#3: Government Fleets

CORE METRIC FOR CATEGORY **A** & **B** & **C** COMMUINTIES

Bold, green font indicates metrics that must improve to be recognized at Step 5

- **Government Vehicles:**
  - Note: If you can only report **hours operated**, leave 3.1-3.4 blank and report it in the justification box below.

3.1 Vehicle miles traveled (VMT) /vehicle hours operated for gasoline fleet (Miles per year)
3.2 Average miles/hour per gallon (MPG) for gasoline fleet (Miles per gallon)
3.3 Vehicle miles traveled (VMT) /vehicle hours operated for diesel fleet (Miles per year)
3.4 Average miles/hour per gallon (MPG) for diesel fleet (Miles per gallon)
3.5 Number of electric vehicles in city/tribal fleet (# of EVs)

See CO2e Guidance Document for Metrics **D**, **E**, and **F**

METRIC DEFINITION

- **Fleet vehicles** include city/tribal-owned and -leased utility vehicles, cars, vans, trucks, and heavy equipment, such as those used in snow plowing, street sweeping, earth-moving, and construction. Include police cars, other emergency vehicles, and NEVs (neighborhood electric vehicles: battery electric vehicles with a top speed of 25 MPH and which, while usually used by parks departments, can be driven on public roads). Also include data from city-employee-owned vehicles used for city business for which the city reimburses employees. If reporting in hours, include any other equipment (such as lawncare tools) that is included in your fuel system reporting. Transit and school buses are generally excluded because they are not fully owned and controlled by city government. (Metrics 3.1-3.5)
- **A city/tribal fleet is divided** for the purposes of this metric into gasoline, diesel-fueled, and electric vehicles. Typically these are distinct fleets: passenger cars, heavy-duty vehicles, and full-electric cars, with widely divergent average miles per gallon/hour efficiency. (Metrics 3.1-3.5)
- **Vehicle miles/hours traveled for the gasoline fleet** includes those miles driven by hybrid electric vehicles, exclude miles driven in full-electric vehicles, and include those miles driven by CNG (compressed natural gas) vehicles. (Metric 3.1)
- **Average miles/hour per gallon for gasoline fleet** is a simple calculation done by adding gallons of standard gasoline (E10), E85, other ethanol blends, and CNG gasoline gallon equivalents, not adjusted (normalized) for the differing energy content of these different fuels (unless a city wishes to do this calculation). (Metric 3.2)
- **Average miles/hour per gallon for the diesel fleet** is not adjusted (normalized) for the differing energy content of standard diesel (B10) and other blends (unless a city wishes to do this calculation). The gallons of different blends should all be added together. (Metric 3.4)
- **Electric Vehicles** are owned and leased vehicles where the drive-train is powered exclusively by an electric motor. This would include plug-in hybrids, NEVs, and all electric vehicles such as the Nissan Leaf. (Metric 3.5)

DATA SOURCES

- City/tribal fleet data or management system and/or purchasing records (Metrics 3.1-3.5)
- City/tribal administration, public works, and parks departments (Metrics 3.1-3.5)
- See the Data Collection Process Guide for more sources and optional methods on:

- Fleet Size and Composition
- Electric Vehicles

METRIC CALCULATION AND PU BLIC REPORTING

- **VMT for the government's gasoline and diesel fleets** are total miles driven during the calendar year preceding the reporting year, by various vehicles as defined in the Metric Definition. (Metrics 3.1 and 3.3)
- **Vehicle hours operated for the government's gasoline and diesel fleets** are total hours operated during the calendar year preceding the reporting year, by various vehicles as defined in the Metric Definition. This is an alternative metric if fleet vehicles tracked do not include odometers. You may report one or the other, or both. (Metrics 3.1 and 3.3)
- **MPG for the government's gasoline and diesel fleets** are calculated as follows: divide gasoline fleet VMT by total gallons of gasoline used, and divide diesel fleet VMT by total gallons of diesel used. For gallons of CNG used, use the 1994 NIST standard of 5.66 pounds of natural gas per gallon of gasoline. (Metrics 3.2 and 3.4)
- **Hours per gallon for the government's gasoline and diesel fleets** are calculated as follows: divide gasoline fleet vehicle hours operated by total gallons of gasoline used, and divide diesel fleet vehicle hours operated by total gallons of diesel used. For gallons of CNG used, use the 1994 NIST standard of 5.66 pounds of natural gas per gallon of gasoline. (Metrics 3.2 and 3.4)
- **For electric vehicles,** report the number owned or leased by the city or tribal nation as of the December 31st preceding the reporting year. (Metric 3.5)

METRIC RATIONALE

Tracking miles driven/hours operated and gallons used is widespread and simple to do for two generally distinct vehicle categories. The two resulting measures are simple ones for city or tribal leaders and tax payers to track. Improvements in MPG represent cost and energy savings and fewer air emissions from improved vehicle efficiency and improved fuels. In simplifying the MPG average calculation by not counting the gallon-equivalent energy content of different liquid fuels and electricity for charged hybrids (but using CNG gasoline gallon equivalents), phasing in of more energy efficient vehicles is incentivized by the resulting higher MPG numbers. Vehicle use is a significant contributor to GHG emissions. Understanding how far vehicles travel in the community is useful for estimating emissions but also setting targets to reduce vehicle use.

Electric vehicles are tracked separately, as their superior technology converts 59%–62% of the electrical energy from the grid to power at the wheels, as opposed to the inefficiency of conventional gasoline vehicles that convert only 17%–21% of the energy stored in gasoline to power at the wheels.

STEP 5 METRIC TARGETS

Individual communities are best equipped to set realistic goals for metric improvement, and any improvement in the metrics is good. That said, the State of Minnesota has the following goal:

- Reduce state fleet consumption of fossil fuels by 30% by 2027 relative to a 2017 baseline. A 5% annual reduction in city fleet fossil fuel consumption is consistent with this state agency operations goal.

RELATED BEST PRACTICE ACTIONS

- 13.2 **Right-size/down-size** the city fleet with the most fuel-efficient vehicles that are of an optimal size and capacity for their intended functions.
- 13.3 Phase-in **operational changes, equipment changes including electric vehicles**, and no-idling practices for city or local transit fleets.

NEED HELP? CONTACT

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