

52000-1
Annex A

Table A.1 — References (See Clause 2)

Reference	Reference document	
	Number	Title
M1-1	ISO 52000-1	This document
M1-2		See M1-1
M1-3		See M1-1
M1-4	ISO 52003-1	<i>Energy performance of buildings - Indicators, requirements, ratings and certificates - Part 1: General aspects and application to the overall energy performance</i>
M1-5, M1-7		See M1-1
M1-8, M1-9		See M1-1
M1-10		
M1-6, M2-7	ISO 17772-1	<i>Energy performance of buildings - Indoor environmental quality - Part 1: Indoor environmental input parameters for the design and assessment of energy performance of buildings</i>
	EN 16798-1 (Under preparation)	<i>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)</i>
M1-11		See M1-6
M1-13	ISO 52010-1	<i>Energy performance of buildings - External climatic conditions - Part 1: Conversion of climatic data for energy calculations</i>
M1-14	EN 15459-1	<i>Delegated method of cost-optimum calculation</i>
M2-2	ISO 52016-1	<i>Energy performance of buildings - Energy needs for heating and cooling, internal temperatures and sensible and latent heat loads - Part 1: Calculation procedures</i>
M2-3	ISO 52017-1	<i>Energy performance of buildings - Sensible and latent heat loads and internal temperatures - Part 1: Generic calculation procedures</i>
M2-4	ISO 52018-1	<i>Energy performance of buildings - Indicators for partial EPB requirements related to thermal energy balance and fabric features - Part 1: Overview of options</i>
M2-5.1	ISO 13789	<i>Thermal performance of buildings - Transmission and ventilation heat transfer coefficients - Calculation method</i>
M2-5.2	ISO 13370	<i>Thermal performance of buildings - Heat transfer via the ground - Calculation methods</i>
M2-5.3	ISO 6946	<i>Building components and building elements - Thermal resistance and thermal transmittance - Calculation methods</i>
M2-5.4	ISO 10211	<i>Thermal bridges in building construction - Heat flows and surface temperatures - Detailed calculations</i>
M2-5.5	ISO 14683	<i>Thermal bridges in building construction - Linear thermal transmittance - Simplified methods and default values</i>
M2-5.6	ISO 10077-1	<i>Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 1: General</i>
M2-5.7	ISO 10077-2	<i>Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 2: Numerical method for frames</i>
M2-5.8	ISO 12631	<i>Thermal performance of curtain walling - Calculation of thermal transmittance</i>
M2-9	ISO 13786	<i>Thermal performance of building components - Dynamic thermal characteristics - Calculation methods</i>
M2-7		See M2-5

Table A.1 (continued)

Reference	Reference document	
	Number	Title
M2-8	ISO 52022-3	<i>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</i>
	ISO 52022-1	<i>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</i>
M3-1	EN 15316-1	<i>Energy performance of 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</i>
M3-2		
M3-3	EN 12831-1	<i>Energy performance of buildings - Method for calculation of the design heat load - Part 1: Space heating load, Module M3-3</i>
M3-4	EN 15316-1	See M3-1
M3-5	EN 15316-2	<i>Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 2: Space emission systems (heating and cooling), Module M3-5, M4-5</i>
M3-6	EN 15316-3	<i>Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 3: Space distribution systems (DHW, heating and cooling), Module M3-6, M4-6, M8-6</i>
M3-7	EN 15316-5	<i>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</i>
M3-8	EN 15316-4-1	<i>Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 4-1: Space heating and DHW generation systems, combustion systems (boilers, biomass), Module M3-8-1 and M 8-8-1</i>
	EN 15316-4-2	<i>Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 4-2: Space heating generation systems, heat pump systems, Module M3-8-2, M8-8-2</i>
	EN15316-4-3	<i>Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 4-3: Heat generation systems, thermal solar and photovoltaic systems, Module M3-8- 3, M8-8-3, M11-8-3</i>
	EN15316-4-4	<i>Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 4-4: Heat generation systems, building-integrated cogeneration systems, Module M8-3-4, M8-8-4, M8-11-4</i>
	EN15316-4-5	<i>Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 4-5: District heating and cooling, Module M3-8-5, M4-8-5, M8-8-5, M11-8-5</i>
	EN15316-4-8	<i>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</i>
M3-9		
M3-10	EN 15378-3	<i>Energy performance of buildings -Heating and DHW systems in buildings - Part 3: Measured energy performance, Module M3-10 and M8-10</i>

Table A.1 (continued)

Reference	Reference document	
	Number	Title
M3-11	EN 15378-1	<i>Energy performance of buildings - Heating systems and DHW in buildings - Inspection of boilers, heating systems and DHW, Module M3-11, M8-11</i>
M3-12		
M4-1	EN 16798-9	<i>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</i>
M4-2		
M4-3	ISO 52016-1	See M2-2
M4-4	EN16798-9	See M4-1
M4-5	EN15316-2	See M3-5
M4-6	EN15316-3	See M3-6
M4-7	EN16798-15	<i>Energy performance of buildings - Ventilation for buildings - Part 15: Calculation of cooling systems (Module M4-7) - Storage</i>
M4-8	EN16798-13	<i>Energy performance of buildings - Ventilation for buildings - Part 13: Calculation of cooling systems (Module M4-8) - Generation</i>
	EN 15316-4-5	See M3-8
M4-9		
M4-10		
M4-11	-	
M4-12		
M5-1	EN 16798-3	<i>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)</i>
M5-2		
M5-3		
M5-4	EN 16798-3	See M5-1
M5-5	-	-
M5-6	EN 16798-5-1 and EN 16798-5-2	<i>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</i> <i>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</i>
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

Table A.1 (continued)

Reference	Reference document	
	Number	Title
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	EN 15316-1	See M3-1
M8-2	EN 12831-3	<i>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</i>
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
	EN15316-4-3	See M3-8
	EN15316-4-4	See M3-8
	EN15316-4-5	See M3-8
	EN15316-4-8	See M3-8
M8-9		
M8-10	EN 15378-3	See M3-10
M8-11	EN 15378-1	See M3-11
M9-1	EN 15193-1	<i>Energy performance of buildings - Energy requirements for lighting - Part 1: Specifications, Module M9</i>
M9-2	EN 15193-1	See M9-1
M9-3		

Table A.1 (continued)

Reference	Reference document	
	Number	Title
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	EN 15232-1	<i>Energy performance of buildings - Part 1: Impact of Building Automation, Controls and Building Management - Modules M10- 4,5,6,7,8,9,10</i>
M10-2		
M10-3		
M10-4		
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	<i>Energy Performance of Buildings - Inspection of Automation, Controls and Technical Building Management - Part 1: Module M10-11</i>
M10-12	EN 16947-1	<i>Energy Performance of Buildings - Building Management System - Part 1: Module M10-12</i>
M11-1		
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	<i>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</i>

A.3 Overarching preparation steps

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

Application	Building category	Assessment type	Conditions
Energy performance certificate	All categories	As built type	-
Building permit	All categories	Design type	-
Permit to use	All categories	As built type	-
Energy audit	All categories	Tailored type	-

Table A.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	
EPB_OBJECT_BLDNG_UNIT	Building unit	1	
EPB_OBJECT_BLDNG_PART	Part of a building (in case of parts of different ownership)	1	
EPB_OBJECT_LCYCLE_NEW.DESIGN	New building design	2	
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	
EPB_OBJECT_LCYCLE_EXIST.EXTENS	Existing building extension (without long term use data)	2	
EPB_OBJECT_LCYCLE_EXIST.IN.USE	Existing building in use	2	
EPB_OBJECT_CAT_RES	Residential building	3	
EPB_OBJECT_CAT_NRES	Non-residential building	3	
EPB_OBJECT_USER_L.PUBL	Large public building	4	
EPB_OBJECT_USER_OTHER	Other	4	

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 (1, 2, 3, 4).

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

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

BLDNGCAT_TYPE		
Type	Description	Comments
BLDNGCAT_RES_SINGLE	Single-family houses of different types	a
BLDNGCAT_RES_APPBLOCK	Apartment blocks	
BLDNGCAT_RES_ELDER	Homes for elderly and disabled people	
BLDNGCAT_RES_COLL	Residence for collective use	
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_DATA_CENTER	Data centre	
BLDNGCAT_INDUS	Industrial sites	
BLDNGCAT_WORKS	Workshops	
BLDNGCATTYPE		
BLDNGCAT_AGRIC	Non-residential agricultural buildings	

a List copied from ISO 13675, Annex 1.5⁸l, but residential sector more differentiated and other buildings use energy more differentiated.

Table A.5 – Which building categories are included in EPB assessment (See 6.2.2)

Building categories	Identifier	Included in EPB assessment • Yes/No
Single family house	-	YES
Multi family house	-	YES
Other	-	YES

[CT1] megjegyzést írt: A rendelet véglegesítése után rendeletszámmal hivatkozni a user profile-os rendeleti táblázatra (jelenleg 20. melléklet)

Table A.6 – Differentiation of space categories (See Clauses 6, 9 and 10.1)

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

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

SPACECAT_TYPE		
Type	Description	Comments
SPACECAT_RES_SFH	Residential living space, kitchen, bed room, study, bath room or toilet in a single family house	Standardised user profiles, fix numeric requirements
SPACECAT_RES_MFH	Residential living space, kitchen, bed room, study, bath room or toilet in a multi family house	Standardised user profiles, fix numeric requirements
SPACECAT_OTHER	Other types	Recommended user profiles only (not mandatory) for certain building types Reference building method to be applied

Table A.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 A.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	only audit
EPB_ASSESS_MEAS_CORR_CLIM	Measured, corrected for climate	only audit
EPB_ASSESS_MEAS_CORR_USE	Measured, corrected for use	only audit
EPB_ASSESS_MEAS_STAND	Measured, standard (corrected for climate and use)	only audit

Table A.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	
EPB_LISTSERVICES_NRES	Services included for the EPB assessment of non-residential buildings	

A.4 Method

Table A.12 – Electricity generation types (See 7.3.3.6 and 9.6.6.2.4)

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 A.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

Table A.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 $\pm 0,1$ MJ/kg.		

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

Fuel	Density kg/m ³	Gross calorific value kWh/m ³
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.		

Table A.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_{Pren}	f_{Pren}	f_{Ptot}	κCO_2e (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		d	d	d	d
9	District cooling		d	d	d	d
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		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.

^d Data provided individually by district heat suppliers.

[CT2] megjegyzést írt: Ez a B. opció.
Ha másik lesz kiválasztva végül, akkor aktualizálni szükséges a táblázatot.

Table A.17 – f_{exp}-factor (See 7.3.5 and 11.6.2.1)

Description	Value
f _{exp}	1
Factor that is used to control which part of the exported energy is included in the energy performance of the building	

Table A.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 A.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

Table A.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

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

<p>Specification and/or reference to document with more information</p> <p>The useful floor area is equal to the area of the floor with the following specific rules:</p> <p>Excluded:</p> <p>The floor area under a load bearing construction is excluded.</p> <p>The open floor area in vides (no floor) is excluded.</p> <p>The floor area with height under the ceiling of less than 1,9 m (except for incidental beams). Included:</p> <p>The floor area under a non-load bearing construction at the boundary of the considered space or spaces: measured to the centre.</p> <p>The floor area under a non-load bearing construction inside the considered space or spaces.</p>

Table A.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 A.20 of this document, with fractions according to Table A.22

Table A.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 (/ref;cat). Default value = 1 ^a
Residential living space, kitchen, bed room, study, bath room or toilet with room height above 1.7 m	YES	1,0
Residential living space, kitchen, bed room, study, bath room or toilet with room height below 1.7 m	NO	
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, 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	YES	1,0
Meeting or seminar space	YES	1,0
Auditorium, lecture room	YES	1,0
Theatre or cinema space	YES	1,0

Table A.22 (continued)

Space categories	Contributing?	If YES: (Optional) fraction of-size contributing to ref. size (/ref;cat). Default value = 1 ^a
Server or computer room	YES	1,0
Sport facilities, thermally conditioned	YES	1,0
Sport facilities, thermally unconditioned	NO	0,5
Wholesale and retail trade services space (shop)	YES	1,0
Non-residential bath room, shower, toilet, if inside thermal envelope	YES	1,0
Heated storage space	YES	1,0
Cooled storage space	YES	1,0
Engine room	NO	
individual garage or collective indoor car park	NO	
Barn	NO	

Table A.23 – Perimeter specification (See 9.5.1 and 9.6.1)

Energy carrier	Specification of nearby perimeter (s ee 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 A.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	Yes	Yes	Yes

[CT3] megjegyzést írt: A követelménynek véglegesítése után felülvizsgálandó.

Table A.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

Table A.25 (continued)

Energy carrier	Conversion factor f_{GCV}/NCV
coal	1,04
lignite	1,08
wood	1,08

Table A.26 – Overheads included in the primary energy and CO2 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 CO2 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.			

Table A.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 ($E_p = E_{pwt}$) or non-renewable energy performance ($E_p = E_{pnen}$)	$E_p = E_{pnen}$	All application types in Table A.6

[CT4] megjegyzést írt: A súlytényezők véglegesítése után felülvizsgálandó.

Table A.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	EL_PROD_PV
Priority level 2	EL_EXP_PRIO_LEVEL_2	EL_PROD_WIND
Priority level 3 (lowest)	EL_EXP_PRIO_LEVEL_3	EL_PROD_CHP

Table A.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	
^a Add lines in case of more service areas.		

Table A.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
Free cooling as renewable energy	No	Not applicable
Free heating as 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
Heat from environment captured by heat pumps	Yes	Yes
Electricity produced by wind power	Yes	Yes
Waste heat	Yes	No
Nearby		
District heating	Yes	No
District cooling	Yes	No
Heat produced by biomass	Yes	No
Distant		
Electricity production from renewable sources	Yes	No

Table A.31 – Electrical uses not satisfied by on-site electricity production (See 11.6.2)

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 A.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_{match}=1
Monthly	All building categories	$f_{\text{match}} = \frac{x^n + \frac{1}{x^n} - k}{x^n + \frac{1}{x^n}}$ <p>with $x = E_{\text{pr};\text{el}}/E_{\text{EP};\text{us};\text{el}}$ $k = \text{carrier} = 1$ and $n = \text{subsystem} = 1$</p>