Standardisation and EU common language across the value chain

To finance the energy transition and to provide reliable results, professionals, which are not used to talk together, needs to cooperate, to understand each other, to speak a common language. This article shows examples of the common language between the financial sector and HVAC professionals.

Keywords: Financing of energy transition, Building performance indicators, EU taxonomy

JOHANN ZIRNGIBL
REHVA Vice-President

JANA BENDZALOVA
CEO ENBEE

The need for a common language: yesterday and today

Since long time, the need for a common language in the construction sector is well documented. Already in Genesis 11:1–9 it is written that people spoke a single language before they started to construct the Babel tower. But Yahweh, observing the ambitious construction and the people seeking to be equal to God, confounds their speech so that they could no longer understand each other. The Babel tower was not finished.

Today, the challenge is the energy transition. There is a need for a common language between financial institutions and HVAC professionals to successfully complete the energy transition. The financing needed for the energy transition is estimated annually to around 1% of EU PIB (225 – 275 billion €). There will be public funding, but additional private funding is necessary. [1]

Private financial markets need financial "products" to deal with, for example green bonds. In Europe, the EU taxonomy or Green Bond principles define what is green or not green, allowing investors to allocate capital to environmentally sustainable investments. This recognised green investment may have better financial conditions for the investor. Green investment can be also valorised in the Environmental, Social and Governance (ESG) reporting of the company.

To increase the confidence in the green labelling, harmonized frameworks for impact reporting are worked out. **Figure 1** shows indicators for the reporting framework of the ICMA* Handbook - Harmonised Framework for Impact Reporting [2] for "Green" buildings making a significant contribution to environmental sustainability.

* The International Capital Market Association (ICMA) represents financial institutions active in the international capital market worldwide. See www.icmagroup.org

Illustrative Core Indicator Summary Template for Project-by-Project Report

Green Building Projects	Signed Amount a/	Share of Total Project Financing b/	Eligibility for green bonds	Green Building component	Allocated Amount c/	Project lifetime d/	Gross Building Area (GBA)	#1) Final and/or Primary Energy Use e/		
Project name f/	currency	%	% of signed amount	% of signed amount	currency	in years	in m²	kWh/m² of GBA p.a.	% of energy use reduced/avoided	% of renewable energy generated on site
e.g. Project 1	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX

Figure 1. Indicators for the reporting framework of the ICMA Handbook.

Indicators as Primary Energy Use are listed. The definition of Primary Energy Use is overtaken from the EPBD or from ISO EN standards. Even the calculation of the Primary energy use is mentioned: "*For further guidance on calculation of PE Use, including renewable energy generated on site, ISO EN standards or national methods … may be used*". The ICMA Handbook also provides definition of floor area for reporting the energy performance indicators in kWh/m². The metrics is a Gross Building Area (GBA) also named Gross Floor Area ("GFA") that corresponds to the total floor area contained in a building measured to the external walls.

It is evident that a Handbook for a harmonised impact reporting cannot go further in the details. The problem in the handbook is that it allows for the calculation **ISO EN standards** or **national methods**. But there are national or regional methods in each Member State providing all different results. The problem with ISO EN standards is that there is no software tool allowing calculating easily all the requested indicators. Financial institutions have to solve this for impact reporting at each national level or even at each bank level.

The consequences of the missing common language – no comparability but administrative burden and costs

Today there is no harmonised calculation tool available. The consequences of the missing common calculation tool on the primary energy indicator are shown in **Figure 2** (example of a single-family house equipped with a heat pump and photovoltaic panels).

Depending on the different hypothesis (on-site ambient heat considered or not in the total primary energy, exported energy counted or not, etc), the numerical EP indicators for the same building vary from 26 to 101 kWh/m² p.a. or even to 119 kWh/m².

As already mentioned, financial institutions must provide evidence of compliance with the EU taxonomy in real estate financing. For example, the EU taxonomy defines that the acquisition or ownership of a building built before 31/12/2020 makes a substantial contribution (Green Building) to climate change mitigation if the building:

- has **at least** an Energy Performance Certificate (EPC) **class A; or**
- is within the top 15% of the residential and non-residential building stock.

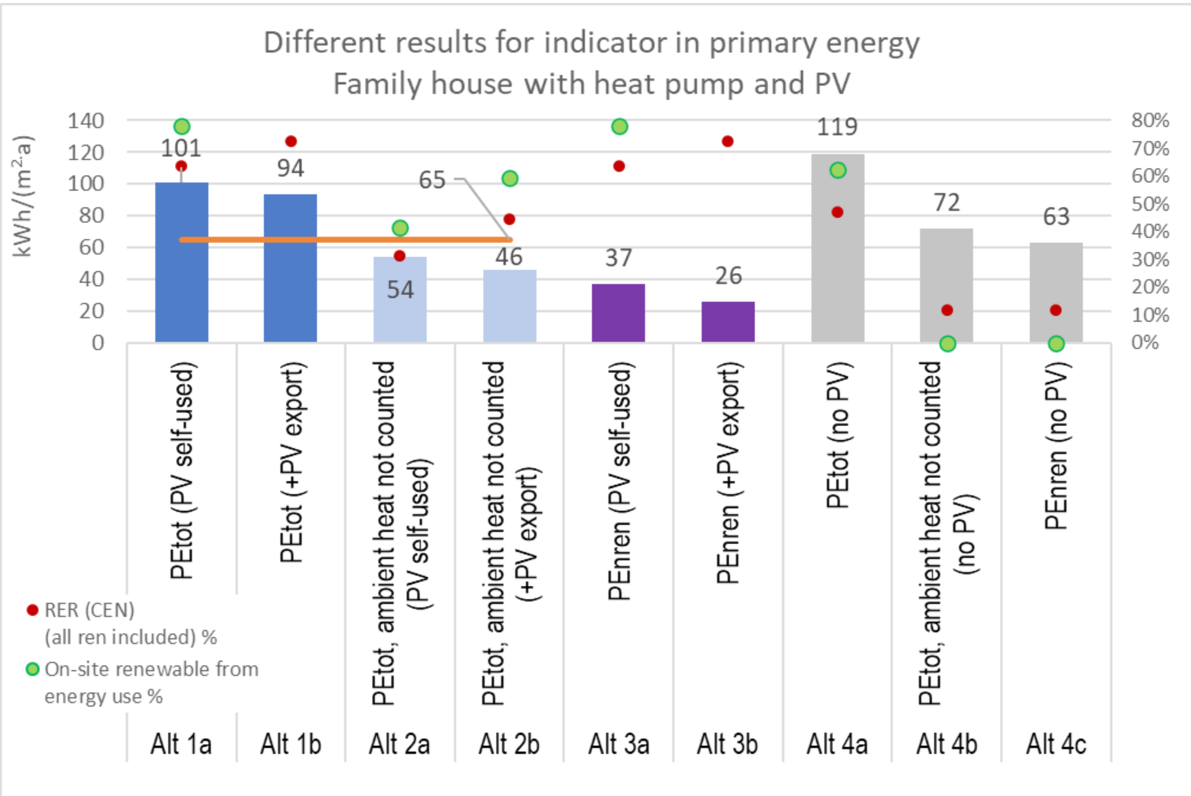

Figure 2. Single-family house equipped with a heat pump and photovoltaic panels.

To identify which characteristic in their national context (information available on the EPC, structure of the building stock, etc) will fulfil the 15% criteria, a German Bank engaged a consultant. The calculation carried out by the consultant showed that single-family houses meet the 15% criteria if they have an energy class of at least B, or if its primary energy demand (PED) is lower than 70 kWh per square meter using the national type of primary energy, calculation method and floor area. This illustrates the non-harmonised framework and the lack of a common language which causes administrative burden and costs.

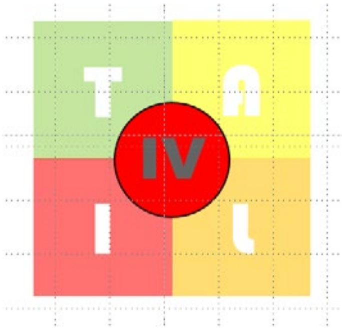

Figure 3. ALDREN TAIL RATING.

HVAC professionals and bankers need to invent a common language

The common language must be based on common indicators **and** the underlying unambiguous calculation methodology. Bankers need indicators that can be understand easily for example the energy performance of a building via the energy classes. HVAC professionals need to deliver comparable, reliable and transparent indicators.

Some indicators exist already, others need to be developed, as for example, indicators related to non-energy benefits as health & wellbeing. These indicators should also allow the financial institution to evaluate the asset value of the building, including energy and non-energy benefits. An example for a new non-energy benefits benchmark is the ALDREN TAIL RATING (see **Figure 3**). TAIL stand for **T**hermal, **A**coustic, **I**ndoor air quality and the **L**ighting performance of a building related to health & wellbeing. [3]

Additional indicators for the real estate market, for example for the assessment of risks related to sustainability and regulatory outlook, could be provided by the HVAC sector. An example is a qualitative indicator of risk including technical obsolescence and financial issues proposed in ALDREN as link between energy and financial valuation.[4]

Conclusion

To finance the energy transition and to provide reliable results, the cooperation between financial institutions and technical know-how in the HVAC sector is necessary. Cooperation needs a common understanding; common understanding needs a common language. Talking to financial institution is a new challenge for HVAC professionals requiring new competences. We should learn from the experience of the Babel Tower. ■

References

[1] COMMISSION DELEGATED REGULATION (EU) 2021/2139 of 4 June 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives, amended by Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022.

[2] Handbook - Harmonised Framework for Impact Reporting. June 2023; ICMA and the Green Bond Principles, June 2023. https://www.icmagroup.org/sustainable-finance/impact-reporting/green-projects/.

[3] The ALDREN TAIL RATING, https://aldren.eu/comfort-well-being/.

[4] The ALDREN methodology for financial valuation – Indicators and information sharing, https://aldren.eu/cost-value-risk/.