

Where:

mpg_e=miles per equivalent gallon of natural gas.

CWF_{HC/NG}=carbon weight fraction based on the hydrocarbon constituents in the natural gas fuel as obtained in paragraph (d) of this section.

D_{NG}=density of the natural gas fuel [grams/ft³ at 68 °F (20 °C) and 760 mm Hg (101.3 kPa)] pressure as obtained in paragraph (d) of this section.

CH₄, NMHC, CO, and CO₂=weighted mass exhaust emissions [grams/

mile] for methane, non-methane HC, carbon monoxide, and carbon dioxide as calculated in § 600.113.

CWF_{NMHC}=carbon weight fraction of the non-methane HC constituents in the fuel as determined from the speciated fuel composition per paragraph (c)(2) of this section.

CO_{2NG}=grams of carbon dioxide in the natural gas fuel consumed per mile of travel.

CO_{2NG}=FC_{NG} D_{NG} WF_{CO2}
where:

FC_{NG} = cubic feet of natural gas fuel consumed per mile

$$= \frac{(0.749)CH_4 + (CWF_{NMHC})NMHC + (0.429)CO + (0.273)(CO_2)}{CWF_{NG}D_{NG}}$$

where:

CWF_{NG}=the carbon weight fraction of the natural gas fuel as calculated in paragraph (d) of this section.

WF_{CO2}=weight fraction carbon dioxide of the natural gas fuel calculated using the mole fractions and molecular weights of the natural gas fuel constituents per ASTM D 1945.

[59 FR 39654, Aug. 3, 1994; 59 FR 44795, Aug. 30, 1994, as amended at 59 FR 48537, Sept. 21, 1994; 64 FR 23975, May 4, 1999]

Subpart C—Fuel Economy Regulations for 1977 and Later Model Year Automobiles—Procedures for Calculating Fuel Economy Values

§ 600.201-86 General applicability.

(a) The provisions of this subpart are applicable to 1986 and later model year gasoline-fueled and diesel automobiles.

[49 FR 13849, Apr. 6, 1984]

§ 600.201-93 General applicability.

The provisions of this subpart are applicable to 1993 and later model year gasoline-fueled, diesel-fueled, alcohol-fueled, natural gas-fueled, alcohol dual

fuel, and natural gas dual fuel automobiles.

[59 FR 39655, Aug. 3, 1994]

§ 600.202-77 Definitions.

The definitions in § 600.002 apply to this subpart.

§ 600.203-77 Abbreviations.

The abbreviations in § 600.003 apply to this subpart.

§ 600.204-77 Section numbering, construction.

The section numbering system set forth in § 600.004 applies to this subpart.

§ 600.205-77 Recordkeeping.

The recordkeeping requirements set forth in § 600.005 apply to this subpart.

§ 600.206-86 Calculation and use of fuel economy values for gasoline-fueled, diesel, and electric vehicle configurations.

(a) Fuel economy values determined for each vehicle, and as approved in § 600.008 (b) or (f), are used to determine city, highway, and combined fuel economy values for each vehicle configuration (as determined by the Administrator) for which data are available.

§ 600.206-93

40 CFR Ch. I (7-1-00 Edition)

(1) If only one set of city and highway fuel economy values is accepted for a vehicle configuration, these values, rounded to the nearest tenth of a mile per gallon, comprise the city and highway fuel economy values for that configuration.

(2) If more than one city or highway fuel economy value is accepted for a vehicle configuration:

(i) All data shall be grouped according to the subconfiguration for which the data were generated using sales projections supplied in accordance with § 600.207(a)(3).

(ii) Within each group of data, all values are harmonically averaged and rounded to the nearest 0.0001 of a mile per gallon in order to determine city and highway fuel economy values for each subconfiguration at which the vehicle configuration was tested.

(iii) All city fuel economy values and all highway fuel economy values calculated in paragraph (a)(2)(ii) of this section are (separately for city and highway) averaged in proportion to the sales fraction (rounded to the nearest 0.0001) within the vehicle configuration (as provided to the Administrator by the manufacturer) of vehicles of each tested subconfiguration. The resultant values, rounded to the nearest 0.0001 mile per gallon, are the city and highway fuel economy values for the vehicle configuration.

(3) The combined fuel economy value for a vehicle configuration is calculated by harmonically averaging the city and highway fuel economy values, as determined in § 600.206(a) (1) or (2), weighted 0.55 and 0.45 respectively, and rounded to the nearest 0.0001 mile per gallon. A sample of this calculation appears in appendix II to this part.

(b) If only one equivalent petroleum-based fuel economy value exists for an electric configuration, that value, rounded to the nearest tenth of a mile per gallon, will comprise the petroleum-based fuel economy for that configuration.

(c) If more than one equivalent petroleum-based fuel economy value exists for an electric vehicle configuration, all values for that vehicle configuration are harmonically averaged and

rounded to the nearest 0.0001 mile per gallon for that configuration.

[49 FR 13849, Apr. 6, 1984]

§ 600.206-93 Calculation and use of fuel economy values for gasoline-fueled, diesel-fueled, electric, alcohol-fueled, natural gas-fueled, alcohol dual fuel, and natural gas dual fuel vehicle configurations.

(a) Fuel economy values determined for each vehicle, and as approved in § 600.008 (b) or (f), are used to determine city, highway, and combined fuel economy values for each vehicle configuration (as determined by the Administrator) for which data are available.

(1) If only one set of city and highway fuel economy values is accepted for a vehicle configuration, these values, rounded to the nearest tenth of a mile per gallon, comprise the city and highway fuel economy values for that configuration.

(2) If more than one city or highway fuel economy value is accepted for a vehicle configuration:

(i) All data shall be grouped according to the subconfiguration for which the data were generated using sales projections supplied in accordance with § 600.207(a)(3).

(ii) Within each group of data, all values are harmonically averaged and rounded to the nearest 0.0001 of a mile per gallon in order to determine city and highway fuel economy values for each subconfiguration at which the vehicle configuration was tested.

(iii) All city fuel economy values and all highway fuel economy values calculated in paragraph (a)(2)(ii) of this section are (separately for city and highway) averaged in proportion to the sales fraction (rounded to the nearest 0.0001) within the vehicle configuration (as provided to the Administrator by the manufacturer) of vehicles of each tested subconfiguration. The resultant values, rounded to the nearest 0.0001 mile per gallon, are the city and highway fuel economy values for the vehicle configuration.

(3) The combined fuel economy value for a vehicle configuration is calculated by harmonically averaging the city and highway fuel economy values, as determined in § 600.206(a) (1) or (2), weighted 0.55 and 0.45 respectively, and