ERRATUM

Erratum to: Cumulative energy demand in LCA: the energy harvested approach

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Correction

Due to a misinterpretation of an information source, the characterisation factor of geothermal energy within the approach ‘CED energy statistics approach’ was wrongly reported and applied. This affected the case study results using this approach. In this paper, the correct tables and figures are displayed. The characterisation factor of geothermal energy in the approach ‘CED energy statistics’ is 1.0, and not 7.0 (see Table 3).

The cumulative energy demand, renewable of the residential building Rautistrasse according to the ‘CED energy statistics’ approach, is 76 MJ wood-eq./m²a, and the total cumulative energy demand is 421 MJ oil-eq./m²a (see Table 6).

Over the whole life cycle of the building, the use phase causes 70 % of the cumulative energy demand according to the approach ‘CED energy statistics’ (Table 7), followed by the manufacturing and construction phase (17 %), the replacement (11 %) and the end of life stage (1 %).

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Table 3 Characterisation factors for the five approaches CED standard, CED energy statistics, CED uranium low, CED uranium high and CED VDI 4600

Energy sources from ecoinvent data v2.2+	Unit	CED standard	CED energy statistics	CED uranium low	CED uranium high	CED VDI 4600
Nonrenewable, fossil						
Coal, brown	MJ/kg	9.90E+00	8.10E+00	9.90E+00	9.90E+00	8.10E+00
Coal, hard	MJ/kg	1.91E+01	1.84E+01	1.91E+01	1.91E+01	1.84E+01
Gas, mine, off-gas, process, coal mining/kg	MJ/kg	4.98E+01	4.53E+01	4.98E+01	4.98E+01	4.53E+01
Gas, mine, off-gas, process, coal mining/m ³	MJ/m ³	3.98E+01	3.62E+01	3.98E+01	3.98E+01	3.62E+01
Gas, natural/m ³	MJ/m ³	3.83E+01	3.48E+01	3.83E+01	3.83E+01	3.48E+01
Gas, off-gas, oil production, in ground	MJ/m ³	3.98E+01	3.62E+01	3.98E+01	3.98E+01	3.62E+01
Oil, crude	MJ/kg	4.58E+01	4.32E+01	4.58E+01	4.58E+01	4.32E+01
Nonrenewable, nuclear						
Uranium	MJ/kg	5.60E+05	4.70E+05	1.80E+05	7.72E+05	5.60E+05
Nonrenewable, biomass						
Wood, primary forest, standing	MJ/m ³	1.08E+04	4.32E+03	1.08E+04	1.08E+04	4.32E+03
Renewable, biomass						
Wood, hardwood, standing	MJ/m ³	1.28E+04	5.12E+03	1.28E+04	1.28E+04	5.12E+03
Renewable, wind, solar, geothermal						
Energy, geothermal, converted	MJ/MJ	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
Energy, kinetic (in wind), converted	MJ/MJ	1.00E+00	9.30E-01	9.30E-01	1.00E+00	3.72E+00
Energy, solar, converted	MJ/MJ	1.00E+00	9.35E-01	9.35E-01	1.00E+00	6.01E+00
Renewable, water						
Energy, potential (in hydropower reservoir), converted	MJ/MJ	1.00E+00	9.50E-01	9.50E-01	1.00E+00	1.19E+00

Values are given in MJ oil-eq. per reference unit

Table 6 Cumulative energy demand of manufacturing and construction, replacement and use phase and end of life of the residential property ‘Rautistrasse’ in the city of Zürich

Indicator	Unit	CED standard	CED energy statistics	CED uranium low	CED uranium high	CED VDI 4600
Total	MJ oil-eq./m ² a	477	421	336	554	478
Nonrenewable	MJ oil-eq./m ² a	351	307	212	428	340
Renewable	MJ wood-eq./m ² a	126	76	124	126	138

Values are given per square metre of energy reference area and per year. The totals are calculated assuming 1 MJ oil-eq. equals 1 MJ wood-eq. The five different CED approaches are described in the ‘Review of existing approaches’ section

Table 7 Share of cumulative energy demand of manufacturing and construction, replacement, use and end of life of the residential property ‘Rautistrasse’ in the city of Zürich

Life stage	CED standard (%)	CED energy statistics (%)	CED uranium low (%)	CED uranium high (%)	CED VDI 4600 (%)
Manufacturing and construction	17	17	22	15	17
Replacement	12	11	15	11	11
Use	70	70	61	73	71
End of life	1	1	2	1	1

Fig. 1 *Left* Cumulative energy demand of the life cycle of the building Rautistrasse in Zürich, differentiating between manufacturing and construction, replacement, use and end of life of the building. *Right* Cumulative energy demand of the use phase of the building, providing

room heating, hot water, ventilation, light and auxiliary operational energy. All values are given per square metre of energy reference area and per year. The five different CED approaches are described in the ‘Review of existing approaches’ section

Fig. 2 Cumulative energy demand of the use phase of the building Rautistrasse in Zürich, showing the different energy resources. *PE* primary energy, *nr* nonrenewable, *r* renewable

The correct cumulative energy demand and shares of the approach ‘CED energy statistics’ are shown in Figs. 1 and 2.

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