

§ 80.1407 How are the Renewable Volume Obligations calculated?

(a) The Renewable Volume Obligations for an obligated party are determined according to the following formulas:

(1) *Cellulosic biofuel.*

$$RVO_{CB,i} = (RFStd_{CB,i} * (GV_i + DV_i)) + D_{CB,i-1}$$

Where:

$RVO_{CB,i}$ = The Renewable Volume Obligation for cellulosic biofuel for an obligated party for calendar year i , in gallons.

$RFStd_{CB,i}$ = The standard for cellulosic biofuel for calendar year i , determined by EPA pursuant to § 80.1405, in percent.

GV_i = The non-renewable gasoline volume, determined in accordance with paragraphs (b), (c), and (f) of this section, which is produced in or imported into the 48 contiguous states or Hawaii by an obligated party in calendar year i , in gallons.

DV_i = The non-renewable diesel volume, determined in accordance with paragraphs (d), (e), and (f) of this section, produced in or imported into the 48 contiguous states or Hawaii by an obligated party in calendar year i , in gallons.

$D_{CB,i-1}$ = Deficit carryover from the previous year for cellulosic biofuel, in gallons.

(2) *Biomass-based diesel.*

$$RVO_{BBD,i} = (RFStd_{BBD,i} * (GV_i + DV_i)) + D_{BBD,i-1}$$

Where:

$RVO_{BBD,i}$ = The Renewable Volume Obligation for biomass-based diesel for an obligated party for calendar year i , in gallons.

$RFStd_{BBD,i}$ = The standard for biomass-based diesel for calendar year i , determined by EPA pursuant to § 80.1405, in percent.

GV_i = The non-renewable gasoline volume, determined in accordance with paragraphs (b), (c), and (f) of this section, which is produced in or imported into the 48 contiguous states or Hawaii by an obligated party in calendar year i , in gallons.

DV_i = The non-renewable diesel volume, determined in accordance with paragraphs (d), (e), and (f) of this section, produced in or imported into the 48 contiguous states or Hawaii by an obligated party in calendar year i , in gallons.

$D_{BBD,i-1}$ = Deficit carryover from the previous year for biomass-based diesel, in gallons.

(3) *Advanced biofuel.*

$$RVO_{AB,i} = (RFStd_{AB,i} * (GV_i + DV_i)) + D_{AB,i-1}$$

Where:

$RVO_{AB,i}$ = The Renewable Volume Obligation for advanced biofuel for an obligated party for calendar year i , in gallons.

$RFStd_{AB,i}$ = The standard for advanced biofuel for calendar year i , determined by EPA pursuant to § 80.1405, in percent.

GV_i = The non-renewable gasoline volume, determined in accordance with paragraphs (b), (c), and (f) of this section, which is produced in or imported into the 48 contiguous states or Hawaii by an obligated party in calendar year i , in gallons.

DV_i = The non-renewable diesel volume, determined in accordance with paragraphs (d), (e), and (f) of this section, produced in or imported into the 48 contiguous states or Hawaii by an obligated party in calendar year i , in gallons.

$D_{AB,i-1}$ = Deficit carryover from the previous year for advanced biofuel, in gallons.

(4) *Renewable fuel.*

$$RVO_{RF,i} = (RFStd_{RF,i} * (GV_i + DV_i)) + D_{RF,i-1}$$

Where:

$RVO_{RF,i}$ = The Renewable Volume Obligation for renewable fuel for an obligated party for calendar year i , in gallons.

$RFStd_{RF,i}$ = The standard for renewable fuel for calendar year i , determined by EPA pursuant to § 80.1405, in percent.

GV_i = The non-renewable gasoline volume, determined in accordance with paragraphs (b), (c), and (f) of this section, which is produced in or imported into the 48 contiguous states or Hawaii by an obligated party in calendar year i , in gallons.

DV_i = The non-renewable diesel volume, determined in accordance with paragraphs (d), (e), and (f) of this section, produced in or imported into the 48 contiguous states or Hawaii by an obligated party in calendar year i , in gallons.

$D_{RF,i-1}$ = Deficit carryover from the previous year for renewable fuel, in gallons.

(b) The non-renewable gasoline volume, GV_i , for an obligated party for a given year as specified in paragraph (a) of this section is calculated as follows:

$$GV_i = \sum_{x=1}^n G_x - \sum_{y=1}^m RBG_y$$

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Where:

x = Individual batch of gasoline produced or imported in calendar year i.

n = Total number of batches of gasoline produced or imported in calendar year i.

G_x = Volume of batch x of gasoline produced or imported, as defined in paragraph (c) of this section, in gallons.

y = Individual batch of renewable fuel blended into gasoline in calendar year i.

m = Total number of batches of renewable fuel blended into gasoline in calendar year i.

RBG_y = Volume of batch y of renewable fuel blended into gasoline, in gallons.

(c) Except as specified in paragraph (f) of this section, all of the following products that are produced or imported during a compliance period, collectively called “gasoline” for the purposes of this section (unless otherwise specified), are to be included (but not double-counted) in the volume used to calculate a party’s Renewable Volume Obligations under paragraph (a) of this section, except as provided in paragraph (f) of this section:

(1) Reformulated gasoline, whether or not renewable fuel is later added to it.

(2) Conventional gasoline, whether or not renewable fuel is later added to it.

(3) Reformulated gasoline blendstock that becomes finished reformulated gasoline upon the addition of oxygenate (RBOB).

(4) Conventional gasoline blendstock that becomes finished conventional gasoline upon the addition of oxygenate (CBOB).

(5) Blendstock (including butane and gasoline treated as blendstock (GTAB)) that has been combined with other blendstock and/or finished gasoline to produce gasoline.

(6) Any gasoline, or any unfinished gasoline that becomes finished gasoline upon the addition of oxygenate, that is produced or imported to comply with a state or local fuels program.

(d) The diesel non-renewable volume, DV_i, for an obligated party for a given year as specified in paragraph (a) of this section is calculated as follows:

$$DV_i = \sum_{x=1}^n D_x - \sum_{y=1}^m RBD_y$$

Where:

x = Individual batch of diesel produced or imported in calendar year i.

n = Total number of batches of diesel produced or imported in calendar year i.

D_x = Volume of batch x of diesel produced or imported, as defined in paragraph (e) of this section, in gallons.

y = Individual batch of renewable fuel blended into diesel in calendar year i.

m = Total number of batches of renewable fuel blended into diesel in calendar year i.

RBD_y = Volume of batch y of renewable fuel blended into diesel, in gallons.

(e) Except as specified in paragraph (f) of this section, all products meeting the definition of *MVNRLM diesel fuel* at § 80.2(qqq) that are produced or imported during a compliance period, collectively called “diesel fuel” for the purposes of this section (unless otherwise specified), are to be included (but not double-counted) in the volume used to calculate a party’s Renewable Volume Obligations under paragraph (a) of this section.

(f) The following products are not included in the volume of gasoline or diesel fuel produced or imported used to calculate a party’s Renewable Volume Obligations according to paragraph (a) of this section:

(1) Any renewable fuel as defined in § 80.1401.

(2) Blendstock that has not been combined with other blendstock, finished gasoline, or diesel to produce gasoline or diesel.

(3) Gasoline or diesel fuel produced or imported for use in Alaska, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas, unless the area has opted into the RFS program under § 80.1443.

(4) Gasoline or diesel fuel produced by a small refinery that has an exemption under § 80.1441 or an approved small refiner that has an exemption under § 80.1442.

(5) Gasoline or diesel fuel exported for use outside the 48 United States and Hawaii, and gasoline or diesel fuel exported for use outside Alaska, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas, if the area has opted into the RFS program under § 80.1443.

(6) For blenders, the volume of finished gasoline, finished diesel fuel,

RBOB, or CBOB to which a blender adds blendstocks.

(7) The gasoline or diesel fuel portion of transmix produced by a transmix processor, or the transmix blended into gasoline or diesel fuel by a transmix blender, under § 80.84.

(8) Any gasoline or diesel fuel that is not transportation fuel.

§§ 80.1408–80.1414 [Reserved]

§ 80.1415 How are equivalence values assigned to renewable fuel?

(a)(1) Each gallon of a renewable fuel, or gallon equivalent pursuant to paragraph (b)(5) or (b)(6) of this section, shall be assigned an equivalence value by the producer or importer pursuant to paragraph (b) or (c) of this section.

(2) The equivalence value is a number that is used to determine how many gallon-RINs can be generated for a gallon of renewable fuel according to § 80.1426.

(b) Equivalence values shall be assigned for certain renewable fuels as follows:

(1) Ethanol which is denatured shall have an equivalence value of 1.0.

(2) Biodiesel (mono-alkyl ester) shall have an equivalence value of 1.5.

(3) Butanol shall have an equivalence value of 1.3.

(4) Non-ester renewable diesel with a lower heating value of at least 123,500 Btu/gal shall have an equivalence value of 1.7.

(5) 77,000 Btu (lower heating value) of biogas shall represent one gallon of renewable fuel with an equivalence value of 1.0.

(6) 22.6 kW-hr of electricity shall represent one gallon of renewable fuel with an equivalence value of 1.0.

(7) For all other renewable fuels, a producer or importer shall submit an application to the Agency for an equivalence value following the provisions of paragraph (c) of this section. A producer or importer may also submit an application for an alternative equivalence value pursuant to paragraph (c) if the renewable fuel is listed in this paragraph (b), but the producer or importer has reason to believe that a different equivalence value than that listed in this paragraph (b) is warranted.

(c) *Calculation of new equivalence values.*

(1) The equivalence value for renewable fuels described in paragraph (b)(7) of this section shall be calculated using the following formula:

$$EV = (R/0.972) * (EC/77,000)$$

Where:

EV = Equivalence Value for the renewable fuel, rounded to the nearest tenth.

R = Renewable content of the renewable fuel. This is a measure of the portion of a renewable fuel that came from renewable biomass, expressed as a fraction, on an energy basis.

EC = Energy content of the renewable fuel, in Btu per gallon (lower heating value).

(2) The application for an equivalence value shall include a technical justification that includes all the following:

(i) A calculation for the requested equivalence value according to the equation in paragraph (c)(1) of this section, including supporting documentation for the value of EC used in the calculation such as a certificate of analysis from a laboratory that verifies the lower heating value in Btu per gallon of the renewable fuel produced.

(ii) For each feedstock, component, or additive that is used to make the renewable fuel, provide a description, the percent input, and identify whether or not it is renewable biomass or is derived from renewable biomass.

(iii) For each feedstock that also qualifies as a renewable fuel, state whether or not RINs have been previously generated for such feedstock.

(iv) A description of the renewable fuel and the production process, including a block diagram that shows all inputs and outputs at each step of the production process with a sample quantity of all inputs and outputs for one batch of renewable fuel produced.

(3) The Agency will review the technical justification and assign an appropriate equivalence value to the renewable fuel based on the procedure in this paragraph (c).

(4) Applications for equivalence values must be sent to one of the following addresses:

(i) *For U.S. Mail:* U.S. EPA, Attn: RFS2 Program Equivalence Value Application, 6406J, 1200 Pennsylvania Avenue, NW., Washington, DC 20460.