HRN EN ISO 52000-1:2017

Energy performance of buildings — Overarching EPB assessment — Part 1: General framework and procedures

Subject: **National Datasheet conforming to the template in Annex A**

Version: 2019-12-20

HRN EN ISO 52000-1/ National Datasheet
(informative)

Input and method selection data sheet — Choices for Croatia

NA.1 General

This National Datasheet gives the choices to be used with respect to values, methods and references in Croatia when using the national methodology for assessment of energy performance of buildings for the purpose of issuing energy performance certificate, building permit and permit to use and for energy audit.

This National Datasheet is in line with the template in Annex A of the standard HRN EN ISO 52000-1:2017.

This National Datasheet takes into account national regulations, climatic conditions, traditions and a specific range of validity.

The specific national or regional regulations referred to in this document are:

- Technical regulation on energy economy and heat retention in buildings (Official Gazette 128/15, 70/18, 73/18, 86/18);
- Ordinance on energy audits and energy certification of buildings (Official Gazette 88/17);
- Methodology on energy audit (2017);
- Algorithms for assessment of energy performance of buildings (2017);
- Type solutions of application of alternative systems (2015);
- Handbook for energy certification of buildings (2010).

The specific range of validity is described in terms of the types and categories that are specified in Clause NA.3.

NA.2 References

The references, identified by the EPB module code number, are given in a table complying with the format given in Table A.1 (a template).

Table NA.1 — References (See Clause 2) Overarching preparation steps

Reference	Reference document	
	Number	**Title**
~~**M1–1**~~	~~ISO 52000-1~~	~~This document~~
M1-1	HRN EN 15603:2008	*Algorithms for assessment of energy performance of buildings (based on HRN EN 15603:2008)* *Energy performance of buildings -- Overall energy use and definition of energy ratings*
M1–2		See M1–1
M1–3		See M1–1
~~**M1–4**~~	~~EN ISO 52003-1~~	~~*Energy performance of buildings – Indicators, requirements, ratings and certificates – Part 1: General aspects and application to the overall energy performance*~~
M1–4	Official Gazette 88/17	*Ordinance on energy audits and energy certification of buildings*

Reference	Reference document	
	Number	**Title**
	HRN EN 15217:2008	*Energy performance of buildings -- Methods for expressing energy performance and for energy certification of buildings*
M1–5, M1–7		See M1–1
M1–8, M1–9		See M1–1
M1–10		
~~**M1–6, M2–7**~~	~~ISO 17772-1~~	~~*Energy performance of buildings – Indoor environmental quality – Part 1: Indoor environmental input parameters for the design and assessment of energy performance of buildings*~~
M1–6, M2–7		*Algorithms for assessment of energy performance of buildings (2017)*
	~~EN 16798-1~~ ~~(Under preparation)~~	~~*Energy performance of buildings – Ventilation of buildings – Part 1: Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics*~~ ~~(Module M1–6)~~
M1–6, M2–7	*HRN EN 15251:2007*	*Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics*
M1–11		See M1–6
~~**M1–13**~~	~~ISO 52010-1~~	~~*Energy performance of buildings – External climatic conditions – Part 1: Conversion of climatic data for energy calculations*~~
~~**M1–14**~~	~~EN 15459-1~~	~~*Energy performance of buildings – Economic evaluation procedure for energy systems in buildings – Part 1: Calculation procedures, Module M1–14*~~
M1–14		*Methodology on energy audit (2017)*
~~**M2–2**~~	~~ISO 52016-1~~	~~*Energy performance of buildings – Energy needs for heating and cooling, internal temperatures and sensible and latent heat loads – Part 1: Calculation procedures*~~
M2–2	HRN EN ISO 13790:2008 Simple hourly method	*Energy performance of buildings -- Calculation of energy use for space heating and cooling*
~~**M2–3**~~	~~ISO 52017-1~~	~~*Energy performance of buildings – Sensible and latent heat loads and internal temperatures – Part 1: Generic calculation procedures*~~
~~**M2–4**~~	~~ISO 52018-1~~	~~*Energy performance of buildings – Indicators for partial EPB requirements related to thermal energy balance and fabric features – Part 1: Overview of options*~~
M2–4	Official Gazette 128/15, 70/18, 73/18, 86/18	*Technical regulation on energy economy and heat retention in buildings*
M2–5.1	HRN EN ISO 13789:2008	*Thermal performance of buildings – Transmission and ventilation heat transfer coefficients – Calculation method*
M2–5.2	HRN EN ISO 13370:2008	*Thermal performance of buildings – Heat transfer via the ground – Calculation methods*
M2–5.3	HRN EN ISO 6946:2008	*Building components and building elements – Thermal resistance and thermal transmittance – Calculation methods*
M2–5.4	HRN EN ISO 10211:2008	*Thermal bridges in building construction – Heat flows and surface temperatures – Detailed calculations*
M2–5.5	HRN EN ISO 14683:2008	*Thermal bridges in building construction – Linear thermal transmittance – Simplified methods and default values*

Reference	Reference document	
	Number	**Title**
M2–5.6	HRN EN ISO 10077-1:2008	*Thermal performance of windows, doors and shutters – Calculation of thermal transmittance – Part 1: General*
M2–5.7	HRN EN ISO 10077-2:2004	*Thermal performance of windows, doors and shutters – Calculation of thermal transmittance – Part 2: Numerical method for frames*
~~**M2–5.8**~~	~~ISO 12631~~	~~*Thermal performance of curtain walling – Calculation of thermal transmittance*~~
M2–9	HRN EN ISO 13786:2008	*Thermal performance of building components – Dynamic thermal characteristics – Calculation methods*
M2–7		See M2–5
~~**M2–8**~~	~~ISO 52022-3~~	~~*Energy performance of buildings – Thermal, solar and daylight properties of building components and elements – Part 3: Detailed calculation method of the solar and daylight characteristics for solar protection devices combined with glazing*~~
	~~ISO 52022-1~~	~~*Energy performance of buildings – Thermal, solar and daylight properties of building components and elements – Part 1: Simplified calculation method of the solar and daylight characteristics for solar protection devices combined with glazing*~~
M2–8	HRN EN 13363-2:2008	*Solar protection devices combined with glazing Calculation of total solar energy transmittance and light transmittance Part 2: Detailed calculation method*
	HRN EN 13363-1:2008	*Solar protection devices combined with glazing – Calculation of solar and light transmittance – Part 1: Simplified method:*
M3–1	HRN EN 15316–1:2008	*Heating systems in buildings– Method for calculation of system energy requirements and system efficiencies – Part 1: General and Energy performance expression*~~*, Module M3–1, M3–4, M3–9, M8–1, M8–4*~~
M3–2		
~~**M3–3**~~	~~EN 12831–1~~	~~*Energy performance of buildings – Method for calculation of the design heat load – Part 1: Space heating load, Module M3–3*~~
M3–3	HRN EN 12831–1:2004	*Heating systems in buildings. Method for calculation of the design heat load*
M3–4	~~EN 15316–1~~	See M3–1
M3–5	HRN EN 15316–2-1:2008	*Heating systems in building– Method for calculation of system energy requirements and system efficiencies – Part 2-1: Space emission systems* ~~*(heating and cooling), Module M3–5, M4–5*~~
M3–6	HRN EN 15316–2-3:2008 HRN EN 15316–3-2:2008	*Heating systems in buildings – Method for calculation of system energy requirements and system efficiencies – Part 2-3: Space distribution systems* ~~*(DHW, heating and cooling), Module M3–6, M4–6, M8–6*~~ *Heating systems in buildings - Method for calculation of system energy requirements and system efficiencies - Part 3-2: Domestic hot water systems, distribution*
M3–7	~~EN 15316–5:2008~~	~~*Energy performance of buildings – Method for calculation of system energy requirements and system efficiencies – Part 5: Space heating and DHW storage systems (not cooling), Module M3–7, M8–7*~~
M3–8	HRN EN 15316–4-1:2008 HRN EN 15316-4-7:2008	*Heating systems in buildings. Method for calculation of system energy requirements and system efficiencies - Part 4-1: Space heating generation systems, combustion systems (boilers)* *Heating systems in buildings. Method for calculation of system energy requirements and system efficiencies - Part 4-7: Space heating*

Reference	Reference document	
	Number	**Title**
	EN 15316-3-3:2008	*generation systems, biomass combustion systems* *Heating systems in buildings. Method for calculation of system energy requirements and system efficiencies- Part 3-3: Domestic hot water systems, generation*
	HRN EN 15316–4-2:2008	*Heating systems in buildings. Method for calculation of system energy requirements and system efficiencies-Part 4-2: Space heating generation systems, heat pump systems*
	EN 15316–4-3:2008 EN 15316–4-6:2008	*Heating systems in buildings. Method for calculation of system energy requirements and system efficiencies - Part 4-3:: Heat generation systems, thermal solar systems* *Heating systems in buildings. Method for calculation of system energy requirements and system efficiencies - Part 4-6: Heat generation systems, photovoltaic systems*
	EN 15316–4-4:2008	*Heating systems in buildings. Method for calculation of system energy requirements and system efficiencies - Part 4-4: Heat generation systems, building-integrated cogeneration systems*
	EN 15316–4-5:2008	*Heating systems in buildings. Method for calculation of system energy requirements and system efficiencies - Part 4-5: Space heating generation systems, the performance and quality of district heating and large volume systems*
	~~EN 15316–4-8:2008~~	~~*Energy performance of buildings – Method for calculation of system energy requirements and system efficiencies – Part 4–8: Space heating generation systems, air heating and overhead radiant heating systems, including stoves (local), Module M3–8-8*~~
M3–9		
~~**M3–10**~~	~~EN 15378–3~~	~~*Energy performance of buildings –Heating and DHW systems in buildings – Part 3: Measured energy performance, Module M3–10 and M8–10*~~
M3–10		*Methodology on energy audit (2017)*
~~**M3–11**~~	~~EN 15378–1~~	~~*Energy performance of buildings – Heating systems and DHW in buildings – Inspection of boilers, heating systems and DHW, Module M3–11, M8–11*~~
M3–11		*Methodology on energy audit (2017)*
M3–12		
~~**M4–1**~~	~~EN 16798–9~~	~~*Energy performance of buildings –Ventilation for buildings – Part 9: Calculation methods for energy requirements of cooling systems (Modules M4-1, M4-4, M4-9) – General*~~
M4–1	HRN EN 15243:2008	*Algorithms for assessment of energy performance of buildings (2017)* (hourly method) *Ventilation for buildings. Calculation of room temperatures and of load and energy for buildings with room conditioning systems*
M4–2		
M4–3	~~ISO 52016–1~~	See M2-2
M4–4	~~EN 16798–9~~	See M4–1
M4–5	~~EN 15316–2~~	See M3–5
M4–6	~~EN 15316–3~~	See M3–6
~~**M4–7**~~	~~EN 16798–15~~	~~*Energy performance of buildings – Ventilation for buildings – Part 15:*~~

Reference	Reference document	
	Number	Title
		~~*Calculation of cooling systems (Module M4–7) – Storage*~~
~~**M4–8**~~	~~EN 16798–13~~	~~*Energy performance of buildings – Ventilation for buildings – Part 13: Calculation of cooling systems (Module M4–8) – Generation*~~
M4–8	HRN EN 15243:2008	*Algorithms for assessment of energy performance of buildings (2017)* (hourly method) *Ventilation for buildings. Calculation of room temperatures and of load and energy for buildings with room conditioning systems*
	~~EN 15316–4-5~~	See M3–8
M4–9		
M4–10		
~~**M4–11**~~	~~EN 16798–17~~	~~*Energy performance of buildings – Ventilation for buildings – Part 17: Guidelines for inspection of ventilation and air-conditioning systems (Module M4–11, M5–11, M6–11, M7–11)*~~
M4–11		*Methodology on energy audit (2017)*
M4–12		
~~**M5–1**~~	~~EN 16798–3~~	~~*Energy performance of buildings – Ventilation for buildings – Part 3: For non-residential buildings – Performance requirements for ventilation and room-conditioning systems (Modules M5–1, M5–4)*~~
M5–1	*HRN EN 13779:2008* *DIN V 18599-10:2007*	*Algorithms for assessment of energy performance of buildings (2017)* *Ventilation for non-residential buildings. Performance requirements for ventilation and room-conditioning systems* *Energy efficiency of buildings - Calculation of the net, final and primary energy demand for heating, cooling, ventilation, domestic hot water and lighting - Part 10: Boundary conditions of use, climatic data (Table 4, nominal flow rates, operating hours)*
M5–2		
M5–3		
M5–4	~~EN 16798–3~~	See M5–1
~~**M5–5**~~	~~EN 16798–7~~	~~*Energy performance of buildings – Ventilation for buildings – Part 7: Calculation methods for the determination of air flow rates in buildings including infiltration (Module M5–5)*~~
M5–5	HEN EN 15242:2008 DIN V 18599-2:2007 HRN EN ISO 13789:2008	*Algorithms for assessment of energy performance of buildings (2017)* *Ventilation for buildings. Calculation methods for the determination of air flow rates in buildings including infiltration (AHU leakage)* *Energy efficiency of buildings - Calculation of the net, final and primary energy demand for heating, cooling, ventilation, domestic hot water and lighting - Part 2: Net energy demand for heating and cooling of building zones (infiltration)* *Thermal performance of buildings — Transmission and ventilation heat transfer coefficients — Calculation method (infiltration)*
~~**M5–6**~~	~~EN 16798–5–1 and EN 16798–5–2~~	~~*Energy performance of buildings – Ventilation for buildings – Part 5–1: Calculation methods for energy requirements of ventilation and air conditioning systems (Modules M5–6, M5–8, M6–5, M6–8, M7–5, M7–8) – Method 1: Distribution and generation*~~ ~~*Energy performance of buildings – Ventilation for buildings – Part 5–2: Calculation methods for energy requirements of ventilation and air conditioning systems (Modules M5–6, M5–8, M6–5, M6–8, M7–5, M7–8) – Method 2: Distribution and generation*~~

Reference	Reference document	
	Number	**Title**
M5–6	HRN EN 15241:2008	*Algorithms for assessment of energy performance of buildings (2017)* *Ventilation for buildings. Calculation methods for energy losses due to ventilation and infiltration in buildings*
M5–7		
M5–8	~~EN 16798–5–1 and EN 16798–5–2~~	See M5–6
M5–9		
M5–10		
M5–11	~~EN 16798–17~~	See M4–11
M6–1		See M5–1
M6–2		See M5–2
M6–3		See M5–3
M6–4		See M5–4
M6–5	~~EN 16798–5–1 and EN 16798–5–2~~	See M5–6
M6–6		See M5–6
M6–7		See M5–7
M6–8	~~EN 16798–5–1 and EN 16798–5–2~~	See M5–6
M6–9		See M5–9
M6–10		See M5–10
M6–11	~~EN 16798–17~~	See M5–11
M7–1		See M5–1
M7–2		See M5–2
M7–3		See M5–3
M7–4		See M5–4
M7–5	~~EN 16798–5–1 and EN 16798–5–2~~	See M5–6
M7–6		See M5–6
M7–7		See M5–7
M7–8	~~EN 16798–5–1 and EN 16798–5–2~~	See M5–6
M7–9		See M5–9
M7–10		See M5–10
M7–11	~~EN 16798–17~~	See M5–11
M8–1	~~15316–1~~	See M3–1
~~**M8–2**~~	~~EN 12831–3~~	~~*Energy performance of buildings – Method for calculation of the design heat load – Domestic hot water systems heat load and characterization of needs, Module M8–2, M8–3*~~
M8–2	HRN EN 15316-3-1:2008	*Heating systems in buildings. Method for calculation of system energy requirements and system efficiencies. Domestic hot water systems,*

Reference	Reference document	
	Number	Title
		characterisation of needs (tapping requirements)
M8–3	~~EN 12831–3~~	See M8–2
M8–4	~~EN 15316–1~~	See M8–1
M8–5		
M8–6	~~EN 15316–3~~	See M3–6
M8–7	~~EN 15316–5~~	See M3–7
M8–8	~~EN 15316–4-1~~	See M3–8
	~~EN 15316–4-3~~	See M3–8
	~~EN 15316–4-4~~	See M3–8
	~~EN 15316–4-5~~	See M3–8
	~~EN 15316–4-8~~	See M3–8
M8–9		
M8–10	~~EN 15378–3~~	See M3–10
M8–11	~~EN 15378–1~~	See M3–11
M9–1	HRN EN 15193~~–1~~:2008	*Energy performance of buildings – Energy requirements for lighting ~~– Part 1: Specifications, Module M9~~*
M9–2	~~EN 15193–1~~	See M9–1
M9–3		
M9–4	~~EN 15193–1~~	See M9–1
M9–5		
M9–6		
M9–8		
~~**M9–10**~~	~~EN 15193–1~~	See M9–1
M9–11	~~EN 15193–1~~	See M9–1
M10–1	HRN EN 15232~~–1~~:2012	*Energy performance of buildings -- Impact of Building Automation, Controls and Building Management~~– Modules M10–4,5,6,7,8,9,10~~*
M10–2		
M10–3		
M10–4	HRN EN 15232~~–1~~:2012	*Energy performance of buildings -- Impact of Building Automation, Controls and Building Management*
M10–5	~~EN 15232–1~~	See M10–1
M10–6	~~EN 15232–1~~	See M10–1
M10–7	~~EN 15232–1~~	See M10–1
M10–8	~~EN 15232–1~~	See M10–1
~~**M10–11**~~	~~EN 16946-1~~	~~*Energy Performance of Buildings – Inspection of Automation, Controls and Technical Building Management – Part 1: Module M10–11*~~
~~**M10–12**~~	~~EN 16947-1~~	~~*Energy Performance of Buildings – Building Management System – Part 1: Module M10–12*~~
M11–1		

Reference	Reference document	
	Number	Title
M11–4		
M11–8	~~EN 15316–4-3~~	See M3–8
	~~EN 15316–4-4~~	See M3–8
	~~EN 15316–4-5~~	See M3–8
	~~EN 15316–4-10~~	~~*Energy performance of buildings – Method for calculation of system energy requirements and system efficiencies – Part 4–10: Wind power generation systems, Module M11–8-3*~~

NA.3 Overarching preparation steps

Table NA.2 — Energy performance assessment types according to building category and application (See 5.3)

Application	Building category	Assessment type	Conditions
Energy performance certificate	All categories	As built type	- Existing building - New building after construction - Renovated building
Building permit	All categories	Design type	- New building before construction - Renovation before construction
Permit to use	All categories	As built type	- New building after construction - Renovated building
Energy audit	All categories	Tailored type	- Existing building - Renovated building
NOTE Add rows in case of more assessment purposes.			

Table NA.3 — Object types (See Clause 6 and 10.1)

EPB_OBJECT_TYPE			
Type [a]	**Description**	**Subset** [b]	**Comments**
EPB_OBJECT_BLDNG_TOT	Whole building	1	Energy performance certificate can be issued for a whole building consisting of different zones (categories)
EPB_OBJECT_BLDNG_UNIT	Building unit	1	Energy performance certificate can be issued for a building unit

EPB_OBJECT_BLDNG_PART	Part of a building (lacking one or more features of a complete building or building unit)	1	EP calculations can be performed for a single zone, no separate en. requirements defined
EPB_OBJECT_ LCYCLE_NEW.DESIGN	New building design	~~2~~1	Different min. energy requirements compared to renovated buildings
~~*EPB_OBJECT_ LCYCLE_AS.BUILT*~~	~~Existing building as built (without long term use data)~~	~~2~~	
EPB_OBJECT_ LCYCLE_EXIST.RENOV	Existing building after renovation (without long term use data)	~~2~~1	Different min. energy requirements compared to new building design
EPB_OBJECT_ LCYCLE_EXIST.EXTENS	Existing building extension (without long term use data)	~~2~~1	
~~*EPB_OBJECT_ LCYCLE_EXIST.IN.USE*~~	~~Existing building in use~~	~~2~~	
EPB_OBJECT_CAT_RES	Residential building	~~2~~1	Different min. energy requirements compared to other categories
EPB_OBJECT_CAT_NRES	Non-residential building	~~2~~1	Different min. energy requirements compared to other categories
~~*EPB_OBJECT_USER_L.PUBL*~~	~~Large public building~~	~~2~~	
EPB_OBJECT_USER_OTHER	Other	~~2~~1	Different min. energy requirements compared to other categories
EPB_OBJECT_USER_HIST	Historic building	1	Different min. energy requirements possible

NOTE The type of object may have an effect on the choices in this overarching document and in the other EPB standards. This property is therefore inherited by the other EPB standards, where relevant.

[a] One choice is possible per subset.

[b] Definition of the calculation case, one selection shall be done for each subset.

Table B.4 — Building categories (See Clauses 6 and 9)

BLDNGCAT_TYPE		
Type	**Description**	**Comments**[a]
BLDNGCAT_RES_SINGLE	Single-family houses of different types	
~~*BLDNGCAT_RES_APPBLOCK*~~	~~Apartment blocks~~	
BLDNGCAT_RES_MULTIAPP	Multi-apartment buildings	
~~*BLDNGCAT_RES_ELDER*~~	~~Homes for elderly and disabled people~~	In category Other non-residential buildings
~~*BLDNGCAT_RES_COLL*~~	~~Residence for collective use~~	In category Other non-residential buildings
~~*BLDNGCAT_RES_MOBIL*~~	~~Mobile home~~	
~~*BLDNGCAT_RES_HOL*~~	~~Holiday home~~	
BLDNGCAT_OFF	Offices	
BLDNGCAT_EDUC	Educational buildings	
BLDNGCAT_HOSP	Hospitals	
BLDNGCAT_HOTEL	Hotels and restaurants	
BLDNGCAT_SPORT	Sports facilities	
BLDNGCAT_RETAIL	Wholesale and retail trade services buildings	
BLDNGCAT_OTHER	Other non-residential buildings	
BLDNGCAT_LOWEN	Buildings with low energy needs	Heated to internal air temp.<18°C
~~*BLDNGCAT_DATA_CENTER*~~	~~Data centre~~	In category Other non-residential buildings
~~*BLDNGCAT_INDUS*~~	~~Industrial sites~~	In category Buildings with low energy needs
~~*BLDNGCAT_WORKS*~~	~~Workshops~~	In category Buildings with low energy needs
~~*BLDNGCAT_AGRIC*~~	~~Non-residential agricultural buildings~~	In category Buildings with low energy needs
a Technical regulation on energy economy and heat retention in buildings (Official Gazette 128/15, 70/18, 73/18, 86/18), Ordinance on energy audits and energy certification of buildings (Official Gazette 88/17)		
NOTE The building category may have an effect on the choices in this overarching document and in the other EPB standards. This property is therefore inherited by the other EPB standards, where relevant.		

Table NA.5 — Which building categories are included in EPB assessment (See 6.2.2)

Building categories	Identifier	Included in EPB assessment [a] Yes/No
Residential buildings:		
Single family houses of different types	*BLDNGCAT_RES_SINGLE*	YES
~~Apartment block~~	~~*BLDNGCAT_RES_APPBLOCK*~~	~~YES~~
Multi-apartment buildings	*BLDNGCAT_RES_MULTIAPP*	YES
~~Homes for elderly and disabled people~~	~~*BLDNGCAT_RES_ELDER*~~	~~YES~~
~~Residence for collective use~~	~~*BLDNGCAT_RES_COLL*~~	~~YES~~
~~Mobile home~~	~~*BLDNGCAT_RES_MOBIL*~~	~~YES~~
~~Holiday home~~	~~*BLDNGCAT_RES_HOL*~~	~~YES~~
Non-residential buildings:		
Office buildings	*BLDNGCAT_OFF*	YES
Educational buildings	*BLDNGCAT_EDUC*	YES
Hospitals	*BLDNGCAT_HOSP*	YES
Hotels and restaurants	*BLDNGCAT_HOTEL*	YES
Sport facilities	*BLDNGCAT_SPORT*	YES
Wholesale and retail trade services buildings	*BLDNGCAT_RETAIL*	YES
Other non-residential buildings	*BLDNGCAT_OTHER*	YES
Buildings with low energy needs	*BLDNGCAT_LOWEN*	NO
~~Industrial sites~~	~~*BLDNGCAT_INDUS*~~	~~NO~~
~~Workshops~~	~~*BLDNGCAT_WORKS*~~	~~NO~~
~~Non-residential agricultural buildings~~	~~*BLDNGCAT_AGRIC*~~	~~NO~~

[a] Technical regulation on energy economy and heat retention in buildings (Official Gazette 128/15, 70/18, 73/18, 86/18), Ordinance on energy audits and energy certification of buildings (Official Gazette 88/17)

Table NA.6 — Differentiation of space categories (See Clauses 6, 9 and 10.1)

Choice		
Type	**Choice**	**Comments**
Differentiation of space categories in a building	Yes	

In case of differentiation Table NA.7 has to be completed. Otherwise the list of space categories is equal to the list of building categories: (SPACECAT_X = BLDNGCAT_X).

Table NA.7 — Space categories (See Clauses 6 and 9)

SPACECAT_TYPE		
Type	**Description**	**Comments**
~~*SPACECAT_RES_LIV*~~	~~Residential living space, kitchen, bed room, study, bath room or toilet~~	
~~*SPACECAT_RES_INDIV_OTHER*~~	~~Residential individual: hall, corridor, staircase inside thermal envelope, attic inside thermal envelope~~	
~~*SPACECAT_RES_COLL*~~	~~Residential collective or non-residential: hall, corridor, staircase inside thermal envelope~~	
SPACECAT_TH.UNCOND_OTHER	Thermally unconditioned adjacent space within thermal envelope ~~such as storage room or unconditioned attic~~	
SPACECAT_TH.UNCOND_SUN	Thermally unconditioned sunspace or atrium	
~~*SPACECAT_HALL*~~	~~Entrance hall/foyer~~	
~~*SPACECAT_CORR*~~	~~Corridor~~	
~~*SPACECAT_TH.UNCOND_CORR*~~	~~Hall, corridor outside thermal envelope~~	
SPACECAT_OFF	Office space	
SPACECAT_EDUC	Educational space	
SPACECAT_HOSP_BED	Hospital bed room	
~~*SPACECAT_HOSP_OTHER*~~	~~Hospital other room~~	
~~*SPACECAT_HOTEL*~~	~~Hotels room~~	
SPACECAT_REST	Restaurant space	
SPACECAT_REST_KITCH	Restaurant kitchen	
SPACECAT_MEET	Meeting or seminar space	
SPACECAT_AUDIT	Auditorium, lecture room	
SPACECAT_THEAT	Theatre or cinema space	
SPACECAT_SERVER	Server or computer room	
SPACECAT_SPORT_TH.COND	Sport facilities, thermally conditioned	
~~*SPACECAT_SPORT_TH.UNCOND*~~	~~Sport facilities, thermally unconditioned~~	Thermally unconditioned adjacent space
SPACECAT_RETAIL	Wholesale and retail trade services space (shop)	
~~*SPACECAT_NONRES_BATH*~~	~~Non-residential bath room, shower, toilet, if inside thermal envelope~~	
~~*SPACECAT_SPA*~~	~~Spa area with sauna shower and/or relaxing area~~	
SPACECAT_SWIMM	Space with indoor swimming pool	
SPACECAT_STOR_HEAT	Heated storage space	
SPACECAT_STOR_COOL	Cooled storage space	

~~*SPACECAT_STOR_NOCON*~~	~~Non conditioned storage space~~	Thermally unconditioned adjacent space
~~*SPACECAT_ENGINE*~~	~~Engine room~~	
SPACECAT_CAR	Individual garage or collective indoor car park	
~~*SPACECAT_BARN*~~	~~Barn~~	
NOTE 1 Each space category requires a set of conditions of use (temperature settings, ventilation, and lighting requirements, domestic hot water needs, etc.), to be specified in M1–6. NOTE 2 The space category may have an effect on the choices in this overarching document and in the other EPB standards. This property is therefore inherited by the other EPB standards, where relevant.		

Table NA.8 — Application types (See Clauses 6, 9 and 10.1)

EPB_APPLIC_TYPE		
Type	**Description**	**Comments**
EPB_APPLIC_REQ	To check compliance with energy performance requirements	
EPB_APPLIC_CERTIF	Energy performance certification	
EPB_APPLIC_PERMIT_BLD	To obtain building permit	
EPB_APPLIC_PERMIT_USE	To obtain permit to use	
EPB_APPLIC_AUDIT	Energy audit (tailored)	
~~*EPB_APPLIC_INSP*~~	~~Energy performance inspection~~	
NOTE The type of application may have an effect on the choices in this overarching document and in the other EPB standards. This property is therefore inherited by the other EPB standards, where relevant.		

Table NA.9 — EPB assessment types (See Clauses 6 and 9)

EPB_ASSESS_TYPE (see Table 3)		
Type	**Description**	**Comments**
EPB_ASSESS_CALC_DESIGN	Calculated, design	
EPB_ASSESS_CALC_ASBUILT	Calculated, as built	
EPB_ASSESS_CALC_ACTUAL	Calculated, actual	
EPB_ASSESS_CALC_TAILORED	Calculated, tailored	
~~*EPB_ASSESS_MEAS_ACTUAL*~~	~~Measured, actual~~	
~~*EPB_ASSESS_MEAS_CORR_CLIM*~~	~~Measured, corrected for climate~~	
~~*EPB_ASSESS_MEAS_CORR_USE*~~	~~Measured, corrected for use~~	
~~*EPB_ASSESS_MEAS_STAND*~~	~~Measured, standard (corrected for climate and use)~~	
NOTE 1 The type may be different for different object types, building or space categories. NOTE 2 The type of assessment may have an effect on the choices in this overarching document and in the other EPB standards. This property is therefore inherited by the other EPB standards, where relevant.		

Table NA.10 — Combination services types (See Clauses 6 and 9)

EPB_LISTSERVICES_**TYPE**		
Type	**Description**	**Comments**
*EPB*_LISTSERVICES_*RES*	Services included for the EPB assessment of residential buildings	— heating; — ventilation; — domestic hot water; — humidification; — dehumidification.
*EPB*_LISTSERVICES_*NRES*	Services included for the EPB assessment of non-residential buildings	— heating; — cooling; — ventilation; — domestic hot water; — lighting; — humidification; — dehumidification.
NOTE 1 The combination may be different for different building or space categories. NOTE 2 The type of services combination may have an effect on the choices in this overarching document and in the other EPB standards. This property is therefore inherited by the other EPB standards, where relevant.		

NA.4 Method

Table NA.11 — Electricity use types (See 7.3.3.4.)

Electric energy use type	Identifier
Main input to a generator	EL_USE_MAIN
Auxiliary energy	EL_USE_AUX
Direct heating (Joule effect)	EL_USE_JOULE
Non EPB uses	EL_USE_NEPB

Table NA.12 — Electricity generation types (See 7.3.3.6 and 9.6.6.2.4)

Electric energy generation type	Identifier
Photovoltaic	EL_PROD_PV
~~Wind turbine~~	~~EL_PROD_WIND~~
Cogeneration	EL_PROD_CHP

Table B.13 — Gross calorific value of some common solid fuels (See 7.3.4 and 9.6.2)

~~Fuel~~	~~Gross calorific value kWh/kg~~
~~Anthracite~~	~~8,9 – 9,7~~
~~Bituminous coal~~	~~4,7 – 6,9~~
~~Charcoal~~	~~8,22~~
~~Coke~~	~~7,8 – 8,6~~
~~Lignite~~	~~4,2 – 8,3~~
~~Peat~~	~~3,6 – 5,6~~
~~Wood (dry)~~	~~3,9 – 4,7~~

~~NOTE Add the rows of the energy carriers.~~

Table B.14 — Gross calorific value of some common liquid fuels (See 7.3.4 and 9.6.2)

~~Fuel~~	~~Density kg/l~~	~~Gross calorific value kWh/kg~~
~~Oil~~		
~~Heating oil, light~~	~~0,84 – 0,85~~	~~12,44~~
~~Heating oil, heavy~~	~~0,96~~	~~13,94 – 11,75~~
~~Liquid gas~~		
~~80 propane:20 butane~~	~~0,52~~	~~13,83~~
~~70 propane:30 butane~~	~~0,53~~	~~13,83~~
~~60 propane:40 butane~~	~~0,53~~	~~13,81~~
~~50 propane:50 butane~~	~~0,55~~	~~13,78~~
~~Commercial propane~~	~~0,51~~	~~13,89~~
~~[a] Confidence interval for liquid gas is about ± 0,1 MJ/kg.~~		
~~NOTE Add the rows of the energy carriers.~~		

Table B.15 — Gross calorific values of some gaseous energy carriers (see 7.3.4 and 9.6.2)

~~Fuel~~	~~Density kg/m³~~	~~Gross calorific value kWh/m³~~
~~Natural gas L~~	~~0,64~~	~~9,75 – 9,78~~
~~Natural gas H~~	~~0,61~~	~~11,41 – 11,47~~
~~Methane~~	~~0,55~~	~~11,06 – 11,08~~
~~Propane~~	~~1,56~~	~~28,03~~
~~Butane~~	~~2,09~~	~~37,19~~
~~Hydrogen~~	~~0,09~~	~~39~~
~~Biogas~~	~~1,2~~	~~4 to 8 [a]~~
~~[a] Depending on its methane content.~~		
~~NOTE Add the rows of the energy carriers.~~		

Tables B.13-15 are not relevant for energy performance assessment. The delivered energy and primary energy factors are based on net calorific value.

Table NA.16 — Weighting factors (based on gross or net calorific value) (See 7.3.5, 9.5.1, 9.6.2, 9.6.5 and 9.6.6.3)

	~~Energy carrier~~ ~~Delivered from distant~~		f_{Pnren}	f_{Pren}	f_{Ptot}	K_{CO2e} ~~(g/kW h)~~
~~1~~	~~Fossil fuels~~	~~Solid~~	~~1,1~~	~~0~~	~~1,1~~	~~360~~
~~2~~		~~Liquid~~	~~1,1~~	~~0~~	~~1,1~~	~~290~~
~~3~~		~~Gaseous~~	~~1,1~~	~~0~~	~~1,1~~	~~220~~
~~4~~	~~Bio fuels~~	~~Solid~~	~~0,2~~	~~1~~	~~1,2~~	~~40~~

~~5~~		~~Liquid~~	~~0,5~~	~~1~~	~~1,5~~	~~70~~
~~6~~		~~Gaseous~~	~~0,4~~	~~1~~	~~1,4~~	~~100~~
~~7~~	~~Electricity [c]~~		~~2,3~~	~~0,2~~	~~2,5~~	~~420~~
	~~**Delivered from nearby**~~					
~~8~~	~~District heating [a]~~		~~1,3~~	~~0~~	~~1,3~~	~~260~~
~~9~~	~~District cooling~~		~~1,3~~	~~0~~	~~1,3~~	~~260~~
	~~**Delivered from on-site**~~					
~~10~~	~~Solar~~	~~PV electricity~~	~~0~~	~~1~~	~~1~~	~~0~~
~~11~~		~~Thermal~~	~~0~~	~~1~~	~~1~~	~~0~~
~~12~~	~~Wind~~		~~0~~	~~1~~	~~1~~	~~0~~
~~13~~	~~Environment~~	~~Geo-, aero-, hydrothermal~~	~~0~~	~~1~~	~~1~~	~~0~~
	~~**Exported**~~					
~~14~~	~~Electricity [b c]~~	~~To the grid~~	~~2,3~~	~~0,2~~	~~2,5~~	~~420~~
~~15~~		~~To non EPB uses~~	~~2,3~~	~~0,2~~	~~2,5~~	~~420~~

~~[a] Default value based on a natural gas boiler. Specific values are calculated according to M3-8.5.~~

~~[b] It is possible to differentiate between different sources of electricity like wind or solar.~~

~~[c] These values are established in line with the default coefficient provided in Annex IV of Directive 2012/27/EU. This default coefficient is currently being reviewed and a later amendment of the above factors could be needed.~~

~~NOTE 1 Add a column in case of other requirements, e.g., CO_2 requirement.~~

~~NOTE 2 Add rows for each relevant energy carrier.~~

In Methodology on energy audit (2017) only non-renewable primary energy factors (f_{Pnren}) and CO2-emission factors (K_{CO2}) are available. There is no distinction between delivered energy, onsite produced energy and exported energy. The corresponding table is presented below.

Primary energy factors for delivered energy and CO2 emission factors per energy carrier

Energy carrier	Primary energy factor	CO_2 emission factor	CO_2 emission factor
	f_{Pnren}	[kg CO_2/GJ]	[kg CO_2/MWh]
Stone coal	1,0381	95,49	343,78
Sub-bituminous coal (Brown coal)	1,0540	98,09	353,14
Lignite	1,0814	105,13	378,48
Wood logs	1,000	8,08	29,09
Wood briquettes	1,000	9,10	32,76
Wood pellets	0,123	9,56	34.4
Wood chaff	0,154	11,76	42,35
Charcoal	1,000	7,27	26,17
Solar energy	0,000	0,00	0,00
Geothermal energy	0,000	0,00	0,00
Natural gas	1,097	61,17	220,20
LPG	1,095	72,47	260,88
Petroleum	1,160	73,54	264,73
Extra-light heating oil	1,033	83,21	299,57
Fuel oil	1,138	86,20	310,31

Electricity		1,614	65,22	234,81
District heating	Average for Croatia	1,494	100,69	362,49
	CHS ZG+OS (CHP)	1,466	97,59	351,33
	HBO – average for Croatia	1,597	109,57	394,46
	CHS ZG (CHP)	1,462	96,05	345,78
	CHS OS (CHP)	1,478	110,15	396,53
	HBO – average for ZG	1,559	107,86	388,31
	HBO – average for OS	1,529	93,66	337,18
	HBO – average for RI	1,569	106,84	384,62
	HBO – average for Sl. Brod	1,385	100,12	360,42
	HBO – average for Split	1,540	132,48	476,94
	HBO – average for KA	1,434	115,77	416,77
	HBO – average for VŽ	1,489	91,27	328,56
	HBO – average for Vinkovci	1,442	103,52	372,66
	HBO – average for Vukovar	1,363	86,00	309,61
	HBO – average for Sisak	2,419	148,13	533,25
	HBO – natural gas	1,350	82,74	297,88
	HBO – fuel oil	1,444	124,41	447,88
	HBO – extra-light heating oil	1,429	118,87	427,94
CHS – Central Heating System HBO – Heating Boiler Only CHP – Combined Heat and Power				

Table B.17 — k_{exp}-factor (See 7.3.5 and 11.6.2.1)

~~Description~~	~~Value~~
~~k_{exp}~~ ~~factor that is used to control which part of the exported energy is included in the energy performance of the building~~	~~1~~
NOT APPLICABLE, see comment in NA.30	

Table NA.18 — Building services considered in the energy performance calculation (See 8.2 and 8.5)

Combination of services type	**Choice: included in the energy performance calculation** < ***one column per service mix type, see Table NA.10*** >	
Building service [a]	***EPB***_LISTSERVICES_***RES***	***EPB***_LISTSERVICES_***NRES***
Heating	Yes	Yes
Cooling	Yes	Yes
Ventilation	Yes	Yes
Humidification	Yes	Yes
Dehumidification	Yes	Yes
Domestic hot water	Yes	Yes

Lighting	No	Yes
External lighting	No	No
People transport (e.g., elevators, escalators)	No	No
Other services consuming electricity (e.g., appliances)	No	No
Others	No	No
[a] Add rows or edit the lines in case of other/more differentiated services.		

Table NA.19 — Principle assumed presence of systems (See 9.2)

Method		**Choice Yes/No** [a]
1	Principle "Assumed system"	YES
2	Principle "Presence of system"	NO
3	Other principle	NO
In case of method 3:		
	Reference to procedure:	Methodology on energy audit (2017)
[a] Only one choice possible; choice may be differentiated per service. NOTE Consistency with the conditions of use (module M1–6) is required.		

Table NA.20 — Specification of the useful floor area (See 9.3)

Specification and/or reference to document with more information
It is equal to the sum of all net floor areas of individual heated spaces of a building. It is calculated according to HRN ISO 9836:2011 (5.1.5.). ~~The useful floor area is equal to the area of the floor with the following specific rules:~~ ~~Excluded:~~ ~~The floor area under a load bearing construction is excluded.~~ ~~The open floor area in vides (no floor) is excluded.~~ ~~The floor area with height under the ceiling of less than 1,5 m (except for incidental beams).~~ ~~Included:~~ ~~The floor area under a non-load bearing construction at the boundary of the considered space or spaces: measured to the centre.~~ ~~The floor area under a non-load bearing construction inside the considered space or spaces.~~

Table NA.21 — Type or types of metric for the building size (See 9.3 and 9.4)

Quantity	**Unit**	**Specification and/or reference to document with more information**
Reference floor area	m^2	Useful floor area as in Table NA.20 of this document, with fractions according to Table NA.22
NOTE Add rows for each metric.		

Table NA.22 — Which space categories are contributing to the reference size (See 9.4)

Space categories	Contributing?	If YES: (Optional) fraction of-size contributing to ref. size ($f_{ref;cat,}$). Default value = 1 [a]
~~Residential living space, kitchen, bed room, study, bath room or toilet~~	~~YES~~	~~1,0~~
Thermally conditioned space of building categories specified in Table NA.5	YES	1,0
~~Residential individual: hall, corridor, staircase inside thermal envelope, attic inside thermal envelope~~	~~YES~~	~~1,0~~
~~Residential collective or non-residential: hall, corridor, staircase inside thermal envelope~~	~~YES~~	~~1,0~~
Thermally unconditioned adjacent space within thermal envelope ~~, such as storage room or unconditioned attic~~	NO	
Thermally unconditioned sunspace or atrium	NO	
~~Hall, corridor outside thermal envelope~~	~~NO~~	
Office space	YES	1,0
Educational space	YES	1,0
Hospital bed room	YES	1,0
~~Hospital other room~~	~~YES~~	~~1,0~~
~~Hotels room~~	~~YES~~	~~1,0~~
Restaurant space	YES	1,0
Restaurant kitchen	NO	
Meeting or seminar space	YES	1,0
Auditorium, lecture room	YES	1,0
Theatre or cinema space	YES	1,0
Server or computer room	NO	
Sport facilities, thermally conditioned	YES	1,0
~~Sport facilities, thermally unconditioned~~	~~YES~~	~~0,5~~
Wholesale and retail trade services space (shop)	YES	1,0
Spaces with height > 4.2 m	YES	Air volume/4.2
~~Non-residential bath room, shower, toilet, if inside thermal envelope~~	~~YES~~	~~1,0~~
Heated storage space	NO	
Cooled storage space	NO	
~~Engine room~~	~~NO~~	
Individual garage or collective indoor car park	NO	
~~Barn~~	~~NO~~	

[a] The choices in this table are choices that actually cannot be made without the holistic view on all EPB standards. The categorization of spaces is directly related to the assumed conditions of use for each space category and to the specific rules for combining spaces into zones. For instance, a fine subdivision into different space categories, with for each space category different conditions of use (such as temperature settings, ventilation rates, lighting levels, etc.) could easily lead to unwanted complexities in the assessment.

Table NA.23 — Perimeter specification (See 9.5.1 and 9.6.1)

Energy carrier		Specification of nearby perimeter (see 3.4.24)
~~Bio~~ fuels	Solid	Not specified further
	Liquid	Connected to the same branch of the distribution network or having a dedicated connection, requiring specific equipment for the assessed object to be connected to it
	Gaseous	Connected to the same branch of the distribution network or having a dedicated connection, requiring specific equipment for the assessed object to be connected to it
Electricity		Connected to the same branch of the distribution network, meaning medium voltage or lower
District heating		Always nearby
~~District cooling~~		~~Always nearby~~

Table NA.24 — Perimeter choice (See 9.5.1 and 9.7)

Perimeter choice	Choice – RER calculation (renewable energy)	Choice – RER calculation (total energy)	Choice – EPB calculation (delivered energy)
On-site	Yes	Yes	Yes
Nearby	Yes	Yes	Yes
Distant	~~No~~Yes	Yes	Yes
	RER calculation is based on delivered energy (not on primary energy as defined in 9.6.1 and 9.7) Ref. Methodology on energy audit (2017)	RER calculation is based on delivered energy (not on primary energy as defined in 9.6.1 and 9.7) Ref. Methodology on energy audit (2017)	

Table B.25 — Conversion factors for net to gross calorific values for energy carriers (See 9.6.2)

~~Energy carrier~~	~~Conversion factor~~ ~~$f_{GCV/NCV}$~~
~~oil~~	~~1,06~~
~~gas~~	~~1,11~~
~~LPG~~	~~1,09~~
~~coal~~	~~1,04~~
~~lignite~~	~~1,08~~
~~wood~~	~~1,08~~
~~NOTE Add the rows of the energy carriers.~~	
NOT APPLICABLE Primary energy factors are based on net calorific value. Conversion factors are not defined.	

Table NA.26 — Overheads included in the primary energy and CO_2 emission factors (See 9.6.2 and 9.6.3)

		Primary energy factors	Emission coefficients
Included overheads	Energy to extract the primary energy carrier	~~Yes~~	~~Yes~~
	Energy to transport the primary energy carrier	Yes*	Yes
	Energy used for any other operations necessary for the delivery to the building (e.g., storage)	Yes*	Yes
	Energy to build, operate and dismantle the transformation units	No	No
	Energy to build, operate and dismantle the transportation system	No	No
	Energy to clean up or dispose the wastes	No	No
	Energy embedded in materials	No	No
Other greenhouse gases than CO_2 included [a]		n.a.	Yes
Applicable for ratings based on		net calorific value	net calorific value
[a] It is possible to list the other greenhouse gases.			
*Not applicable to all energy carriers (e.g. wood logs, wood briquettes and charcoal, geothermal energy)			

Table NA.27 — Basis for the energy performance of buildings (See 9.6.2)

Basis for the building energy performance	Choice	Application type (see Table A.6/B.6)
Total energy performance ($E_P = E_{Ptot}$) or non-renewable energy performance ($E_P = E_{Pnren}$)	$E_P = E_{Pnren}$	All application types in Table NA.6
NOTE Add lines in case of more assessment purposes.		

Table NA.28 — Priority for generation system, export (See 7.3.3.6 and 9.6.6.2.4)

Priority level to export	Priority identifier	Generation type
Priority level 1 (highest)	EL_EXP_PRIO_LEVEL_~~1~~NONE	EL_PROD_PV
~~Priority level 2~~	~~EL_EXP_PRIO_LEVEL_2~~	~~EL_PROD_WIND~~
Priority level 3 (lowest)	EL_EXP_PRIO_LEVEL_~~3~~NONE	EL_PROD_CHP

Table NA.29 — Subdivision rules (See 10.5.1)

Type of zone or service area [a]	General rule	Specific rules (if any)
~~Thermal zone~~	~~Useful floor area weighted~~	~~See ISO 52016-1~~
~~Heating system service area~~	~~Useful floor area weighted~~	
~~Cooling system service area~~	~~Useful floor area weighted~~	
~~Ventilation service area~~	~~Useful floor area weighted~~	
~~DHW service area~~	~~Useful floor area weighted~~	

~~Lighting service area~~	~~Useful floor area weighted~~	
Unconditioned space	Useful floor area weighted	National methodology on energy audit (2017)
[a] Add lines in case of more service areas.		
In the National methodology on energy audit (2017) only calculation of heat losses to unconditioned space from adjacent conditioned zones is defined		

Table NA.30 — Energy flows taken into account in the building balance (See 11.6.2.1)

System or component	Counted as delivered energy? (Yes/No) [a]	~~Exported energy taken into account under step B of the energy performance assessment (11.6.2.1)[b] (Yes/No)~~
Needs		
Passive renewable energy	No	~~Not applicable~~
On-site		
Technical building systems located "on-site" and producing energy from renewable sources	Yes	~~Yes~~
Solar energy captured by thermal solar panels	Yes	~~Yes~~
Solar energy captured by PV	Yes	
~~Free cooling as renewable energy~~	~~Yes~~	~~Not applicable~~
~~Free heating as renewable energy~~	~~Yes~~	~~Not applicable~~
Heat from environment captured by heat pumps	Yes	~~Yes~~
~~Electricity produced by wind power~~	~~Yes~~	~~No~~
Nearby	[c]	
District heating	Yes	~~No~~
~~District cooling~~	~~Yes~~	~~No~~
~~Heat produced by biomass~~	~~Yes~~	~~No~~
Distant	[d]	
Electricity production from renewable sources	~~Yes~~No	~~No~~
[a] A "No" in the second column implies "not applicable" in the third column. [b] Only relevant if $k_{exp} > 0$, see Table A.19/B.19. [c] If choice of perimeter is "nearby" (see Table A.9). [d] If choice of perimeter is "distant" (see Table A.9). NOTE Rows may be deleted or added.		
The procedures from the National methodology on energy audit (2017) and from the Type solutions of application of alternative systems (2015) do not distinguish between onsite produced renewable energy used for EPB and nonEPB services and exported energy. Also, the onsite resources and the avoided resources in the grid are not defined as such. The same weighting factors are used for electrical energy produced from onsite resources and from the grid.		

Table NA.31 — Electrical uses not satisfied by on-site electricity production (See 11.6.~~2~~4)

On-site electricity production type	Not allowed uses	Comment
All	None	Any EPB use of electricity can be satisfied by any type of on-site electricity production

Table B.32 — Matching factor of produced and used electricity (See 11.6.2.4)

~~Calculation interval~~	~~Case~~	~~Matching factor function and parameters~~
~~Hourly~~	~~All building categories~~	$f_{\text{match}} = 1$
~~Monthly~~	~~All building categories~~	$f_{\text{match}} = \dfrac{x^n + \dfrac{1}{x^n} - k}{x^n + \dfrac{1}{x^n}}$ ~~with~~ ~~$x = E_{pr;el}/E_{EPus;el}$;~~ ~~$k$ = carrier = 1 and n = subsystem = 1~~
NOT APPLICABLE, see comment in NA.30		