

**WAC 173-441-130 Calculation methods for suppliers.** Suppliers of motor vehicle fuel, special fuel, or aircraft fuel subject to the requirements of this chapter must calculate the CO<sub>2</sub> emissions that would result from the complete combustion or oxidation of each fuel that is reported to DOL as sold in Washington state using the methods in this section.

(1) **Applicable fuels.** Suppliers are responsible for calculating CO<sub>2</sub> emissions from the following applicable fossil fuels and biomass derived fuels:

(a) All taxed motor vehicle fuel that the supplier is required to report to DOL as part of the supplier's filed periodic tax reports of motor vehicle fuel sales under chapter 82.38 RCW.

(b) All taxed special fuel that the supplier is required to report to DOL as part of the supplier's filed periodic tax reports of special fuel sales under chapter 82.38 RCW.

(c) All taxed and untaxed aircraft fuel supplied to end users that the supplier is required to report to DOL as part of the supplier's filed periodic tax reports of aircraft fuel under chapter 82.42 RCW.

(2) Calculating CO<sub>2</sub> emissions separately for each fuel type. CO<sub>2</sub> emissions must be calculated separately for each applicable fuel type using Equation 130-1 of this section. Use Equation 130-2 of this section to separate each blended fuel into pure fuel types prior to calculating emissions using Equation 130-1.

$$CO_{2i} = Fuel\ Type_i \times EF_i \quad (Eq. 130-1)$$

Where:

- CO<sub>2i</sub> = Annual CO<sub>2</sub> emissions that would result from the complete combustion or oxidation of each fuel type "i" (metric tons)
- Fuel Type<sub>i</sub> = Annual volume of fuel type "i" supplied by the supplier (gallons).
- EF<sub>i</sub> = Fuel type-specific CO<sub>2</sub> emission factor (metric tons CO<sub>2</sub> per gallon) found in Table 130-1 of this section.

$$Fuel\ Type_i = Fuel_i \times \%Vol_i \quad (Eq. 130-2)$$

Where:

- Fuel Type<sub>i</sub> = Annual volume of fuel type "i" supplied by the supplier (gallons).
- Fuel<sub>i</sub> = Annual volume of blended fuel "i" supplied by the supplier (gallons).
- %Vol<sub>i</sub> = Percent volume of product "i" that is fuel type<sub>i</sub>.

(3) **Calculating total CO<sub>2</sub> emissions.** A supplier must calculate total annual CO<sub>2</sub> emissions from all fuels using Equation 130-3 of this section.

$$CO_{2x} = \sum(CO_{2i}) \quad (Eq. 130-3)$$

Where:

CO<sub>2x</sub> = Annual CO<sub>2</sub> emissions that would result from the complete combustion or oxidation of all fuels (metric tons).

CO<sub>2i</sub> = Annual CO<sub>2</sub> emissions that would result from the complete combustion or oxidation of each fuel type "i" (gallons).

(4) **Monitoring and QA/QC requirements.** Comply with all monitoring and QA/QC requirements under chapters 308-72, 308-77, and 308-78 WAC.

(5) **Data recordkeeping requirements.** In addition to the annual GHG report required by WAC 173-441-050 (6)(c), the following records must be retained by the supplier in accordance with the requirements established in WAC 173-441-050(6):

(a) For each fuel type listed in Table 130-1 of this section, the annual quantity of applicable fuel in gallons of pure fuel supplied in Washington state.

(b) The CO<sub>2</sub> emissions in metric tons that would result from the complete combustion or oxidation of each fuel type for which subsection (5)(a) of this section requires records to be retained, calculated according to subsection (2) of this section.

(c) The sum of biogenic CO<sub>2</sub> emissions that would result from the complete combustion oxidation of all supplied fuels, calculated according to subsection (3) of this section.

(d) The sum of nonbiogenic and biogenic CO<sub>2</sub> emissions that would result from the complete combustion oxidation of all supplied fuels, calculated according to subsection (3) of this section.

(e) All records required under chapters 308-72, 308-77, and 308-78 WAC in the format required by DOL.

**Table 130-1:  
Emission Factors for Applicable Motor Vehicle Fuels, Special Fuels,  
and Aircraft Fuels**

Fuel Type (pure fuel)	Emission Factor (metric tons CO <sub>2</sub> per gallon)
Gasoline	0.008960
Ethanol (E100)	0.005767
Diesel	0.010230
Biodiesel (B100)	0.009421
Propane	0.005593
Natural gas	0.000055*
Kerosene	0.010150
Jet fuel	0.009750
Aviation gasoline	0.008310

Contact ecology to obtain an emission factor for any applicable fuel type not listed in this table.

\*In units of metric tons CO<sub>2</sub> per scf. When using Equation 130-1 of this section, enter fuel in units of scf.

[Statutory Authority: Chapters 70.94, 70.235 RCW. WSR 16-19-047 (Order 15-10), § 173-441-130, filed 9/15/16, effective 10/16/16; WSR 15-04-051 (Order 13-13), § 173-441-130, filed 1/29/15, effective 3/1/15. Statutory Authority: 2010 c 146, and chapters 70.235 and 70.94

RCW. WSR 10-24-108 (Order 10-08), § 173-441-130, filed 12/1/10, effective 1/1/11.]