#3: City Fleets

OPTIONAL METRIC FOR CATEGORY A & B & C CITIES

Bold, green font indicates data elements that are eligible to be recognized at Step 5 if improvement is demonstrated.

DATA ELEMENTS

City Vehicles:

3.1 Vehicle miles traveled (VMT) for gasoline fleet
3.2 Average miles per gallon (MPG) for gasoline fleet
3.3 Vehicle miles traveled (VMT) for diesel fleet
3.4 Average miles per gallon (MPG) for diesel fleet
3.5 Number of electric vehicles in city fleet

DEFINITIONS

- **City vehicles** include 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. Transit and school buses are generally excluded because they are not fully owned and controlled by city government. (Elements 3.1-3.5)
- **A city's 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 efficiency. (Elements 3.1-3.5)
- **Vehicle miles traveled for gasoline fleet** include those miles driven by hybrid electric and hydrogen fuel cell vehicles. (Element 3.1)
- **Average miles per gallon for gasoline fleet** are not adjusted (normalized) for the differing energy content of standard gasoline (E10), E85, and other ethanol blends. The gallons of different blends should all be added together. Gasoline gallons also do not count gasoline-equivalents for electricity and hydrogen used in hybrid electric and hydrogen vehicles. (Element 3.2)
- **Vehicle miles traveled for diesel fleet** include those miles driven by CNG (compressed natural gas) vehicles. (Element 3.3)
- **Average miles per gallon for diesel fleet** are not adjusted (normalized) for the differing energy content of standard diesel (B10) and other blends. The gallons of different blends should all be added together. Diesel gallons also do not count gasoline-equivalents for natural gas used in CNG vehicles. (Element 3.4)
- **Electric Vehicles** are owned and leased vehicles where the drive-train is powered exclusively by an electric motor. This would include NEVs, all electric vehicles such as the Nissan Leaf, and also the Chevrolet Volt and similar cars where the gasoline engine charges the battery. (Element 3.5)

DATA SOURCES

- City fleet data (Elements 3.1-3.5)

- City administration, public works, and parks departments (Elements 3.1-3.5)

CALCULATION AND PU BLIC REPORTING

- VMT for the city's gasoline and diesel fleets are total miles driven during the calendar year preceding the reporting year by various vehicles as defined in the Definition section. (Elements 3.1 and 3.3)
- MPG for the city's gasoline and diesel fleets are calculated as follows: total all miles driven during the calendar year preceding the reporting year by various vehicles as defined in the Definition section (this is the VMT); divide gasoline fleet miles by total gallons of gasoline used, and divide diesel fleet miles by total gallons of diesel used. The two numbers represent each fleet's average miles per gallon. (Elements 3.2 and 3.4)
- For electric vehicles, report the number owned or leased by the city as of the December 31st preceding the reporting year, and report total miles traveled by all electric vehicles during the calendar year preceding the reporting year. (Element 3.5)

RATIONALE

Tracking miles driven and gallons used is widespread and simple to do for two generally distinct vehicle categories. The two resulting measures are simple ones for city leaders and tax payers to track. Improvements in MPG represent a mix of 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 hybrid and hydrogen electricity and CNG, phasing in of such vehicles is incentivized by the resulting higher MPG numbers.

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. See GreenStep's best practice #13 at http://www.MnGreenStep.org for ongoing life-cycle research on EVs that is dispelling various myths about oil vs. coal pollution, total transport energy, battery recycling, total costs, and other issues.

STEP 5 GOALS

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

- To transition 30% of total gasoline used in the state to biofuels by 2025.
- Past state agency fleet goals: (1) use vehicles with fuel efficiency ratings that exceed 30 miles per gallon for city usage or 35 miles per gallon for highway usage; (2) reduce the use of petroleum-based diesel fuel in on-road vehicles by 10% by 2010 and by 25% by 2015, using 2005 as a baseline; (3) reduce the use of gasoline in on-road vehicles by 25% by 2010 and by 50% by 2015, using 2005 as a baseline.

NEED HELP? CONTACT

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