated into comprehensive area-wide strategy to ensure NAAQS compliance
 - Should be available to general public
 - Only offered during critical pollution events
 - Should be coupled with a robust marketing strategy to promote alternative (non-SOV) transportation options

2. Restrictions of certain roads or lanes for bus – HOV utilization

3. Employer-based transportation management plans

4. Trip-reduction ordinances; restricted downtown SOV utilization

5. Traffic flow improvements (congestion reduction):

- intersection improvements
- “traffic calming”
- bulb-outs
- roundabouts
- signal timing
- HOV lanes
- access management
- left-turn or other managed lanes
- ITS (Intelligent Transportation Systems):
 - traffic signal synchronization
 - regional multi-modal traveler information systems
 - electronic toll-collection
 - incident management programs
 - freeway – transit management systems

- Value – congestion pricing strategies:
 - HOT (High Occupancy Toll) lanes
 - variable-toll express lanes on existing toll-free highways
 - variable tolls on new or existing toll roadways
 - network-wide or cordon pricing
 - usage-based vehicle pricing (mileage-based vehicle taxation)
 - pay-per-mile auto insurance
 - marketing – outreach initiatives to expand use of pricing measures

6. Fringe and transportation corridor parking facilities (HOV and transit)

7. HOV – shared ride services

8. Non-motorized vehicle initiatives (bicycle – pedestrian focus)

9. Bicycle storage; bike lanes

10. Idling reduction strategies

11. Interoperable emergency communications equipment purchase

12. Extreme cold-start emissions reduction strategies:

- fleet vehicle water-oil heater installation; retrofits
- truck stop electrification (TSE)

13. Employer-sponsored flexible work scheduling

14. Transit promotion initiatives; SOV travel reduction ordinances

15. Bicycle – pedestrian path construction and reconstruction

Alternative Fuels, Vehicles, and Technology:

1. Construction of publicly-owned alternative fueling facilities

2. Conversion of private fueling facilities (public-private partnerships)

3. Purchase of publicly-owned alternative fuel non-transit vehicles:

- passenger vehicles
- refuse trucks
- street sweepers
- delivery trucks

4. Installation of diesel engine retrofits for fleet trucks and off-road construction equipment

5. Purchase of hybrid vehicles:

- vehicles with lower emission rates than conventional counterparts
- passenger vehicles must comply with EPA low-emission and energy efficiency requirements for certification under SAFETEA-LU HOV exception provisions

Travel Demand Management (TDM): (related to TCM's)

1. **Fringe and corridor parking facilities** - HOV and transit services
2. **Traveler information services**
3. **Shuttle services**
4. **Guaranteed ride home services**
5. **Carpools – vanpools**
6. **“Traffic calming” measures**
7. **Parking pricing**
8. **Variable road pricing**
9. **Telecommuting**
10. **Employer-based commuter choice programs**
11. **Market research** – planning for TDM implementation
12. **Capital maximum three years operating assistance** - administer and manage new or expanded TDM programs

Bicycle – Pedestrian Facilities and Programs:

1. **Facilities construction:**
 - paths
 - storage racks
 - bike lanes
 - sidewalks
2. **Public education – outreach to promote bicycle safety**

Public Education – Outreach Activities:

1. **Media public service announcements:**
 - proper vehicle maintenance
 - “trip chaining” (reduce SOV travel)
 - observation of speed limits (save gas)
 - idling reduction
 - elimination of “jack rabbit” starts and stops
2. **Market research – focus groups**
3. **Preparation of advertising materials and brochures**
4. **Evaluation of public awareness campaigns**
5. **Promotion of IRS Tax Code (Section 132f) – commute benefits**

Transportation Management Association (TMA)

(group of citizens, firms, or employers that organize specifically to address local transportation issues by promoting ride-share, transit, shuttle, or other services or measures)

1. **Start-up expenses** (eligibility requires emissions reduction strategy)
2. **Operating assistance** (three-year maximum)

Freight, Intermodal, and Non-Road Strategies:

1. **Installation of new diesel engine technology**
2. **Installation of long-haul tractor on-board idle reduction systems:**
 - auxiliary power units (APU) – provide electricity to cab
 - direct-fired heaters and coolant systems for temperature control
 - automatic engine shut-off systems
3. **Installation of state-of-the-art tractor-trailer aerodynamic and weight reduction technology:**
 - integrated roof fairings, side fairings, and air dams
 - air deflector bubbles
 - cab extenders
 - trailer side skirts and end caps
 - single-wide tires
 - aluminum alloy wheels, axle hubs, clutch housings, cab frame, and trailer posts and floor joists
4. **Diesel engine retrofits:**
 - engine replacement
 - engine rebuilding, repowering, and reconditioning
 - purchase and installation of after-treatment hardware:
 - ❖ particulate matter traps
 - ❖ oxidation catalysts
 - ❖ closed crankcase ventilation systems
 - ❖ exhaust control devices
 - ❖ hybrid powertrain (drive train) technology
5. **Construction of container transfer facilities; inland trans-shipment ports; near/on dock rail** (railyard switch locomotives – shunters)
6. **Locomotive replacement, repowering, and engine rebuilding**
7. **Marine vessel replacement, repowering, and engine rebuilding**
8. **Transportation equipment replacement and repowering**
9. **Heavy-duty vehicle retirement programs**

Road Dust Mitigation:

1. **Unpaved road chemical dust abatement**
2. **Paving gravel – dirt roadways**

Training (eligibility requires nexus with air quality improvement implementation)

Inspection/Maintenance (I/M) Programs: (for publicly- or privately-owned facilities)

1. **Construction of facilities**
2. **Purchase of equipment**
3. **Program development** (must constitute new or additional efforts)
4. **Start-up activities: (one-time)**
 - updating quality assurance software
 - development of mechanic training curriculum
 - administrative costs for privately-owned facilities, requiring a public-private partnership
5. **Development of “portable” I/M program** (including remote sensing)
6. **Operating assistance** (no displacement of existing funding; 3-year maximum)

Experimental Pilot Projects:

1. Project must focus on emission reductions by decreasing vehicle-miles traveled (VMT), fuel consumption, congestion, or other related factors.
2. FHWA encourages States and MPO's to address air quality issues through creative new services, innovative financing arrangements, and public-private partnerships.
3. Pre- and post-implementation studies should be conducted to measure project impacts on air quality (net emission reductions).
4. Assessments should document short- and long-term air quality benefits.
5. Schedules for both pre- and post-implementation studies should be incorporated into program agreements.
6. Completed studies should be submitted to FHWA within three years of project implementation or within one year following project completion.