

Byggnaders energiprestanda – Indikatorer, krav och certifiering –

**Del 1: Allmänna riktlinjer och tillämpning på total
energiprestanda (ISO 52003-1:2017)**

**Energy performance of buildings – Indicators, requirements,
ratings and certificates – Part 1: General aspects and
application to the overall energy performance
(ISO 52003-1:2017)**

Annex A

(normative)

Input and method selection data sheet — Template

NDS.1 General

The template in Annex A of this document shall be used to specify the choices between methods, the required input data and references to other documents.

NOTE 1 Following this template is not enough to guarantee consistency of datNDS.

NOTE 2 Informative default choices are provided in [Annex B](#). Alternative values and choices can be imposed by national/regional regulations. If the default values and choices of [Annex B](#) are not adopted because of the national/regional regulations, policies or national traditions, it is expected that:

— national or regional authorities prepare data sheets containing the national or regional values and choices, in line with the template in Annex A; or

— by default, the national standards body will add or include a national annex (Annex NA) to this document, in line with the template in Annex A, giving national or regional values and choices in accordance with their legal documents.

NOTE 3 The template in Annex A is applicable to different applications (e.g., the design of a new building, certification of a new building, renovation of an existing building and certification of an existing building) and for different types of buildings (e.g., small or simple buildings and large or complex buildings). A distinction in values and choices for different applications or building types could be made:

— by adding columns or rows (one for each application), if the template allows;

— by including more than one version of a table (one for each application), numbered consecutively as a, b, c, ... For example: Table NNDS.3a, Table NNDS.3b;

— by developing different national/regional data sheets for the same standard. In case of a national annex to the standard these will be consecutively numbered (Annex NA, Annex NB, Annex NC, ...).

NOTE 4 In the section “Introduction” of a national/regional data sheet information can be added, for example about the applicable national/regional regulations.

NOTE 5 For certain input values to be acquired by the user, a data sheet following the template of Annex A, could contain a reference to national procedures for assessing the needed input datNDS. For instance, reference to a national assessment protocol comprising decision trees, tables and pre-calculations.

The shaded fields in the tables are part of the template and consequently not open for input.

Specific information concerning Annex A and [Annex B](#) of this document:

The reporting tables allow full freedom of choice at national or regional level.

Typically, different choices will be made according to the type of work, notably for new constructions (or equivalent) or works on existing buildings. Furthermore, there may be differentiations according to other criteria, such as between residential and non-residential buildings. Each different application area will thus have its own set of tables if different choices are made. The application domain of every set shall be clearly specified.

NDS.2 References

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

Table NDS.1 — References

Reference	Reference documenta	
	Number	Title
M1-6b	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 16798-1c	<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>
M1-14b	EN 15459-1	<i>Energy performance of buildings — Economic evaluation procedure for energy systems in buildings — Part 1: Calculation procedures, Module M1-14</i>
M2-4b	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>
M3-4b	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>
M4-4b	EN 16798-9	<i>Energy performance of buildings — Ventilation for buildings — Part 9: Calculation methods for energy requirements of cooling systems (Module M4-1, M4-4 M4-9) — General</i>
M5-4b	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>
M6-4b	EN 16798-3	See M5-4
M7-4b	EN 16798-3	See M5-4
M8-4b	EN 15316-1	See M3-4
M9-4b	EN 15193-1	<i>Energy performance of buildings — Energy requirements for lighting — Part 1: Specifications, Module M9</i>
M10-4b	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>
a	If a reference comprises more than one document, the references may be differentiated.	
b	Informative.	
c	Under preparation.	

NDS.3 Energy performance requirements

[Table NDS.2](#), which contains the overall energy performance requirement mix, should be filled out as follows:

- The first column lists the overall energy performance features that can be considered for setting requirements. The motivation for the chosen mix shall be reported. If required, other overall EPB features can be added at the bottom of the table. By means of a numbered reference, a precise description of each additional overall EPB feature will then be given and the motivation shall be described in a clear manner.
- In the second column, an X-mark is put at each of the features chosen to set a requirement.
- In the third column, a numbered reference is made to a full, detailed and clear explanation for each exception, including the motivation for the exception.

[Table NDS.2](#) should be seen in conjunction with all the partial EPB requirements (which are beyond the scope of this document, e.g. concerning technical systems). Partial EPB requirements related to the fabric are discussed in ISO 52018, which also provides reporting templates for the corresponding EPB features.

Table NDS.2 — Default choices with respect to the overall EPB requirements (see [9.5](#))

Application: All new buildings		
Overall energy performance feature	Requirement?	Exceptions*?
Total primary energy use	Yes	-
Non-renewable primary energy use	No	-
Renewable primary energy use	No	-
Renewable energy ratio	No	-
Greenhouse gas emissions	No	-
Energy policy factors (define*)	-	-

The columns or cells that are marked with an asterisk * (i.e. any cell involving a specific national/regional element) shall be marked with a numbered reference. Clear explanation and motivation shall be given for each of these new elements.

Motivation for the requirement mix:
 Plan- och byggförordningen (2011:338) anger att viktningfaktorerna ska sättas så att de bidrar till teknikneutralitet mellan hållbara uppvärmningssystem som inte är fossilbränslebaserade.¹ Fossila bränslen får en hög viktningfaktor som begränsar möjligheten att använda fossilbränslebaserade uppvärmningssystem. Vidare är fossila bränslen vid direkt användning för uppvärmning belagda med energiskatt och koldioxidskatt.

I plan- och byggförordningen finns även krav på att en byggnad ska ha en mycket hög energiprestanda där den energi som tillförs i mycket hög grad kommer från förnybara energikällor (nära-nollenergibyggnad). Användningen av förnybar energi främjas även genom att byggnaders energianvändning får reduceras med förnybar energi som produceras på plats och används inom byggnaden. Sverige har en mycket hög andel förnybar energi för sektorerna el samt värme och kyla – 66,2 procent respektive 65,4 procent 2018² – samtidigt som byggnadsbeståndet till största del använder el och fjärrvärme för uppvärmning och tappvarmvatten. Detta innebär, tillsammans med de höga faktorerna på fossila bränslen, att nya byggnader i Sverige använder en hög andel förnybar energi

¹Träder i kraft 2020-09-01.
²Sveriges femte rapport om utvecklingen av förnybar energi enligt artikel 22 i Direktiv 2009/28/EG.

As explained in [Clause 9](#), the numerical value of the requirement on the total primary energy use (notably whether variable or constant) should be set with great care.

Table NDS.3 — Numeric indicator used for the requirement on the total primary energy use (see [9.5](#))

Numeric indicator	Choice
Total primary energy use per useful floor area [kWh/m ²]	-
Total primary energy use E_{Ptot} [kWh]	-
Ratio (define)	-

As explained in [Clause 9](#), the numerical value of the requirement on the non-renewable primary energy use (notably whether variable or constant) should be set with great care.

Table NDS.4 — Numeric indicator used for the requirement on the non-renewable primary energy use (see [9.5](#))

Numeric indicator	Choice
Non-renewable primary energy use per useful floor area [kWh/m ²]	No
Non-renewable primary energy use E_{Pnren} [kWh]	No
Ratio (define)	No

As explained in [Clause 9](#), the numerical value of the requirement on the renewable primary energy use (notably whether variable or constant) should be set with great care.

Table NDS.5 — Numeric indicator used for the requirement on the renewable primary energy use (see [9.5](#))

Numeric indicator	Choice
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Renewable primary energy use per useful floor area [kWh/m ²]	No
Renewable primary energy use E_{Pren} [kWh]	No
Ratio (define)	No

NDS.4 Rating

Table NDS.6 — Energy rating methods (see [10.2](#) and [10.3](#))

Method	Choice ^a
1) Default energy rating method with two reference points (see 10.2)	No
2) Default energy rating method with a single reference point (see 10.2)	No
3) Other energy rating method (see 10.2)	Yes
In case of method 1:	Parameters
Subclasses to expand the classes	-
Position of the energy performance regulation reference, R_r ,	-
Position of the building stock reference, R_s ,	-
Measure for the building stock reference	-
Position of $EP = 0$	-
In case of method 2.:	Parameters
Subclasses to expand the classes	-
Boundary for the reference position, n_{ref}	-
In case of method 3:	Reference
Subclasses to expand the classes	No
Position of the energy performance requirement (regulation reference)	C – D
Position of $EP = 0$	A
<p>Reference to procedure: Boverkets föreskrifter och allmänna råd (2007:4) om energideklaration för byggnader, BED https://www.boverket.se/contentassets/4688c6ecfd1a4627aca1013d2dcedd42/konsoliderad_bed_bfs_2007-4--2018-11.pdf</p> <p>Referensvärde 7 § Som referensvärde ska anges en klassning som utgår från de krav på primärenergital som vid var tid gäller vid uppförandet av en ny byggnad enligt Boverkets byggregler (2011:6) – föreskrifter och allmänna råd.</p> <p>Klassning 7 a § Klassningen av byggnadens energiprestanda, från A till G, ska anges enligt följande. Om byggnaden har en bättre energiprestanda än de krav som ställs vid uppförandet av en ny byggnad utgör intervall A ≤ 50 procent av kravet vid uppförandet av en ny byggnad och intervall B > 50 procent och ≤ 75 procent. Intervall C utgör > 75 procent och ≤ 100 procent av kravet vid uppförandet av en ny byggnad. Om byggnaden har en sämre energiprestanda än de krav som ställs vid uppförandet av en ny byggnad utgör intervall D > 100 procent och ≤ 135 procent, intervall E > 135 procent och ≤ 180 procent, intervall F > 180 procent och ≤ 235 procent och intervall G > 235 procent.</p> <p>Möjligen används metod 3 i Sverige. Stegen som avgör klassernas intervall anges inte i standarden. Flexibiliteten blir större. Klassindelningen är</p> <p>A < 75 % av kravet B 50–75 % av kravet C 75–100 % av kravet D 100–135 % av kravet E 135–180 % av kravet F 180–235 % av kravet</p>	

G >235 % av kravet

NDS.5 Label model

Table NDS.7 — Graphical representation of the rating (see [11.3](#))

Method	Choice ^a
1. Default model for the graphical representation of the rating (see 11.3)	Yes
2. Other model for the graphical representation of the rating (see 11.3)	No
In case of method 2:	-
Reference to procedure: Boverkets föreskrifter och allmänna råd (2007:4) om energideklaration för byggnader, BED https://www.boverket.se/contentassets/4688c6ecfd1a4627aca1013d2dcedd42/konsoliderad_bed_bfs_2007-4--2018-11.pdf	
BED 8a § och Bilaga 2 anger hur klassningen ska presenteras i grafisk form	
Sammanfattning av energideklaration	
8 a § En sammanfattning av energideklarationen ska utformas på det sätt som framgår av bilaga 2 till dessa föreskrifter. Sammanfattningen ska vara på svenska.	
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