

Orbia's Heating Values and Emission Factors Data Sheet

The purpose of this document is to support expert readers in the interpretation of our energy and greenhouse gas emissions data in our Sustainability Reports. In line with our continuous improvement process, the below heating values and emission factors were reviewed and several were updated in 2019 to use more recent and standardized sources.

Table 1. Heating values for fuels

Fuel	Prior to and including 2018	2019	Units
Natural gas as a stationary energy source	0.0390	0.0383	GJ/m ³
Natural gas as a mobile energy source	0.0390	0.0383	GJ/m ³
LPG as a mobile energy source	0.0253	0.0257	GJ/L
LPG as a stationary energy source	0.0253	0.0257	GJ/L
Propane as a mobile energy source	0.0240	0.0254	GJ/L
Propane as a stationary energy source	0.0240	0.0254	GJ/L
Butane as a mobile energy source	0.0258	0.0287	GJ/L
Butane as a stationary energy source	0.0258	0.0287	GJ/L
Diesel as a mobile energy source	0.0371	0.0383	GJ/L
Diesel as a stationary energy source	0.0396	0.0383	GJ/L
Gasoline as a mobile energy source	0.0342	0.0349	GJ/L
Gasoline as a stationary energy source	0.0342	0.0349	GJ/L
Bio LPG as a mobile energy source	0.0253	0.0257	GJ/L
Bio diesel as a mobile energy source	0.0379	0.0357	GJ/L
Bio diesel as a stationary energy source	0.0379	0.0357	GJ/L
Coal	24.7613	24.7885	GJ/ton

Table 2. Emission factors for fuels

Fuel	Prior to and including 2018	2019	Units
Natural gas as a stationary energy source	0.00189	0.00193	tons CO ₂ e/m ³
Natural gas as a mobile energy source	0.0028	1.1888	tons CO ₂ e/m ³
LPG as a mobile energy source	0.0018	0.0015	tons CO ₂ e/L
LPG as a stationary energy source	0.0017	0.0015	tons CO ₂ e/L
Propane as a mobile energy source	0.0017	0.0015	tons CO ₂ e/L
Propane as a stationary energy source	0.0017	0.0015	tons CO ₂ e/L
Butane as a mobile energy source	0.0018	0.0018	tons CO ₂ e/L
Butane as a stationary energy source	0.0018	0.0018	tons CO ₂ e/L
Diesel as a mobile energy source	0.0032	0.0027	tons CO ₂ e/L
Diesel as a stationary energy source	0.0027	0.0027	tons CO ₂ e/L
Gasoline as a mobile energy source	0.0028	0.0023	tons CO ₂ e/L
Gasoline as a stationary energy source	0.0027	0.0023	tons CO ₂ e/L
Bio LPG as a mobile energy source	0.0008	0.0008	tons CO ₂ e/L
Bio diesel as a mobile energy source	0.0025	0.0025	tons CO ₂ e/L
Bio diesel as a stationary energy source	0.0025	0.0025	tons CO ₂ e/L
Coal	2.1902	2.5836	tons CO ₂ e/ton

Table 3: Emission factors for electricity used (scope 2)

Purchased electricity (grid) carbon intensity	Prior to and including 2018	2019	Units
Electrical energy carbon intensity	0.46*	0.41**	Tons CO ₂ e/MWh

Note:

Due to a confidentiality provision with the International Energy Association (IEA) signed at the time of purchase, we are not able to provide the specific scope 2 emission factors used per region or country. Therefore, a carbon intensity figure is provided to showcase the magnitude of change in Scope 2 emission factors used prior to and including 2018 and 2019.

*IEA emission factors 2013 version

**IEA emission factors 2019 version