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## OIR-16-05 Inconsistent formulas for GHG emissions intensity of an electricity portfolio

OIR-16-05 Inconsistent formulas for GHG emissions intensity of an electricity portfolio

Formulas for GHG emissions intensity of an electricity portfolio in 1393 are not reliable, accurate, timely, and consistent.

The use of adjusted net purchase in 1393 is not accurate and is inconsistent with the formula in 1391 "GHG emissions intensity of an electricity portfolio".

The formula in 1391 "GHG emissions intensity of an electricity portfolio" is accurate because it uses the sum of all annual emissions of greenhouse gases associated with the generation sources comprising an electricity portfolio divided by the annual retail sales of that electricity portfolio.

Public Utilities Code - PUC 398.1. (a) requires reliable, accurate, timely, and consistent information regarding fuel sources for electric generation offered for retail sale in California.

See attached below for more detail.

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*Additional submitted attachment is included below.*

OIR-16-05 Inconsistent formulas for GHG emissions intensity of an electricity portfolio

Formulas for GHG emissions intensity of an electricity portfolio in 1393 are not reliable, accurate, timely, and consistent.

The use of adjusted net purchase in 1393 is not accurate and is inconsistent with the formula in 1391 "GHG emissions intensity of an electricity portfolio".

1393. Accounting Methodology (c) (4) (A)
Sum all GHG emissions attributable to the electricity portfolio by multiplying the adjusted net purchase of each specified purchase or purchase of unspecified power in the electricity portfolio by the corresponding emissions factor, then summing the products as follows:

Equation 8: $E = \text{sum}( ANP_i * EF_i )$

Where:

E = Sum of all GHG emissions attributable to the electricity portfolio

$ANP_i$ = Adjusted net purchase from generator i pursuant to subdivision 1393 (a)(6) Equation 3 or unspecified power pursuant to subdivision 1393 (a)(7).

$EF_i$ = Emissions factor of generator i

1393. Accounting Methodology (c) (4) (B)
Divide the sum of all GHG emissions attributable to the electricity portfolio by the retail sales of the electricity portfolio as follows:

Equation 9: $EI = E / RS$

Where:

EI = GHG emissions intensity of electricity portfolio for the reporting period

E = Sum of GHG emissions attributable to electricity portfolio

RS= Retail sales of electricity portfolio

1393. Accounting Methodology (a) (6)
If the total procurement of specified net purchases of an electricity portfolio exceeds retail sales, each net purchase of electricity from a generator using natural gas shall be proportionally reduced so that

the sum of all adjusted net purchases equals the retail sales of an electricity portfolio, as expressed in
Equation 3
. If an electricity portfolio has insufficient natural gas electricity sources to adjust to reconcile the excess specified net procurements with retail sales, each purchase from coal and other fossil fuel electricity sources shall then be proportionally reduced in accordance with
Equation 3
. If an electricity portfolio has insufficient natural gas or coal and other fossil fuel electricity sources to adjust to reconcile the excess specified net procurements with retail sales, all other specified purchases shall then be proportionally reduced in accordance with
Equation 3
.

Equation 3: $ANP_i = NP_i - ( NP - RS ) * ( NP_i / NP_{NR} )$

$ANP_i$ = Adjusted net purchase i, measured in MWh

$NP_i$ = Net purchase i, measured in MWh

$NP$ = Sum of all net purchases, measured in MWh

$RS$ = Total retail sales of an electricity portfolio, measured in MWh

$NP_{NR}$ = Any net purchase of a fuel type that is not an eligible renewable, large hydro, or nuclear resource, measured in MWh

1393. Accounting Methodology (a) (7)
Procurements from nuclear or large hydroelectric generating units cannot be classified as specified purchases if the associated environmental attributes have been claimed by, or traded to, a separate party.

The formula in 1391 "GHG emissions intensity of an electricity portfolio" is accurate because it uses the sum of all annual emissions of greenhouse gases associated with the generation sources comprising an electricity portfolio divided by the annual retail sales of that electricity portfolio.

1391. Definitions.
"GHG emissions intensity of a generator" means the sum of all annual emissions of GHGs associated with a generation source divided by the net annual production of electricity from the generation source.

1391. Definitions.
"GHG emissions intensity of an electricity portfolio" means the sum of all annual emissions of greenhouse gases associated with the generation sources comprising an electricity portfolio divided by the annual retail sales of that electricity portfolio.

Public Utilities Code - PUC 398.1. (a) requires reliable, accurate, timely, and consistent information regarding fuel sources for electric generation offered for retail sale in California.

Public Utilities Code - PUC 398.1. (a)
(a) The Legislature finds and declares that there is a need for reliable, accurate, timely, and consistent information regarding fuel sources for electric generation offered for retail sale in California.