

# The benefits of the PEP approach for the communication of environmental performance of HVAC equipment

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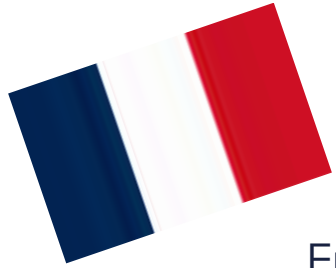
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# AGENDA



- France started producing EPDs for HVAC products in 2010
- Regulatory context : ErP/ESPR, EPBD
- Today's situation in Europe
- What are the stakes for products in HVAC sector
- What has been done by PEPCopassport
- How to achieve EU harmonisation



# How France deals with EPDs (for more than 10 years)



## PRODUCTS

Environnemental product data

**HVAC products**  
(among others like EEE)

Via PEPECopasseport  
Since 2010

*Rely on EN 50 693 standard*

**Construction products**  
(concrete blocks, beams, insulation...)

Via Inies  
Since 200

*Rely on EN 15 804 standard*

## NEW BUILDINGS

**RE2020 regulation**  
*Mandatory since 2022*

Building footprints :

Life cycle global warming potential (GWP)

From 2028 / 2030\*

According to EN 15 978 standard



# Disponible EPDs in France for Hvac Products



## PRODUCTS

By « extrapolation »  
thanks to EN 50 693  
Better suitable for Hvac  
products

569 EPDs (PEP) for HVAC

4 552 environmental  
déclarations at reference  
level

*Work, time and money...*

A lot of work has been done so far. A huge amount of money has also been invested by industrialists and Uniclima. On it's own, Uniclima has invested around **750 k€\*** just to create the conditions of PEPs developpment...



# HVAC manufacturers already working with PEPecopasseport...



Acso	Daikin Applied Europe SPA	Johnson Controls Hitachi	Saftair Ventilation
Aermec	Daikin Europe NV	LFB (ex-Lennox)	Schneider Electric Industries SAS
Air Technologies	Danfoss A/S	LG Electronics	Solaronics
Aldes	Delta Dore	Lorefar SL	TFD SNC
Arbonia Kermi France	Eurevia	Mitsubishi Electric BV France	Trane Technologies
Ariston Group	France Air	Muller intuitiv	Uniclima
Arkteos	GA SAS	MVN	Vaillant group
Axenco	GD Midea Heating & Ventilating equipment Co	Nibe Energy Systems France SAS	Ventiairsec
BDR Thermea Group	Groupe Atlantic Synergy	Ouest Isole & Ventil	Viessmann France
Brasseurs d'air	Hestia	Panasonic	VIM
Carrier	HM Heizkorper GMBH heating Techno	Purmo Group LTD	Zehnder Group France
Ciat	Ibana	S&P France	
Clivet	Intuis	Sabiana	
Cordivari SRL			



# What are the environmental european stakes on new buildings ?



## PRODUCTS

Coming european régulations :  
ErP → ESPR

HVAC products

Construction products

## NEW BUILDINGS

Coming european regulation :  
Energy performance of buildings directive  
(EPBD)

Building footprints :

- Zero emission new buildings
- Life cycle global warming potential (GWP)

From 2028 / 2030\*

According to EN 15 978 standard

\* 2028 for buildings  $S > 1\,000\text{ m}^2$  ; 2030 for  $S < 1\,000\text{ m}^2$





# When will EU require EPDs for HVAC products ?

## PRODUCTS

For HVAC products

Ecodesign energy related products (ErP)

Exple : lot ENER 01 – under review

12/2026 : end of  
ErP / ESPR



2028

2030

Ecodesign for sustainable products regulation (ESPR)

ESPR already in force for electronics, furniture, textile, tyres...

## NEW BUILDINGS

2028

2030

Energy performance of building directive (EPBD)

# Which countries in europe are already asking environmental data to evaluate building footprints ?



-  Already applied
-  On going application on voluntary bases



# Current situation : several rules for EPDs in Europe – heat pumps example



Publisher	c-PCR/PCR	Scope	FU/DU	RSL	Use stage	Refrigerant scenario	End-of-life scenario
IBU	Part B: Requirements on the EPD for heat generators	Room heaters and combination heating appliances with a rated output of max. 70 kW (EU Regulation No. 811/2013)	"1 heat exchanger" Extra rules apply for use stage	EN 15804 BBSR table (SL)	None defined	Not applicable	None
PEP	PSR-0013-ed3.0-EN-2023-06-06	Thermodynamic generator with electric compression	FU: "1 kW of cooling or heating or heating and hot water..." DU: "To produce heating or cooling or heating and hot water..."	Predefined (default scenarios) 17 / 22 years	EN 16147 EN 14825	Leaks: define in all stage Refill: define + treatment scenario	EUROSTAT: For sales packaging (A5) EN50693 Annex G
EPD Italy	PCR EPDItaly019 – HVAC Home Appliances	Air-conditioning machines (CPC 43912) Refrigerating and freezing equipment and heat pumps, except household type equipment (CPC 43913)	FU: general instructions & examples given DU: 1 HVAC home appliance	Predefined (20 years)	EN 14825	Leaks: use	None Module D: EN15804 for construction products & CFF for rest of products
EPD International	Mutual recognition with PEP in progress						



In green : countries where PEP are produced



# What are the stakes for HVAC products?

## Prepare the coming EU regulations

- Consider what has been done by PEpecopassport
- Harmonise rules to do EPDs
- Work on standards that will be necessary for ErP / ESPR and EPBD

# What has been achieved within PEPecopasseport



## PEPecopassport rules:

- **Product Category Rules (PCR):** towards harmonization with EN 15 804 methodology
  - Current PCR ed4 mostly aligned with EN 15 804
  - PCR ed5 is being launched to integrate updates following new IEC 63 366 which will replace EN 50 693
- **Product Specific Rules (PSR) for HVAC products:** based on EU standards
  - They have been developed by Uniclimate
  - They are based on EU standards (especially for the use phase with ErP parameters)
  - They include extrapolation rules (necessary for ranges of products)

# What has been achieved within PEPecopasseport



## 12 PSR :

- **PSR 2** : specific rules for direct, visible, fixed electric heating appliances
- **PSR 4** : specific rules for individual, standalone devices for production of stored domestic hot water only
- **PSR 5** : specific rules for electrical switchgear and control gear Solutions
- **PSR 8** : specific rules for ventilation, air treatment, filtration and mechanical smoke and exhaust equipment
- **PSR 9** : specific rules for comfort terminal units (CTU)
- **PSR 10** : specific rules for uninterrupted power Systems (UPS)
- **PSR 11** : specific rules for hot water radiators or towel radiators
- **PSR 12** : specific rules for gas, fuel oil, or biomass boilers for heating only or heating and domestic hot water production
- **PSR 13** : specific rules for thermodynamic generators with electric compression for space heating and/or cooling the production of domestic hot water
- **PSR 15** : specific rules for wood heating system appliance for individual dwellings
- **PSR 16** : specific rules for storage tanks
- **PSR 17** : specific rules for thermal solar collectors

**The above mentioned PSR are available to other PO, i.e. each PO can use them to support EPD making and registration within their program.**



## EN 50 693 versus EN 15 804 : main differences

	EN 50 693	EN 15 804
Type of product	EEE & HVAC	Construction product
Use phase	Mandatory	Optional
End of life	Recycled material at the beginning of the life	Recycled material at the end of the life
- Product range	Extrapolation rules	



# How to achieve EU harmonisation ? 1/3



## Middle term : standardisation for the coming regulations

- Prepare **standardisation mandates coming from ErP, EPBD & ESPR** regulations ; with European Commission
- **Work** in sectorial standardisation (ventilation, heat pump and air conditionning, boilers, radiators, ...)

**Our goal : consider EN 50 693 next to or besides EN 15 804 for HVAC products**

# How to achieve EU harmonisation ? 2/3



Short term: meanwhile, prepare the path towards harmonisation

- **Mutual Recognition Agreement with other Program Operators** (within Ecoplatform)
- **Prepare the discussions** : with EU associations & manufacturers
  - Explain the **interest of** EN 50 693 / IEC 63 366 standard
  - Start the discussions about **harmonisation on the base of PSRs**

To avoid loss of time and loss of money : **don't start from scratch ! Reuse the existing work and adapt it if necessary !**

# How to achieve EU harmonisation? 3/3



To help in the discussion, Uniclima has written a detailed note with:

- Specificities of PEpecopassport approach
- How much work has been achieved
- Comparison between EN 50 693 and EN 15 804 including pro/con

# THANK YOU FOR YOUR ATTENTION



Ensemble,  
au cœur d'un **génie climatique  
durable**