Team member	Phone	Email	Date
Igor Sikonczyk	+32 (0)466 90 04 01	igor.sikonczyk@eurovent.eu	2026-01-21

Operational energy use in the complementary Product Category Rules for residential ventilation units.

In a nutshell

In this paper, members of the Eurovent Product Group 'Residential Ventilation Systems' (PG-RVS) present their proposed approach to addressing B6 in EPDs for residential ventilation units to the experts of CEN/TC 156 WG26. The key elements of this proposal include providing indicative energy use and CO_2-equivalent information in the General information section of the EPD to support informed product selection at an early design stage, when a complete LCA is not yet available.

Background

The Environmental Product Declaration (EPD) has become a key tool for evaluating the environmental performance of a product, alongside its energy efficiency. The information provided in the EPD is increasingly essential in the context of buildings' carbon footprint assessments mandated by the 2024 recast EPBD.

CEN/TC 156/WG 26 is in the process of developing a new EN standard establishing complementary Product Category Rules (c-PCR) for EPDs for ventilation components and products. This effort aims to harmonise the different rules presently applied by various EPD programme operators across the European market. One of the subjects currently discussed within WG26 is the approach to including the operational energy use stage (B6) in the c-PCR.

With this paper, addressed to the experts of WG26, members of the Eurovent Product Group 'Residential Ventilation Systems' share their perspective on possible approaches to addressing B6 for residential ventilation units.

General considerations on the approach to B6 in EPDs

No exact B6 data included in the normative part

Considering that the primary purpose of EPD information is to support the Life Cycle Assessment (LCA) of buildings, and taking into account the regulatory framework, PG-RVS members acknowledge that B6 data included in an EPD, based on an agreed standard scenario, are not intended to be used for the LCA of a specific building, which is characterised by a set of individual parameters affecting its actual operational energy use.

Consequently, PG-RVS members support excluding the B6 stage from the normative part of the standard, with B6 stage values remaining empty.

Provision of information on the product's impact on operational energy use

At the same time, it must be stressed that, where heat and electricity generation are associated with high CO_2 emission intensities, energy use and savings in the B6 stage have a dominant impact on the environmental performance of products such as residential ventilation units.

Therefore, PG-RVS members consider that an EPD should provide an appropriate mandatory indication of a product's operational energy use in order to support informed product selection at an early project stage, before a complete LCA is available. This information should be based on a reliable

and well-established methodology, must not be misleading or inaccurate, and should allow for cost-effective and scalable application across a wide range of units.

Eurovent proposal

In light of the above considerations, PG-RVS members propose including the following mandatory items in the General information section of the EPD of a residential ventilation unit:

Energy estimations

- Annual Electricity Consumption (AEC)
- For BVUs only: Annual Heating Saved (AHS) due to heat recovery, presented by climate (cold, average, warm).

Both values, Annual Electricity Consumption and Annual Heating Saved, are calculated based on the methodology set out in Annex VIII to Regulation (EU) 1254/2014 and are converted and expressed in kWh per year and per 1 m^2 of floor area (not per 100 m^2 as specified in the Regulation) to ensure ease of scalability.

Commentary on using energy estimations for LCA

Assuming that the ecodesign methodology provides reliable energy estimations, it is proposed to accompany the table with the following annotation:

- *Due to the high level of harmonisation and standardisation of residential ventilation systems across Europe, the Annual Electricity Consumption (AEC) and Annual Heating Saved (AHS) values calculated in accordance with the well-established methodology set out in Ecodesign Regulation (EU) 1254/2014 may be considered a reasonable approximation of actual operational performance for use in building Life Cycle Assessments (LCA).*

Indication of associated CO_2 emissions

To further illustrate the potential environmental impact of a product at an early design stage, it is proposed to present an additional set of data indicating the contribution of Annual Electricity Consumption (AEC) and Annual Heating Saved (AHS) to the B6 stage, expressed as annual CO_2-equivalent emissions, covering:

- Emissions related to electricity consumption
- Reductions in emissions resulting from annual heating saved.

Indicative values for electricity-related emissions are proposed to be calculated based on EU-average emission factors, while emission reductions related to heating savings are proposed for the most common heating system types and by climate.

Regarding the source of data for annual CO_2-equivalent emissions, it is recommended to refer to:

- Electricity consumption: IEA (2025) Emission Factors[1] (https://www.iea.org)
- Heating system emissions: EcoInvent database[2] (ecoinvent - Data with purpose)

[1] https://www.iea.org
[2] https://ecoinvent.org/

Presenting information in the general information section of the EPD

The information proposed to be included in the general section of the EPD can be presented in a table, for example:

Data presented per m² of a dwelling space

		Climate region		
Item	U.M.	Cold	Average	Warm
AEC – annual electricity consumption[1)]	kWh/a/m²			
AHS – annual heating energy saving[1)]	kWh/a/m²			

Annual CO_2-eq - consumption – electricity[2)]	kg CO_2e/a/m²			
Annual CO_2-eq - savings – oil boiler heating[3)]	kg CO_2e/a/m²			
Annual CO_2-eq - savings – gas boiler heating[3)]	kg CO_2e/a/m²			
Annual CO_2-eq - savings – heat pump (air-to-water)	kg CO_2e/a/m²			

[1)] AEC, AHS values as per Commission Delegated Regulation (EU) no 1254/2014
[2)] EU average CO_2-eq emission of 0,1786 kg CO_2e/kWh for electricity consumption – IEA (2025)
[3)] CO_2-eq emissions for different heating systems –EcoInvent database
- 0,346 kg CO_2e/kWh for oil boiler heating,
- 0,261 kg CO_2e/kWh for gas heating
- 0,160 kg CO_2e/kWh for air-to-water heat pump.

Alternatively, the data can be presented for a specific unit covered by the EPD,

Based on annual values (example of realistic values)

		Climate region		
Item	U.M.	Cold	Average	Warm
AEC – annual electricity consumption	kWh/a	140	140	140
AHS – annual heating energy saving	kWh/a	8963	4582	2072

Annual CO_2-eq - consumption – electricity	kg CO_2e/a	25	25	25
Annual CO_2-eq - savings – oil boiler heating	kg CO_2e/a	3101	1585	717
Annual CO_2-eq - savings – gas boiler heating	kg CO_2e/a	2339	1196	541
Annual CO_2-eq - savings – heat pump (air-to-water)	kg CO_2e/a	1434	733	332

Or, based on values over the entire unit lifetime of <u>50 years</u> (example of realistic values)

		Climate region		
Item	U.M.	Cold	Average	Warm
AEC – annual electricity consumption	MWh	7	7	7
AHS – annual heating energy saving	MWh	448	229	104

Annual CO_2-eq - consumption – electricity	tons CO_2e	1	1	1
Annual CO_2-eq - savings – oil boiler heating	tons CO_2e/a	155	79	36
Annual CO_2-eq - savings – gas boiler heating	tons CO_2e/a	117	60	27
Annual CO_2-eq - savings – heat pump (air-to-water)	tons CO_2e/a	72	37	17

About Eurovent

Eurovent is the voice of the European Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) industry, representing over 100 companies directly and more than 1.000 indirectly through our 16 national associations. The majority are small and medium-sized companies that manufacture indoor climate, process cooling, and cold chain technologies across more than 350 manufacturing sites in Europe. They generate a combined annual turnover of more than 30 billion EUR and employ over 150.000 Europeans in good quality tech jobs.

Mission

Eurovent's mission is to bring together HVACR technology providers to collaborate with policymakers and other stakeholders towards conditions that foster fair competition, innovation, and sustainable growth for the European HVACR industry.

Vision

Eurovent's vision is an innovative and competitive European HVACR industry that enables sustainable development in Europe and globally, which works for people, businesses, and the environment.

→ For in-depth information and a list of all our members, visit www.eurovent.eu

Who is behind this position?

Eurovent uses fair and transparent decision-making procedures. Every member is given a chance to voice their opinion, and reasonable efforts are made towards compromise and the accommodation of disagreements. Votes are only held as a last resort.

1. Who receives which number of votes?

At Eurovent, the number of votes is never determined by organisation size or membership fee level. Whether SME or large multinational, each member receives the same number of votes.

2. Who has the final decision-making power?

Eurovent Working Groups decide on matters within their remit. They are open to all members. Eurovent's committee of national associations is tasked with mediating in case of conflicts.

3. How European is the association?

Eurovent members manufacture across more than 350 sites in Europe, generate a combined annual turnover of more than 30 billion EUR, and employ over 150.000 Europeans in good quality tech jobs.

4. How representative is the organisation?

Eurovent represents over 100 companies directly, covering well over 80% of the market in most segments, and more than 1.000 companies indirectly through our 16 national associations.

Check on us in the European Union Transparency Register under identification no. 89424237848-89.