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The European Portal For Energy Efficiency In Buildings

Making building performance assessment transparent & holistic: ensuring a reliable and level playing field

Tuesday, 20 September

13h30-15h00 CEST

19-23 SEPTEMBER 2022

EUROPEAN SUSTAINABLE ENERGY WEEK

Going green and digital
for Europe's energy transition

EXTENDED PROGRAMME

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#EUSEW2022

MAKING BUILDING PERFORMANCE ASSESSMENT TRANSPARENT & HOLISTIC: ENSURING A RELIABLE AND LEVEL PLAYING FIELD

← **Welcome session moderator,**
Andrei Vladimir Liţiu, Executive Director

Welcome session host,
Build Up Editorial Team →

← **Welcome & intro, Quentin de Hults,**
Director Green & Healthy Buildings

#EUSEW2022

MAKING BUILDING PERFORMANCE ASSESSMENT TRANSPARENT & HOLISTIC: ENSURING A RELIABLE AND LEVEL PLAYING FIELD

← Keynote 1, Pau Garcia Audi, Policy Officer, DG ENER

Keynote 2, Dick van Dijk, EPB Expert →

← Keynote 3, Hélène Sibileau, Senior Policy Advisor

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MAKING BUILDING PERFORMANCE ASSESSMENT TRANSPARENT & HOLISTIC: ENSURING A RELIABLE AND LEVEL PLAYING FIELD

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EuroACE
Energy Efficient Buildings

Rémi Collombet

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EPEE
The voice of the heating, cooling and refrigeration industry

Henk Kranenberg

eu.bac european building automation controls association

EUROPEAN ALLIANCE TO SAVE ENERGY
Creating an Energy-Efficient Europe

Jules Cordillot

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MAKING BUILDING PERFORMANCE ASSESSMENT TRANSPARENT & HOLISTIC: ENSURING A RELIABLE AND LEVEL PLAYING FIELD

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Welcome and introduction,
Quentin de Hults, Director
Green & Healthy Buildings

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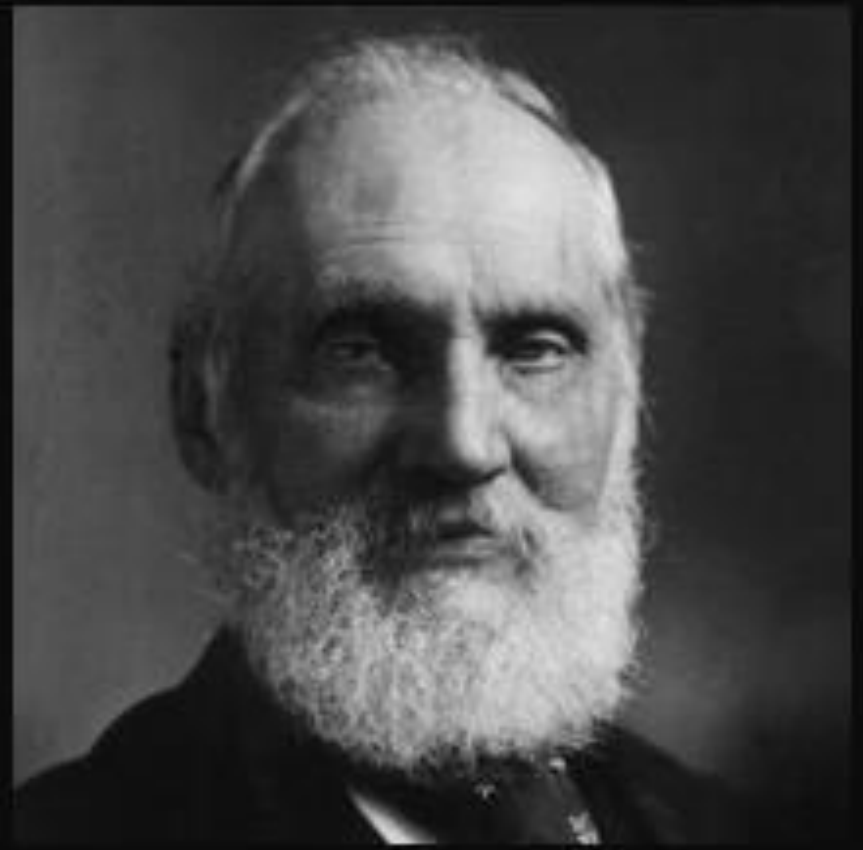

If you can not measure it, you can not improve it.

~ Lord Kelvin

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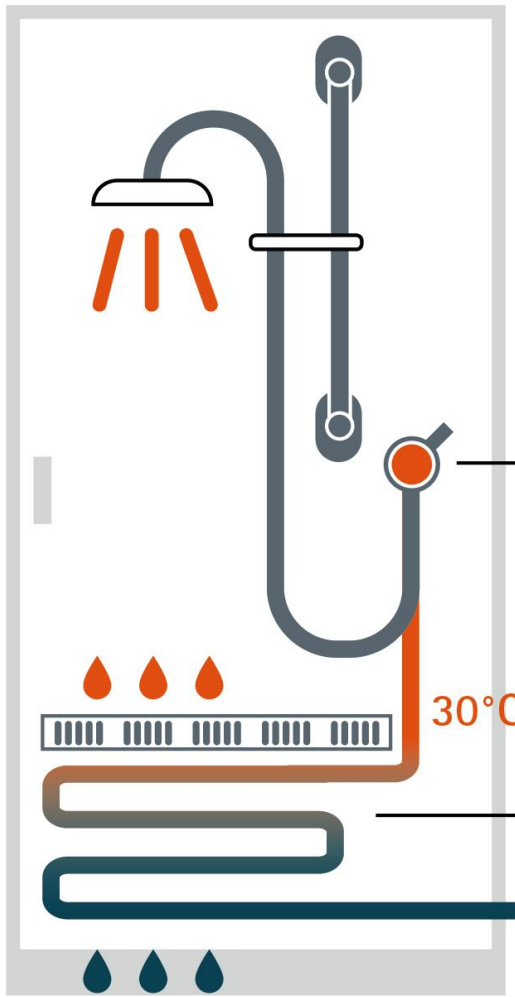
Waste Water Heat Recovery (WWHR) systems

Low hanging fruit for energy efficiency and decarbonisation of buildings



Working principle

Shower water

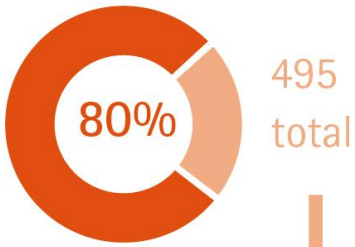
Mixing valve

30°C

~40% heat recovery

10°C

Energy demand for domestic hot water preparation in the EU (TWh/y)



A heat exchanger transfers heat from the waste hot shower water to the incoming fresh water supply, warming it up from around 10°C to 30°C.

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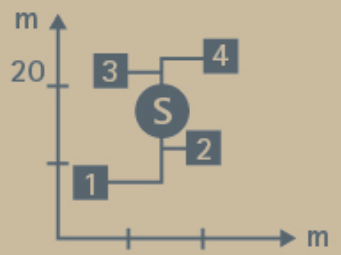
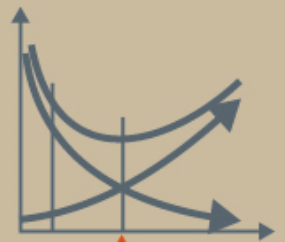
Efficient in-building electrical installations

can save 1% of the electricity generated in Europe

Basic principles



Optimal location


Proper sizing


Load management


Control and monitoring

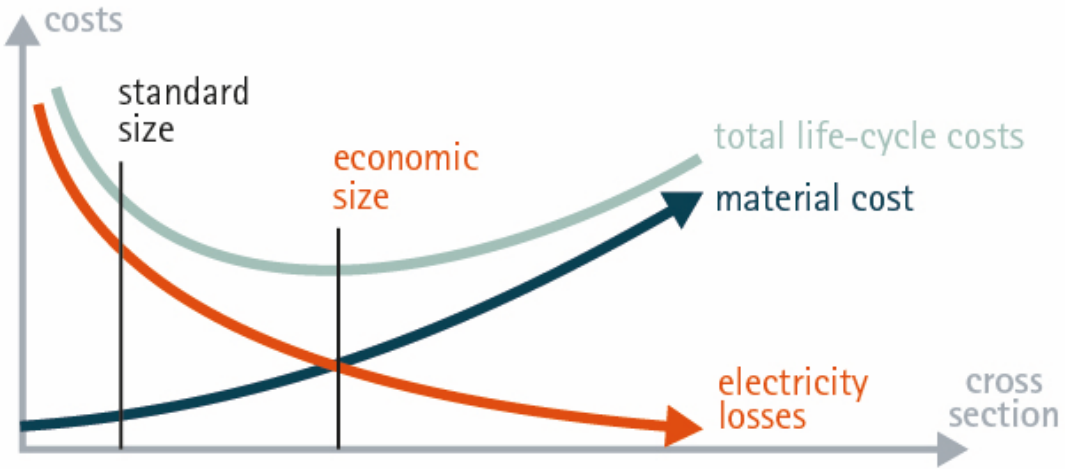
Proper sizing


cross section


resistance

Increasing the conductor cross section reduces the energy losses.

The optimal size to achieve minimum life-cycle cost is in most cases larger than the standard size.



MAKING BUILDING PERFORMANCE ASSESSMENT TRANSPARENT & HOLISTIC: ENSURING A RELIABLE AND LEVEL PLAYING FIELD

Keynote 1,
Pau Garcia Audi,
Policy Officer

#EUSEW2022

Delivering on the European Green Deal and Fit for 55

Building energy performance assessments and the Energy Performance of Buildings Directive (EPBD)

EPB Center, webinar, 20 September 2022

ENER/B - Just Transition, Consumers, Energy Efficiency and Innovation
Unit ENER B.3 – Buildings and products

Energy Performance of Buildings Directive

EPBD 2002/91/EC

- Article 3 – Adoption of methodology
- Annex I – General framework

EPBD 2010/31/EU (recast)

- Annex I – General framework (updated)
  - Typical conditions
  - Primary energy

Mandate 480

- EPB standards ISO-52000 (series)

EPBD (EU) 2018/844 (amending)

- Annex I – General framework (updated)
  - Common indicator
- Introduce references to standards and obligation to report

ANNEX

General framework for the calculation of energy performance of buildings (Article 3)

1. The methodology of calculation of energy performances of buildings shall include at least the following aspects:
   (a) thermal characteristics of the building (shell and internal partitions, etc.). These characteristics may also include air-tightness;
   (b) heating installation and hot water supply, including their insulation characteristics;
   (c) air-conditioning installation;
   (d) ventilation;
   (e) built-in lighting installation (mainly the non-residential sector);
   (f) position and orientation of buildings, including outdoor climate;
   (g) passive solar systems and solar protection;
   (h) natural ventilation;
   (i) indoor climatic conditions, including the designed indoor climate.
2. The positive influence of the following aspects shall, where relevant in this calculation, be taken into account:
   (a) active solar systems and other heating and electricity systems based on renewable energy sources;
   (b) electricity produced by CHP;
   (c) district or block heating and cooling systems;
   (d) natural lighting.
3. For the purpose of this calculation buildings should be adequately classified into categories such as:
   (a) single-family houses of different types;
   (b) apartment blocks;
   (c) offices;
   (d) education buildings;
   (e) hospitals;
   (f) hotels and restaurants;
   (g) sports facilities;
   (h) wholesale and retail trade services buildings;
   (i) other types of energy-consuming buildings.

Annex I of Directive 2002/91/EC

European Commission

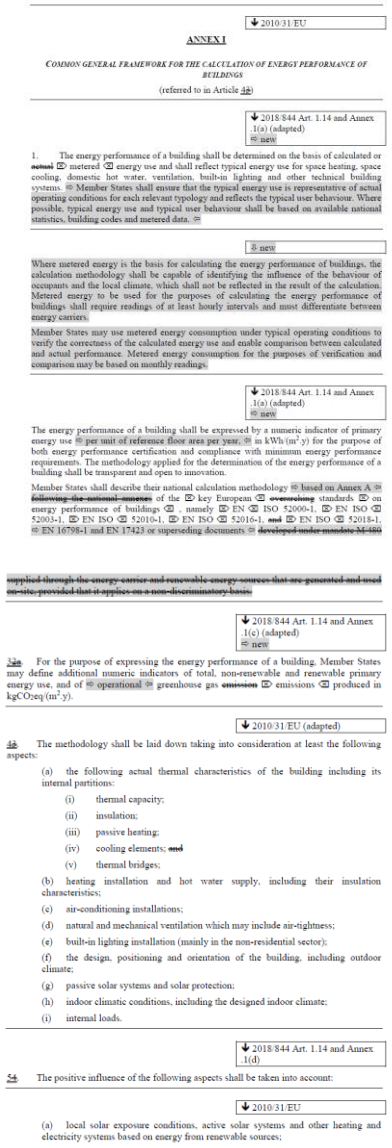
Energy Performance of Buildings Directive

EPBD 2021 (proposal for recast)

- Annex I – General framework (updated)
  - Hourly calculations
  - Measured energy
  - Links to product regulation
  - Recognition of benefits of primary energy factors in supply (based on EN-17423)
  - Additional indicators

Links to multiple articles

- Minimum energy performance requirements (MEPR – new and existing buildings)
- Cost-optimal methodology (sets MEPR)
- Energy Performance Certificates (EPC)
- Financial incentives



2010/31/EU

ANNEX I

COMMON GENERAL FRAMEWORK FOR THE CALCULATION OF ENERGY PERFORMANCE OF BUILDINGS

(referred to in Article 4a)

2018/844 Art. 1.14 and Annex .1(a) (adapted)
new

1. The energy performance of a building shall be determined on the basis of calculated or actual metered energy use and shall reflect typical energy use for space heating, space cooling, domestic hot water, ventilation, built-in lighting and other technical building systems. Member States shall ensure that the typical energy use is representative of actual operating conditions for each relevant typology and reflects the typical user behaviour. Where possible, typical energy use and typical user behaviour shall be based on available national statistics, building codes and metered data.

new

Where metered energy is the basis for calculating the energy performance of buildings, the calculation methodology shall be capable of identifying the influence of the behaviour of occupants and the local climate, which shall not be reflected in the result of the calculation. Metered energy to be used for the purposes of calculating the energy performance of buildings shall require readings of at least hourly intervals and must differentiate between energy carriers.

Member States may use metered energy consumption under typical operating conditions to verify the correctness of the calculated energy use and enable comparison between calculated and actual performance. Metered energy consumption for the purposes of verification and comparison may be based on monthly readings.

2018/844 Art. 1.14 and Annex .1(a) (adapted)
new

The energy performance of a building shall be expressed by a numeric indicator of primary energy use per unit of reference floor area per year, in kWh/(m².y) for the purpose of both energy performance certification and compliance with minimum energy performance requirements. The methodology applied for the determination of the energy performance of a building shall be transparent and open to innovation.

Member States shall describe their national calculation methodology based on Annex A following the national annexes of the key European overarching standards on energy performance of buildings , namely EN ISO 52000-1, EN ISO 52003-1, EN ISO 52010-1, EN ISO 52016-1, and EN ISO 52018-1, EN 16798-1 and EN 17423 or superseding documents developed under mandate M-480

supplied through the energy carrier and renewable energy sources that are generated and used on-site, provided that it applies on a non-discriminatory basis.

2018/844 Art. 1.14 and Annex .1(c) (adapted)
new

3a. For the purpose of expressing the energy performance of a building, Member States may define additional numeric indicators of total, non-renewable and renewable primary energy use, and of operational greenhouse gas emission emissions produced in kgCO2eq/(m².y).

2010/31/EU (adapted)

4. The methodology shall be laid down taking into consideration at least the following aspects:

(a) the following actual thermal characteristics of the building including its internal partitions:
  (i) thermal capacity;
  (ii) insulation;
  (iii) passive heating;
  (iv) cooling elements; and
  (v) thermal bridges;
(b) heating installation and hot water supply, including their insulation characteristics;
(c) air-conditioning installations;
(d) natural and mechanical ventilation which may include air-tightness;
(e) built-in lighting installation (mainly in the non-residential sector);
(f) the design, positioning and orientation of the building, including outdoor climate;
(g) passive solar systems and solar protection;
(h) indoor climatic conditions, including the designed indoor climate;
(i) internal loads.

2018/844 Art. 1.14 and Annex .1(d)

5. The positive influence of the following aspects shall be taken into account:

2010/31/EU

(a) local solar exposure conditions, active solar systems and other heating and electricity systems based on energy from renewable sources;

given to the European Committee for Standardisation (CEN). This provision shall not constitute a legal codification of those standards.

new

Member States shall take the necessary measures to ensure that, where buildings are supplied by district heating or cooling systems, the benefits of such supply are recognised and accounted for in the calculation methodology through individually certified or recognised primary energy factors.

2018/844 Art. 1.14 and Annex .1(b) (adapted)
new

2. The energy needs and energy use for space heating, space cooling, domestic hot water, ventilation, lighting and other technical building systems shall be calculated using hourly or sub-hourly time calculation intervals in order to account for varying conditions that significantly affect the operation and performance of the system and the indoor conditions, and in order to optimise health, indoor air quality and comfort levels defined by Member States at national or regional level.

new

Where product-specific regulations for energy-related products adopted under Regulation 2009/125/EC include specific product information requirements for the purpose of the calculation of energy performance under this Directive, national calculation methods shall not require additional information.

2018/844 Art. 1.14 and Annex .1(b) (adapted)
new

The calculation of primary energy shall be based on primary energy factors, (distinguishing non-renewable, renewable and total) or weighting factors per energy carrier, which have to be recognised by the national authorities. Those primary energy factors may be based on national, regional or local information. Primary energy factors may be set on an annual, and possibly also seasonal, or monthly, or daily or hourly basis weighted averages or on more specific information made available for individual district systems system.

Primary energy factors or weighting factors shall be defined by Member States. The choices made and data sources shall be reported according to EN 17423 or any superseding document. Member States may opt for an average EU primary energy factor for electricity established pursuant to Directive (EU) …/… [recast EED] instead of a primary energy factor reflecting the electricity mix in the country.

In the application of these factors to the calculation of energy performance, Member States shall ensure that the optimal energy performance of the building envelope is pursued.

In the calculation of the primary energy factors for the purpose of calculating the energy performance of buildings, Member States may take into account renewable energy sources

(b) electricity produced by cogeneration;
(c) district or block heating and cooling systems;
(d) natural lighting.

6. For the purpose of the calculation buildings should be adequately classified into the following categories:
(a) single-family houses of different types;
(b) apartment blocks;
(c) offices;
(d) educational buildings;
(e) hospitals;
(f) hotels and restaurants;
(g) sports facilities;
(h) wholesale and retail trade services buildings;
(i) other types of energy-consuming buildings.

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EPBD revision – Focus areas

Renovation

- National Building Renovation Plans
- Minimum Energy Performance Standards
- Energy Performance Certificates
- Renovation passports for individual buildings

Decarbonisation

- Zero-emission buildings as new standard for new buildings and 2050 vision for building stock
- Consideration of whole life cycle carbon
- Phasing out of incentives for fossil fuels and new legal basis for national bans

Modernisation & system integration

- Infrastructure for sustainable mobility
- EPC digitalisation & databases
- Smart Readiness Indicator

Financing

- Public and private financing & technical assistance
- Deep renovation standard
- Priority to vulnerable households and people affected by energy poverty

Energy Performance of Buildings Directive

Calculation methodology

- Flexible
- Asset calculation – standardized conditions
- Must reflect typical operation (yet flexible)
- Common indicator: kWh/(m^2 year) primary energy use
- Primary Energy Factors (PEF)
- Additional indicators are possible (e.g. kg CO_2/(m^2 year))
- Calculated or measured (*)

Calculation methodology – in practice

- Flexibility between Member States
  - Differences in application
- Used for compliance / design / certification
- Centralised / Licenced / Mixed calculation
  - Links to multiple calculation software suites

Energy Performance of Buildings Directive

EPB standards and the EPBD

- Flexibility of adoption
- Modular approach
- Obligation to report using standards
  - Common understanding
  - Overarching (ISO 52000)
  - Indoor requirements (EN 16798-1)
  - PEFs (EN 17423)
- Support service
  - EPB Center | EPB Standards
  - https://epb.center
  - Documentation, FAQs, case studies, webinars, etc.

European Commission


Thank you

MAKING BUILDING PERFORMANCE ASSESSMENT TRANSPARENT & HOLISTIC: ENSURING A RELIABLE AND LEVEL PLAYING FIELD

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Keynote 2,
Dick van Dijk,
EPB Expert

#EUSEW2022

European Commission

The CEN/ISO EPB standards and EPBD's implementation

Dick van Dijk

- *EPB Center expert and initiator*
- *Chair of ISO Joint Advisory Group on set of EPB standards ((EN) ISO 52000 family)*

Making building performance assessment transparent & holistic: ensuring a reliable and level playing field

Tuesday, 20 September

13h30-15h00 CEST

European Sustainable Energy Week

#EUSEW2022

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European Commission

dick.vandijk@epb.center

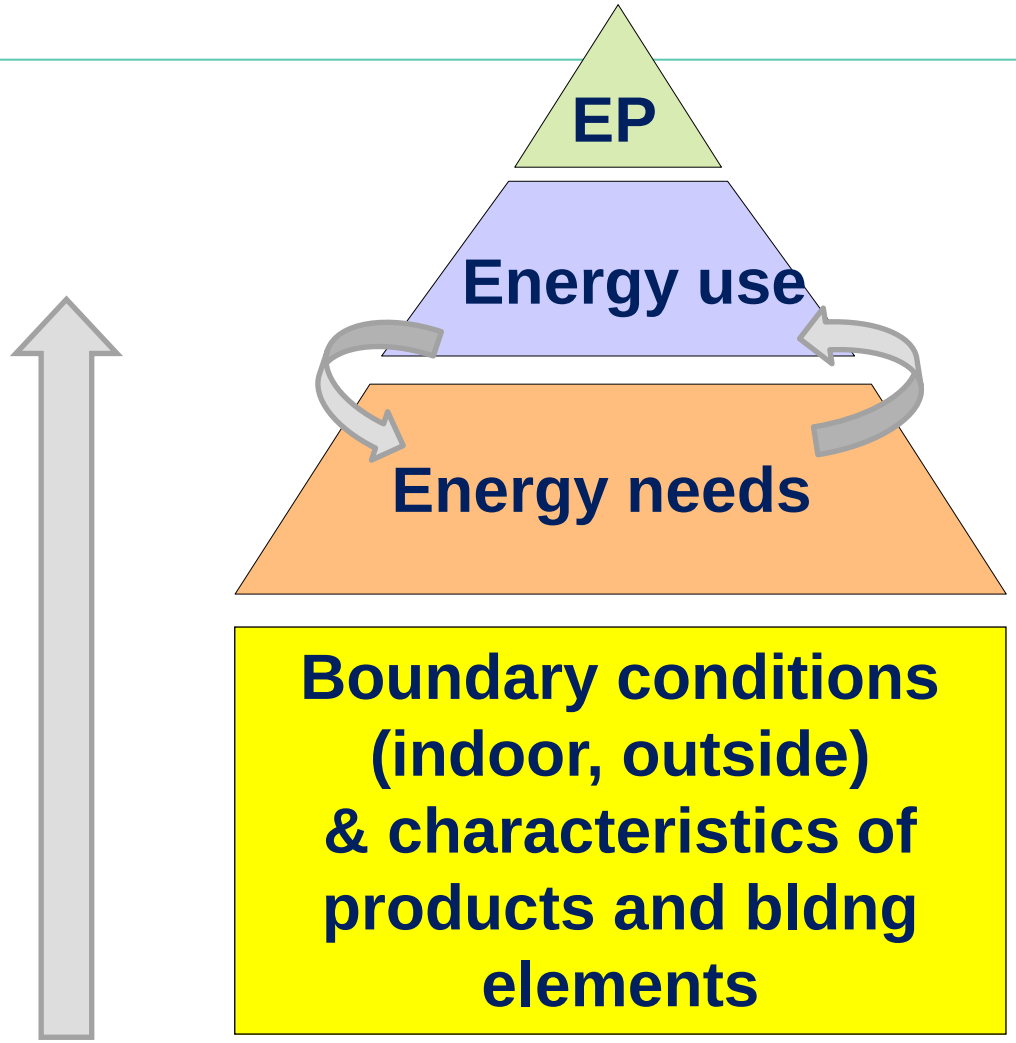
Set of harmonized European and global EPB standards

The set of CEN and CEN ISO EPB standards

- Europe-wide -*and to great extent globally*- converged calculation methodology to assess the overall energy performance of buildings
- For information (EP Certificates)
- For benchmarking and checking compliance with minimum EP requirements
- For new and existing buildings, residential and non-residential

- Most were published in 2017
- Current status: being implemented, expanded and reviewed

The set of EPB standards



Holistic (systemic) approach

From product & component data

via systems performance

to overall building energy performance

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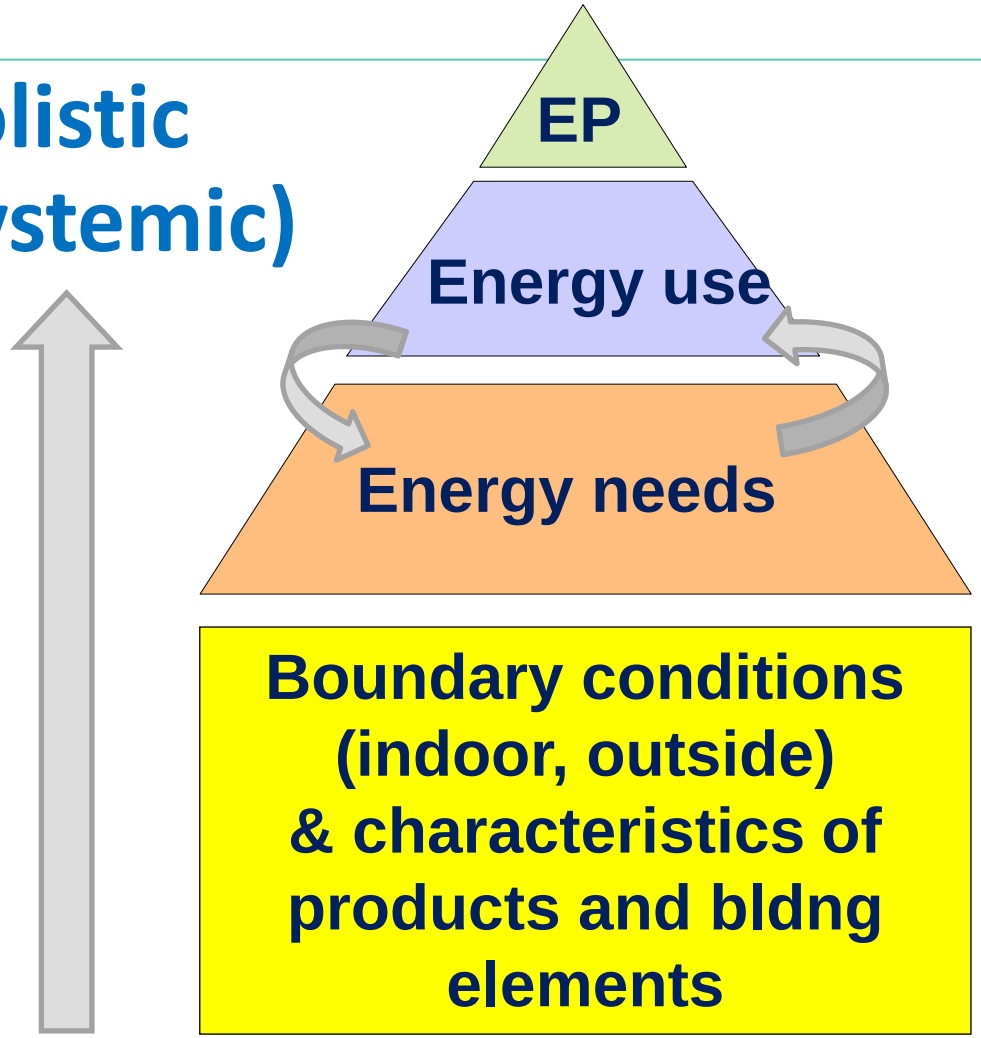
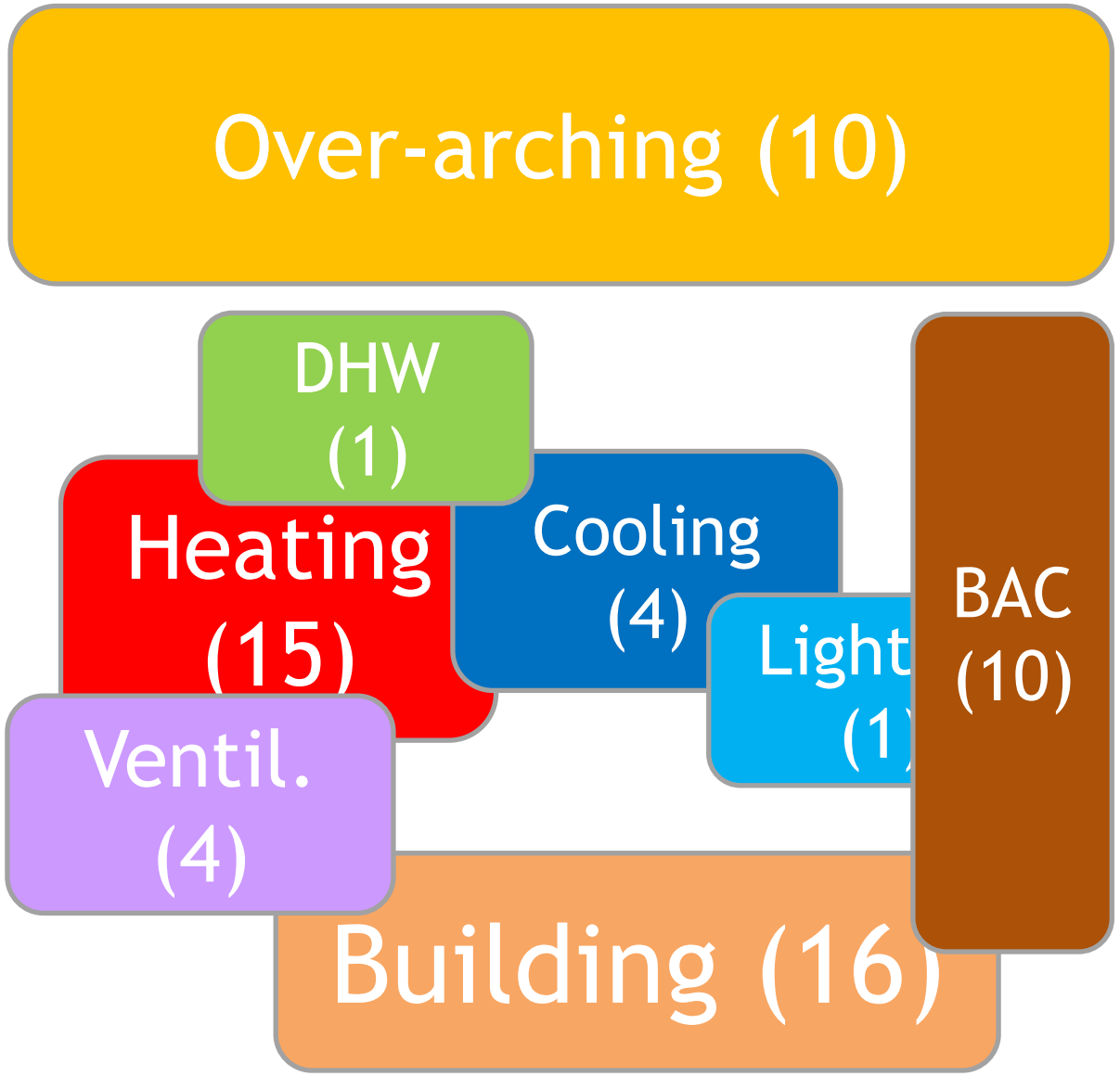
The set of EPB standards

Holistic (systemic)



Modular approach



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Why important to have and to use this set?

+ Definitions
+ Calculation method
+ (assumed) outdoor and indoor conditions

EP calculation methodology

= EP value (kWh/m^2)

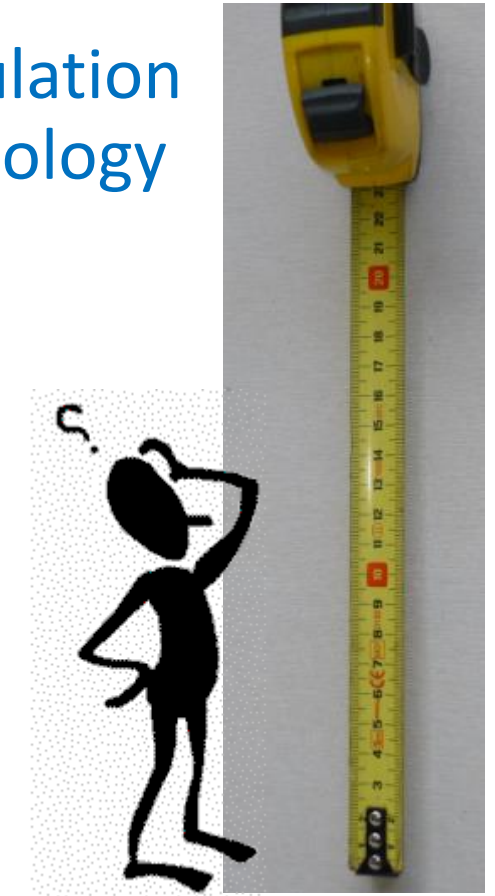
Why important to have and to use this set?

+ Definitions
+ Calculation method
+ (assumed) outdoor and indoor conditions

EP calculation methodology

= EP value (kWh/m^2) *But what does it mean?*

→ Need benchmarks / reference values
to give meaning to the EP value



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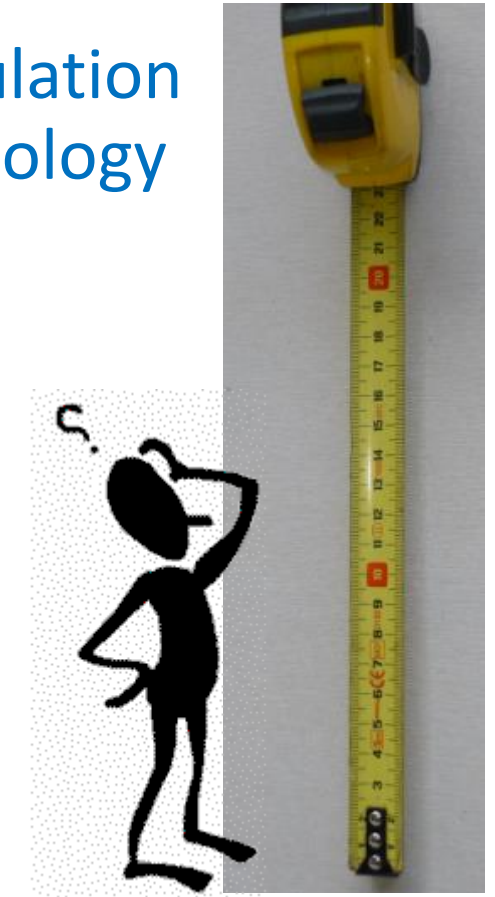

Set of EPB standards

Common EP assessment methodology =

+ Common definitions
+ Common calculation method
+ Common [sets of] (assumed) outdoor and indoor conditions
+ Common EP indicators

Different methodology = different meaning

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Set of EPB standards

Common EP assessment methodology =

+ Common definitions
+ Common calculation method
+ Common [sets of] (assumed) outdoor and indoor conditions
+ Common EP indicators

No national choices?

Yes, but conversion to a common reference should be possible, so limited to e.g.

- Climatic conditions
- (Non)Renewable Primary Energy Factor values

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For more details: go to EPB Center website

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Consultancy Services on the Energy Performance of Buildings

Support, consultancy and services on
Energy Performance of Buildings
Standards calculations and implementation

www.epb.center

Large amount of accurate and transparent publicly available information on the EPB standards

Dozens of frequently Asked Questions

10 short videos

16 recently updated tools

10 webinar recordings

14 detailed case studies

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And still growing!

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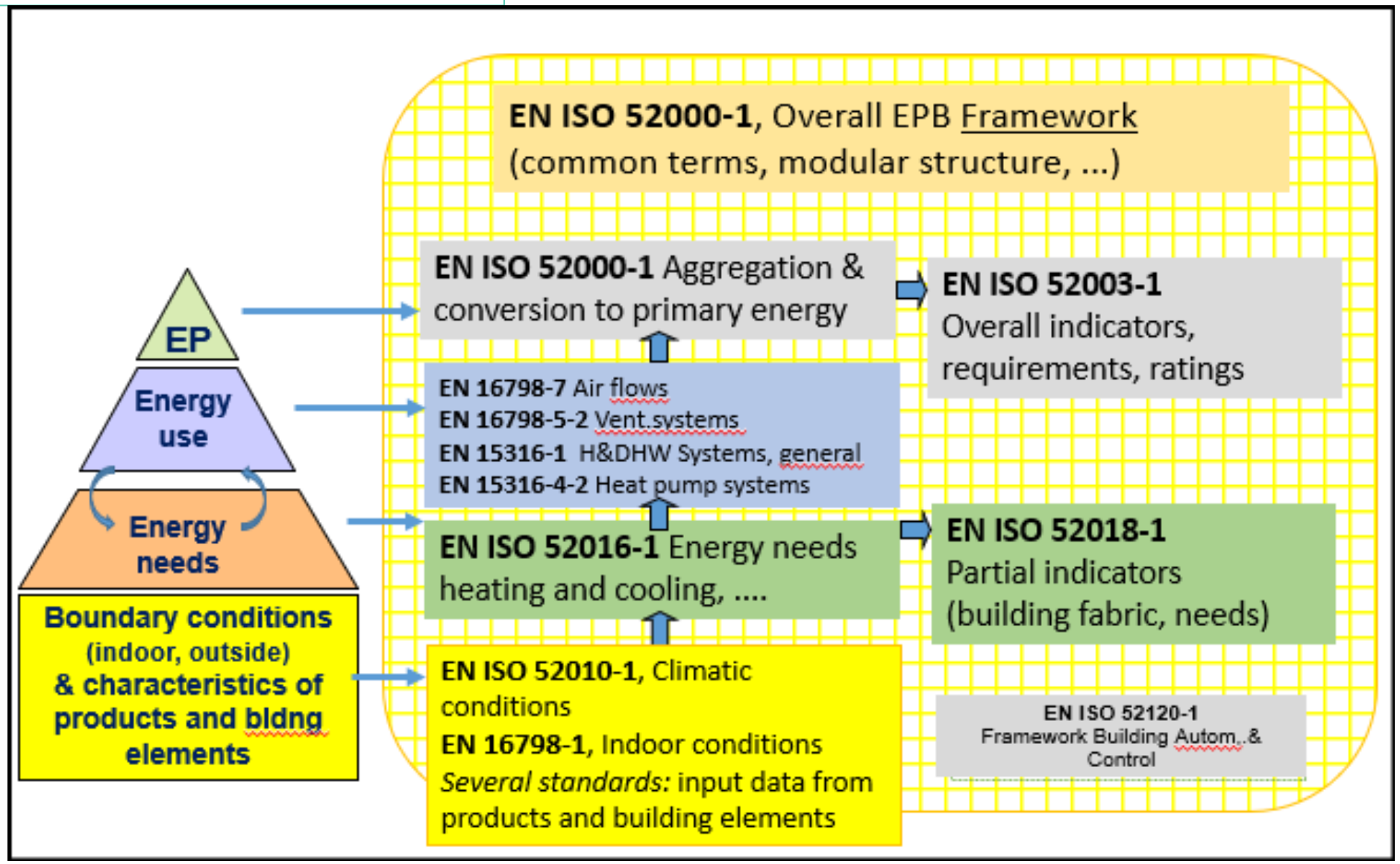
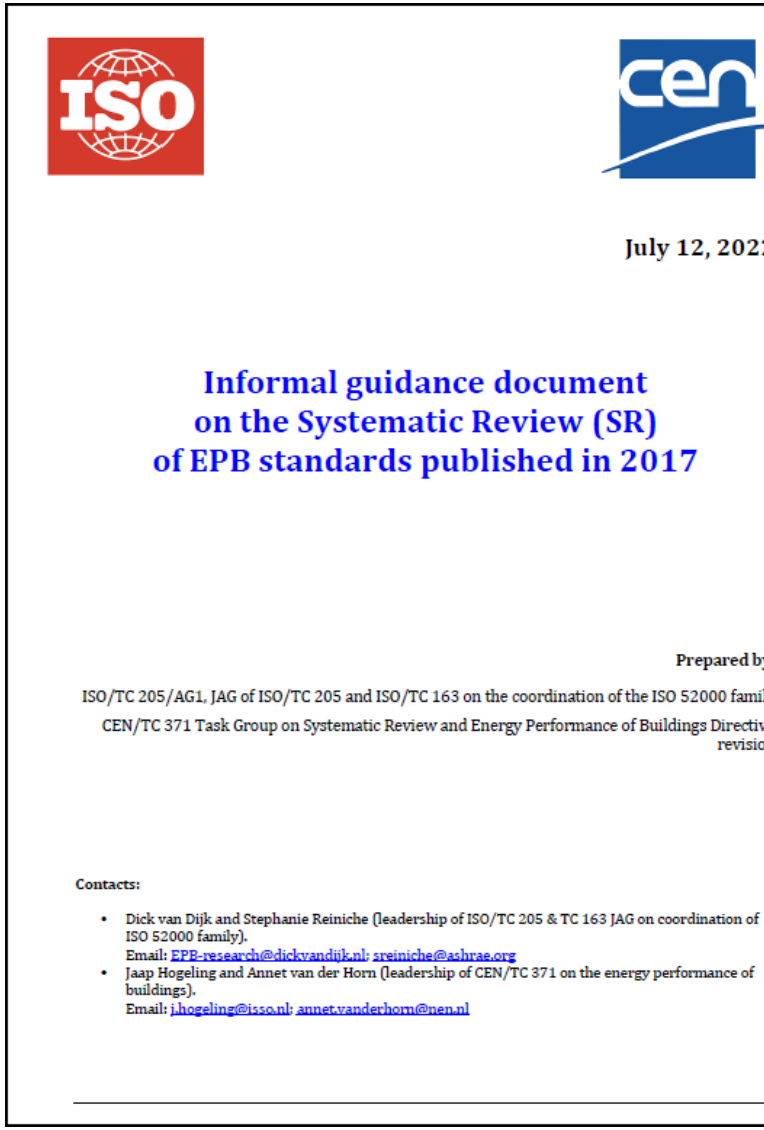
Key EPB standards



Future development of the set of EPB standards

- From July 15 to December 2, 2022: **Systematic** (5 years, periodic) **Review** of all EPB standards that were published in 2017, in both CEN and ISO
- For this unique occasion, a team of CEN and ISO experts prepared and distributed an **informal guidance document**
  - containing extensive background information, “food for thought” and questions
  - for all relevant mirror committees of the national CEN and ISO member bodies. To provide feedback: on individual EPB standards and on the total set



ISO

cen

July 12, 202

Informal guidance document on the Systematic Review (SR) of EPB standards published in 2017

Prepared by

ISO/TC 205/AG1, JAG of ISO/TC 205 and ISO/TC 163 on the coordination of the ISO 52000 famil

CEN/TC 371 Task Group on Systematic Review and Energy Performance of Buildings Directiv revisio

Contacts:

- Dick van Dijk and Stephanie Reiniche (leadership of ISO/TC 205 & TC 163 JAG on coordination of ISO 52000 family).
  Email: EPB-research@dickvandijk.nl; sreiniche@ashrae.org
- Jaap Hogeling and Annet van der Horn (leadership of CEN/TC 371 on the energy performance of buildings).
  Email: j.hogeling@isso.nl; annet.vanderhorn@nen.nl

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Tentative ‘wish list’

- *Less options for national choice: increased convergence*
- *Digitalisation of the standards (~ ISO SMART programme)*
- *Prepare an open source core (framework) software tool*
- *Bring more EPB CEN standards to global (ISO) level*
- *Include new demands and features from EPBD recast*
- *Include new technologies (e.g. batteries)*

Importance of transparent and meaningful EP indicators

Definition:

- **Total** primary energy performance:
  - This is ‘simply’ the sum of **non-renewable** energy and **renewable** energy performance

Not to be confused with:

- **Overall** (total, non-renewable or renewable) primary energy performance = EP for the whole building

Importance of transparent and meaningful EP indicators

In particular relevant when it comes to renewable energy (like PV) produced and used on-site

- **Net annual** (total, non-renewable or renewable) **energy performance**
  - The energy balance is averaged over a longer period
  - The need for electricity from the grid during the evening or during winter time is compensated by the surplus of PV during the day or during summer

Importance of transparent and meaningful EP indicators

Net annual (total, non-renewable or renewable) **energy performance is**

- Summer (day) surplus does not "cover" winter (night) shortage; it is only compensated in the calculation
- It disguises non-renewable energy use: leads to fake ZEB
- It also hinders optimization of the energy balance between building and grid (e.g. smart use of equipment, batteries, ..)

Instead:

Annual primary energy based on **hourly** energy balance

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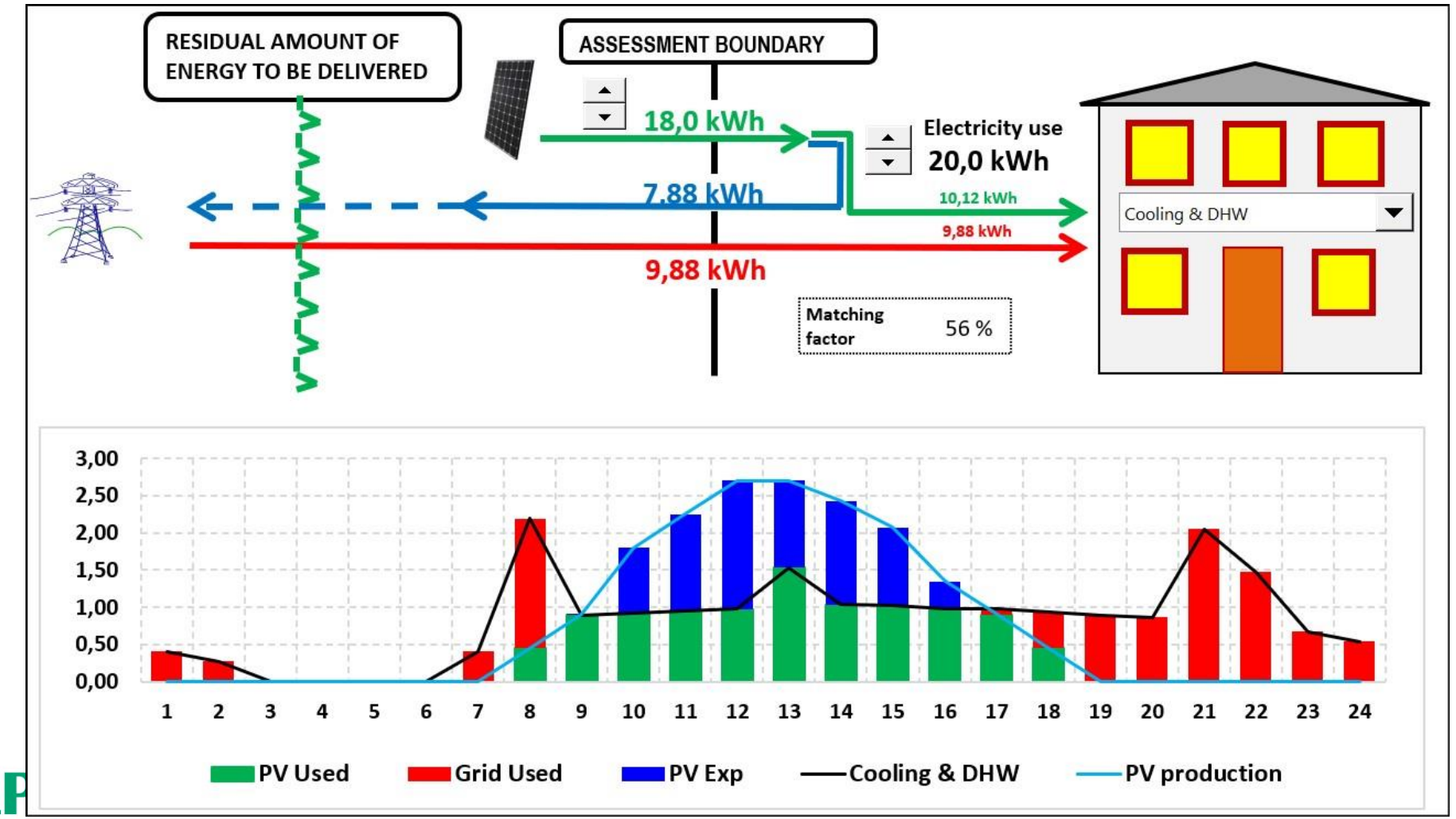
Illustration



➔Absolute need for **hourly calculation steps**

➔(also for thermal comfort, IEQ)

Importance of transparent and meaningful EP indicators

What indicator is needed to (more or less) assure a high energy efficient building?

- **Not total primary energy**, because this includes renewable energy that is used to achieve a high efficiency building
- A useful indicator would be:
  the amount of energy that has to be delivered to the building site
  - From nearby or distant
  - This may be (partly) non-renewable or renewable
  - **In addition to** the overall non-renewable energy performance

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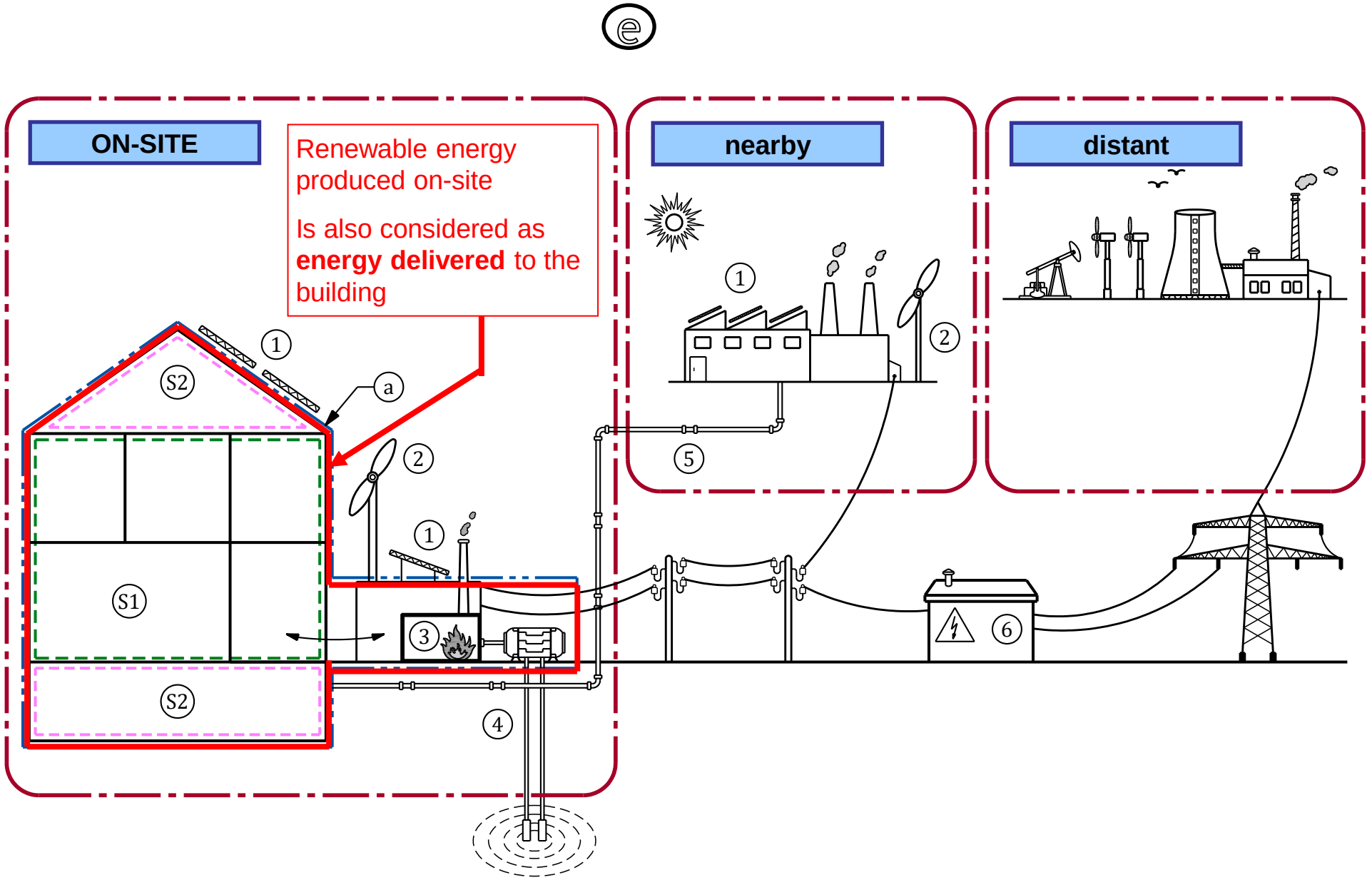
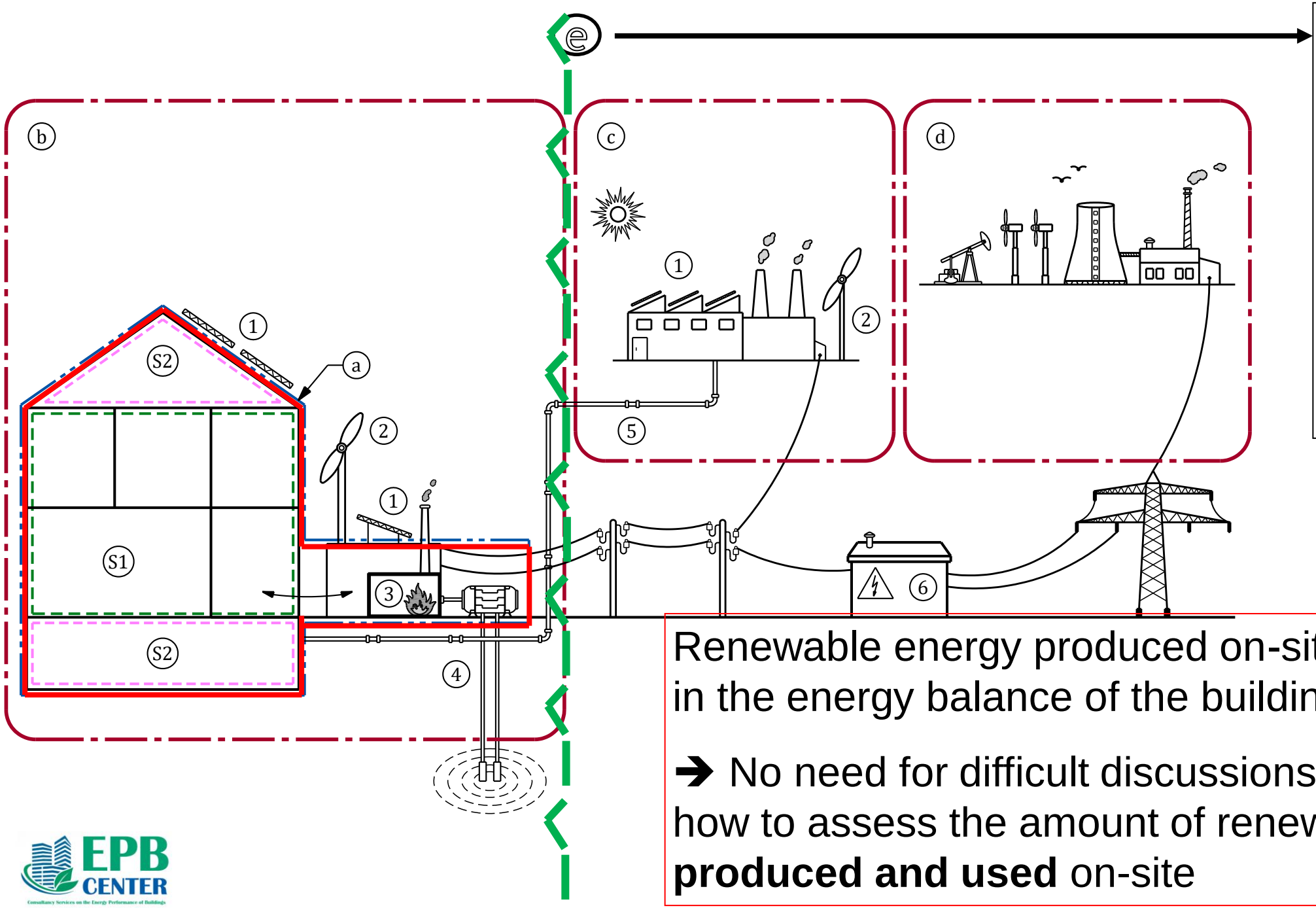
EN ISO 52000-1 assessment boundaries

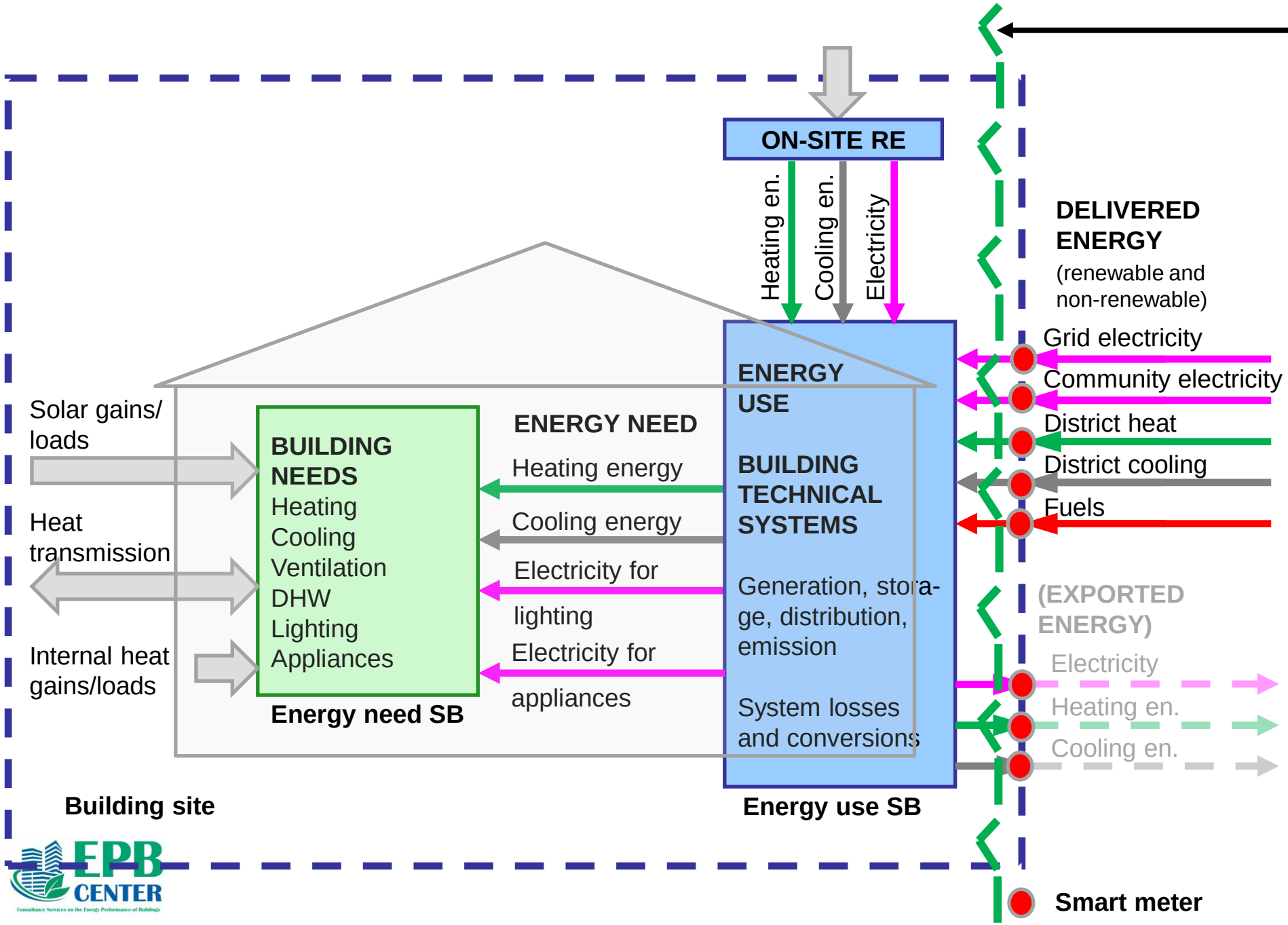




Boundary for "residual energy still required"

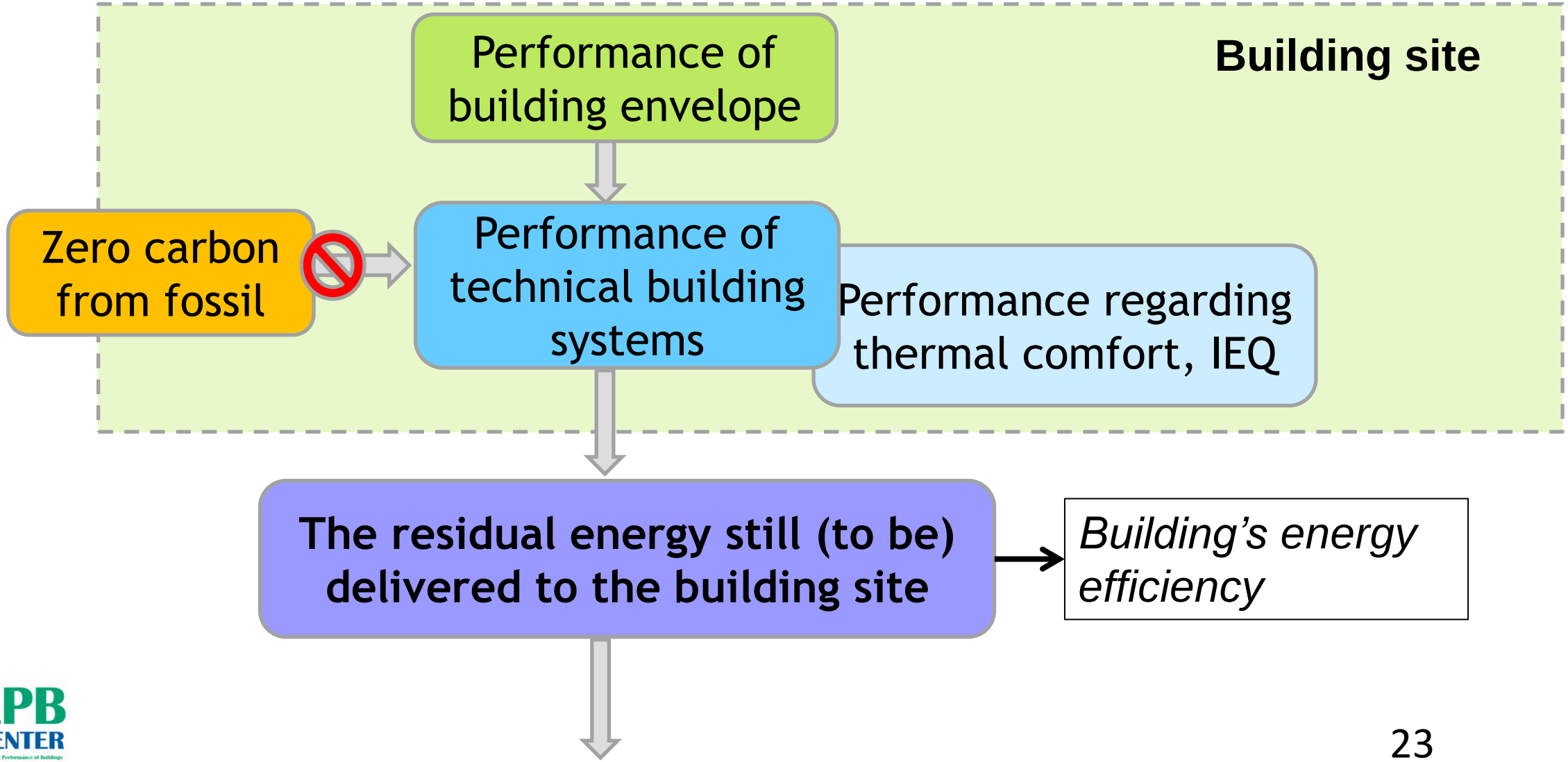
Renewable energy produced on-site Is included in the energy balance of the building

➔ No need for difficult discussions on where and how to assess the amount of renewable energy **produced and used** on-site



Residual amount of energy to be delivered to the building

Successive assessment steps (1)

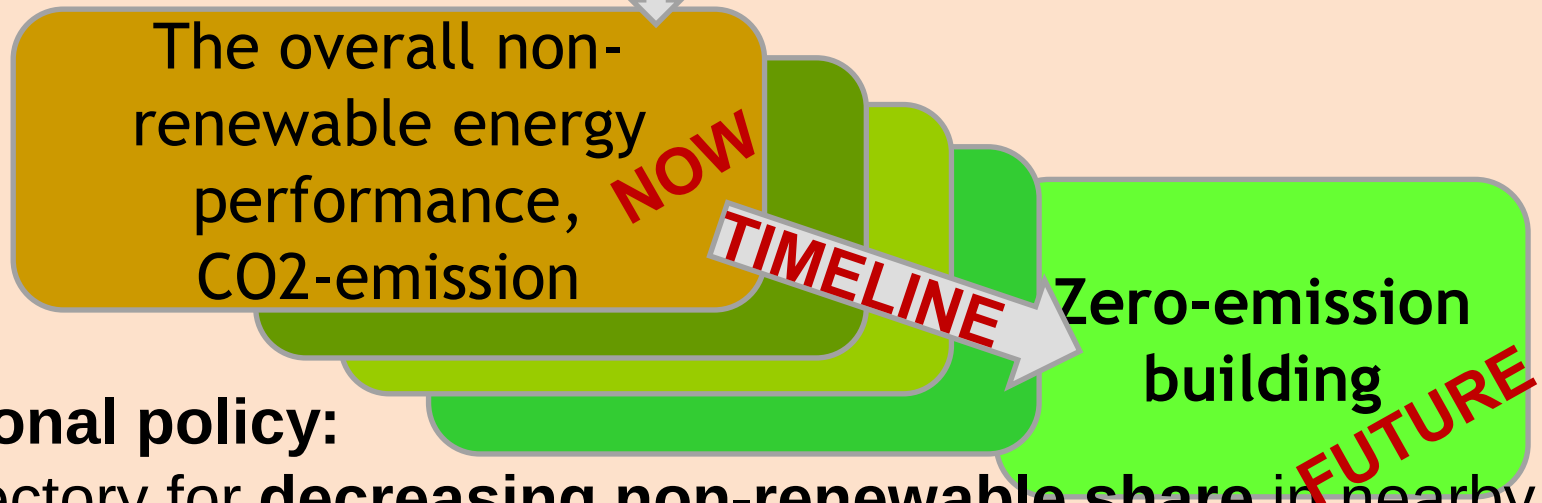


Successive assessment steps (2)

Building site

The residual energy still (to be) delivered to the building site

Nearby and distant



National policy:
Trajectory for **decreasing non-renewable share** in nearby and distant energy supply

Conclusions (1)

- Using the set of CEN and ISO EPB standards is vital to achieve European policy goals
  - Common calculation procedures
  - Common definitions
  - Common assumptions and assessment boundaries
  - Common EP indicators
- Hourly calculation steps necessary
  - Real use of non-renewable energy use instead of disguised use of non-renewable energy due to monthly or annual average (=fake zero carbon emission)
  - For assessing SRI and thermal comfort (IEQ)

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Conclusions (2)

- Main overall EP indicator: overall non-renewable primary energy
- Plus, for minimum energy quality of building
  - Metric at building site boundary
  - with renewable energy produced and used on-site already discounted
- In other words: “the residual energy still (to be) delivered to the building”
- This “residual energy” may contain energy from non-renewable sources (district heating/cooling, grid)
- ➔ National trajectories towards 100 % renewable

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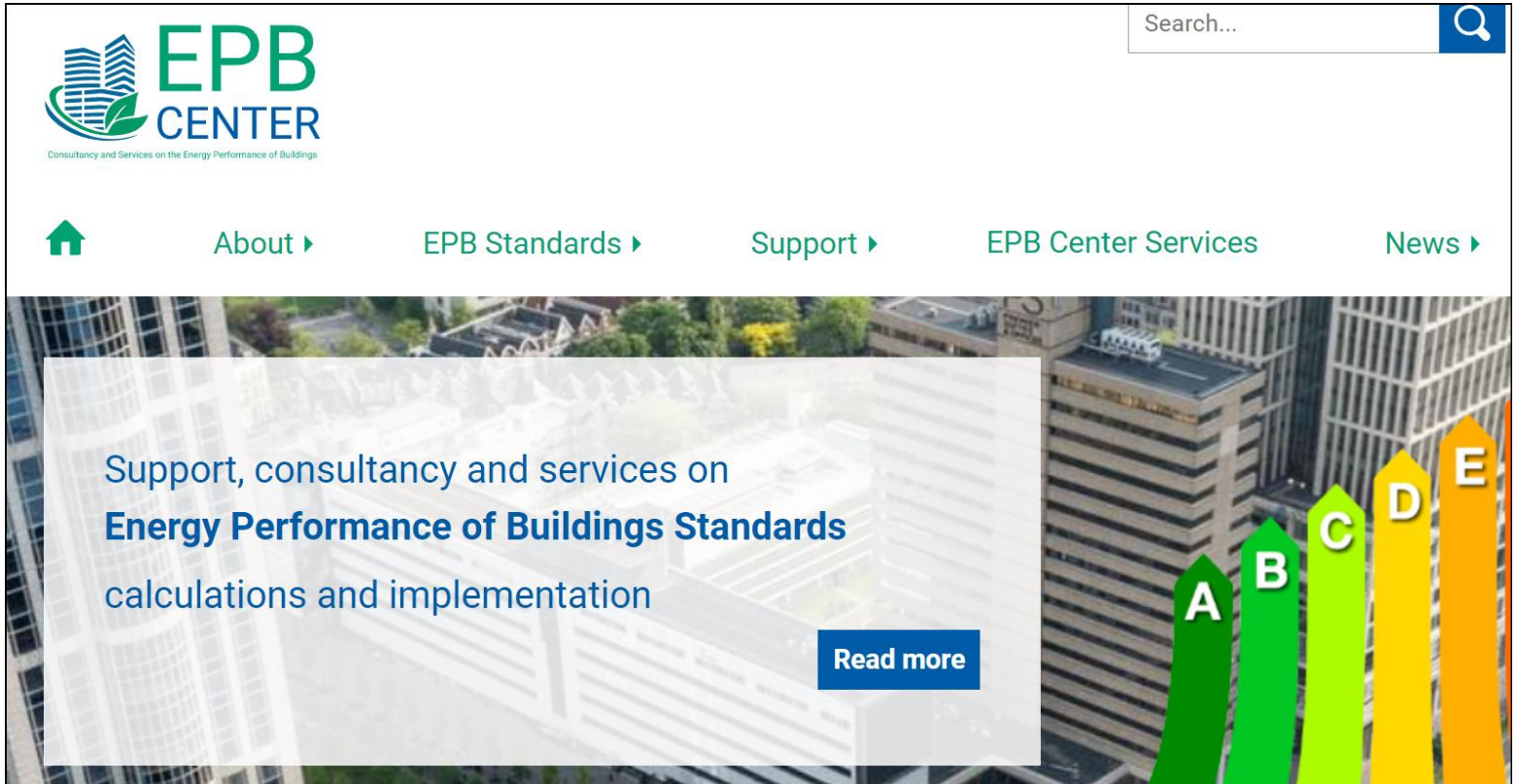
Questions?



More information:

- www.epb.center
- Informal guidance document on systematic review of EPB standards (can be downloaded from EPB Center)
- REHVA Journal paper (2022/04), van Dijk & Kurnitski

MAKING BUILDING PERFORMANCE ASSESSMENT TRANSPARENT & HOLISTIC: ENSURING A RELIABLE AND LEVEL PLAYING FIELD

Keynote 3,
Hélène Sibileau,
Senior Policy Advisor

#EUSEW2022

European Commission

EUSEW Session

Making building performance assessment transparent & holistic: ensuring a reliable and level playing field

20/09/2022 | Hélène Sibileau

Online

BPIE

BUILDINGS PERFORMANCE INSTITUTE EUROPE

Who we are and what we do

NON-PROFIT
THINK-TANK

POLICY ADVICE
ON BUILDING
REGULATION,
FROM DESIGN TO
IMPLEMENTATION

BRUSSELS
AND
BERLIN

INDEPENDENT
RESEARCH

IMPROVING THE
ENERGY
PERFORMANCE
OF BUILDINGS
ACROSS EUROPE

IN OPERATION
SINCE 2010

COST OPTIMALITY AND EPBD REVISION

Outline

1

- Why is cost-optimality important?
- What are current limitations?

2

- What key quality principles should we keep in mind?
- What are possible ways forward in the EPBD revision?

1. Cost-optimality: state of play

Why is it important?

- CO is a **very technical** topic (not only applied to buildings), but with big impacts on the ground as well as high political assumptions and implications
- Introduced in **EPBD II (2010)** + Delegated Regulation (2012). No change in last revision (2018).

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Driver of minimum energy performance requirements (major renovation, NZEB) - “pushing from the bottom”

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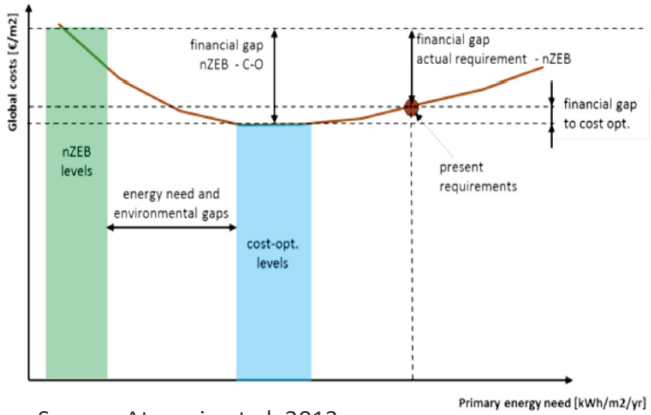

Source: Atanasiu et al, 2013

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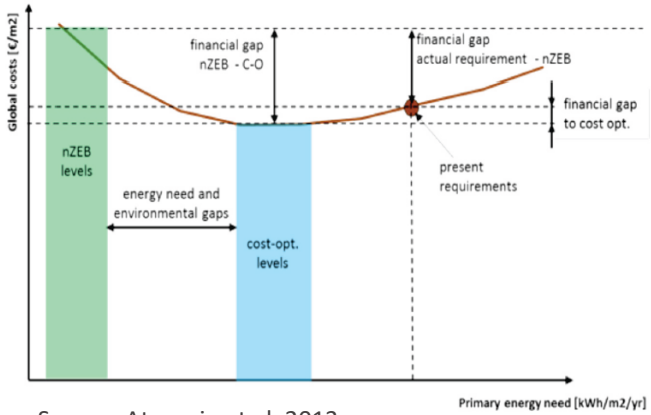

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If put in perspective with what we want to achieve and must deliver now

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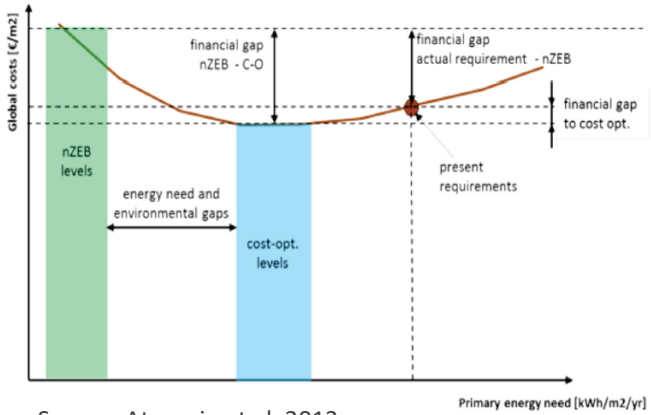

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If put in perspective with what we want to achieve and must deliver now

2030 climate target, 2050 climate neutrality (Zero Emission Building stock, transforming existing buildings into ZEBs)

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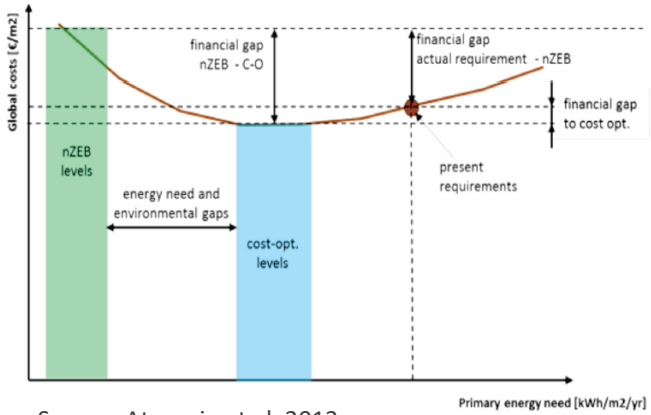

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If put in perspective with what we want to achieve and must deliver now

= GAP!

2030 climate target, 2050 climate neutrality (Zero Emission Building stock, transforming existing buildings into ZEBs)

1. Cost-optimality: state of play

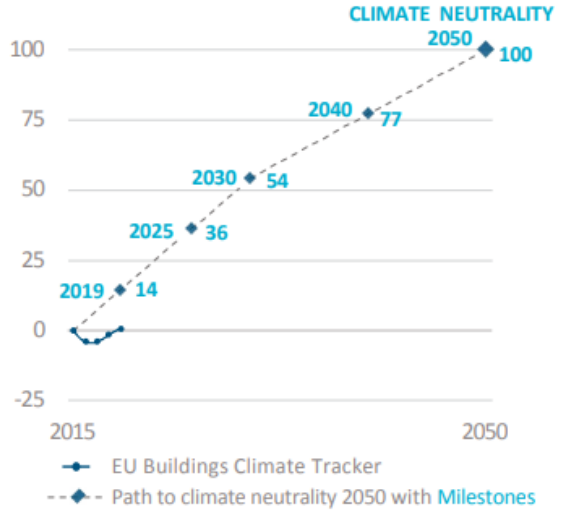
Why is it important?

BPIE's EU Buildings Climate Tracker shows the building stock is **not on track with full decarbonisation by 2050**. There is a growing gap that needs to be closed through stronger and accelerated (policy) action.

Yes, we need to open the discussion on the EPBD methodological framework and question whether it is still fit for purpose.

EU BCT policy briefing (link here)
EU BCT methodology and results report (link here)

Figure 2: EU Buildings Climate Tracker compared to path to climate neutrality 2050 with milestones



1. Cost-optimality: state of play

Limitations – misalignment climate targets

Which limitations exactly?

- (Technological) assumptions outdated?
  - Outdoor temperatures, lifetime of building
- Carbon emissions costs much below current values?
  - Since rise of energy prices, some calculation results are not valid anymore (e.g., preference given to fossil fuel boilers)
- Sensitivity analyses (done by MS) not reflecting possible price shocks?
  - Analyses on discount rates or energy price developments foresee variations usually around 10-30% (sometimes 50% for gas prices) but nothing in the range of current price increase
- Externalities and wider benefits of building renovation not (enough) considered?
  - Increased property value, increased energy security, job creation, improved air quality, IEQ & comfort, higher productivity
  - Rarely discussed, even less monetised

1. Cost-optimality: state of play

Limitations – misalignment climate targets

All these parameters

- Are largely determined by Member States, with flexibility granted by EU level methodology
- Have a significant impact on the outcome of the calculations

The consequence?

- Overall, a distorted picture of costs and benefits of building renovation
- Costs are as uncertain as benefits, but are still given the focus/priority (unequal treatment between economic and social aspects)

2. Cost-optimality: possible ways forward

Key quality principles

- Ensure **multiple benefits** are expressed in economic terms and considered, that **costs of inaction** are taken into account
- Update the guidance on assumptions related to **technological developments & EU carbon price** (levels, volatility, sensitivity)
- Consider how to blend **mitigation and adaptation** considerations when setting building requirements (i.e., factoring in the benefits for adaptation)
- Consider the appropriateness of the **frequency of the update** and the **level of deviation authorised**

2. Cost-optimality: possible ways forward

Key quality principles

From a partial view…

2. Cost-optimality: possible ways forward

Key quality principles

From a partial view…

…to a complete and longer-term view

2. Cost-optimality: possible ways forward

Key quality principles

From a partial view…

…to a complete and longer-term view

A more fundamental change needed in CO methodology?

A shift in perspective will trigger bigger impacts than “quick fixes”

2. Cost-optimality: possible ways forward

Key quality principles

Building requirements should be set based on

- What *can be* done (based especially on a corrected picture of costs and benefits)
- And the economically feasible should be in line with what *should be* delivered to achieve our long-term goals

Need to change gears

- from business-as-usual or incremental improvements
- to future-proof buildings to be climate –resilient

Climate neutrality / ZEB stock 2050 / Energy Efficiency First as guiding principle for optimality (not only cost)

2. Cost-optimality: possible ways forward

Policy opportunities

Although cost-optimality might have a lot of flaws, it is **still needed as "safety net"** (for renovation of existing buildings).

Current EPBD revision includes some **policy placeholders for future technical improvement**

- Commission to adopt a Delegated Act by 30 June 2026 to revise the CO methodology
- Member States must report by 30 June 2028 all input data, assumptions and results of CO calculations

Let's use the opportunity of EPBD revision for
propelling a positive change to make an impact before 2030!

THANK YOU!

helene.sibileau@bpie.eu

20/09/2022 | Hélène Sibileau

Online

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Moderator panel discussion,
Rémi Collombet,
Senior EU Affairs Officer

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Quentin de Hults

European Copper Institute
Copper Alliance

Alain Zarli

ECTP
INNOVATIVE BUILT ENVIRONMENT

Henk Kranenberg

EPEE
The voice of the heating, cooling and refrigeration industry

Jules Cordillot

eu.bac european building automation controls association

EUROPEAN ALLIANCE TO SAVE ENERGY
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ECTP
INNOVATIVE BUILT ENVIRONMENT

Closing remarks,
Nerea Gómez Morán,
Junior Project Officer

#EUSEW2022

European Commission

Making building performance assessment transparent & holistic: ensuring a reliable and level playing field

Tuesday, 20 September

13h30-15h00 CEST

Thank you for attending!

Stay in touch for the BuildUp Portal webinar series to be continued on this topic!

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