

National plan for increasing the number of nearly zero- energy buildings in Slovak Republic



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1 Starting point

Please give a short overview of your national building stock. Describe the most important characteristics and emerging needs. Additionally, illustrate the chronological development of national requirements on the energy performance of buildings (for an example, see guidance document)

Overview of national building stock: In the Slovak republic there are app. 21,723 apartment buildings (800,634 of flats) and about 792,555 single-family houses. There are approximately 15 thousand buildings owned by the state.

Table 1: Overview of national building stock: residential and non-residential buildings owned by the state

Type of building	Number of buildings
Schools	6 943
Buildings for trade and services	156
Hospitals	1 293
Cultural houses	525
Office buildings	2 556
Hotels	1 317
Sports facilities	126
Railway stations and airports	7
Posts	440
Other buildings	2 072
Total	15 435

The implementation of EPCs came into force for various categories of newly constructed buildings, buildings undergoing major renovation, sold or rented buildings (family houses, apartment buildings, office buildings, educational buildings, hospitals, hotels and restaurants, sports buildings, buildings for trade and services, as well as mixed-use buildings) on the 1st of January 2008. From this date onwards, the duty for labelling large public buildings of over 1,000 m² was introduced. This figure was reduced to 500 m², on the 1st of January 2013, and will become 250 m², from the 9th of July 2015 onwards. All buildings, except those constructed before 1947, monuments, buildings of historical and architectural heritage, buildings used less than 4 months per year, and buildings with of total floor space of less than 50 m², are assigned an energy rating. If there are different uses in a building in more than 10% of the building's total floor area, the rating is calculated as referring to a mixed-use building. According to the Act No.555/2005 Col. on energy performance of buildings as amended, energy performance (EP) certification of units (e.g., flats) becomes obligatory from the 1st of January 2016.

Table 2: Energy Class scale for global indicator from 2013, in kWh/m².year -primary energy for different categories of buildings

Global indicator – primary energy	Category of buildings	Energy Performance of building Classes							
		A0	A1	B	C	D	E	F	G
	Family houses	≤ 54	55-108	109-216	217-324	325-432	433-540	541-648	> 648
	Apartment buildings	≤ 32	33-63	64-126	127-189	190-252	253-315	316-378	> 378
	Office buildings	≤ 60	61-120	121-240	241-360	361-480	481-600	601-720	> 720
	Schools	≤ 34	35-68	69-136	137-204	205-272	273-340	341-408	> 408
	Hospitals	≤ 96	97-192	193-384	385-576	577-769	770-961	962-1153	>1153
	Hotels and Restaurants	≤ 82	83-164	165-328	329-492	493-656	657-820	821-984	> 984
	Sports facilities	≤ 38	39-76	77-152	153-258	259-304	305-380	381-456	> 456
	Buildings for trade and services	≤ 85	86-170	171-340	341-510	511-680	681-850	851-1020	>1020

Table 3: Chronological development of minimum requirements on energy performance of buildings – examples for residential buildings.

Indicator/ Global indicator	Requirements in force from	Minimum required Energy Class	Upper border of the required Energy Class [kWh/m ² .year]	
			Family houses	Apartment buildings
Heating	1 January 2013	B	86	53
	1 January 2016	A	42	27
	1 January 2021	A	42	27
DHW preparation	1 January 2013	B	24	26
	1 January 2016	A	12	13
	1 January 2021	A	12	13
Total energy use in building	1 January 2013	B	110	79
	1 January 2016	A	54	40
	1 January 2021	A	54	40
Primary energy	1 January 2013	B	216	126
	1 January 2016	A1	108	63
	1 January 2021	A0	54	32

2 Application of the definition of nearly zero-energy buildings

Please indicate how a nearly zero-energy building is defined within national context and explain underlying assumptions and factors that provide the rationale for the chosen definition.

For reporting the detailed application in practice of the definition of nearly zero-energy buildings, the table presented in the Annex is to be used.

If a national definition of nearly zero-energy buildings does not exist yet in your country, please indicate here whether precise plans are already under development and if so, please describe these plans. Please also describe if any currently used non-governmental definitions will be considered in these plans and/or a future directive.

The definition of NZEBs was introduced and established by the Act No. 555/2005 Col. on energy performance of buildings as amended by Act No. 300/2012 Col.:

„Budovou s takmer nulovou potrebou energie sa rozumie budova s veľmi vysokou energetickou hospodárnosťou. Takmer nulové alebo veľmi malé množstvo energie potrebné na užívanie takej budovy musí byť zabezpečené efektívnou tepelnou ochranou a vo vysokej miere energiou dodanou z obnoviteľných zdrojov nachádzajúcich sa v budove alebo v jej blízkosti.“

[UNOFFICIAL TRANSLATION: Building with nearly zero energy demand means a building with very high energy performance. Almost zero or very small amount of energy needed for utilization of such a building must be ensured through effective thermal protection and through high share of energy supplied from the renewable energy sources which are located in the building or its surroundings.]

According to this, stricter thermal properties of building components are required, while the consideration of renewable energy sources (RES) within the building and in its surroundings is also precisely defined.

The payback period of proposed measures should be less than 15 years. The law specifies that, after the 31st of December 2018, all new public buildings and, after the 31st of December 2020, all new buildings should be constructed as NZEBs.

The *National plan for increase of the number of nearly zero energy buildings* was approved by the administration of the Ministry of Transport, Construction and Regional Development of the Slovak Republic (MDVRR SR) in January 2013. It introduces the starting points and determines the requirements on the energy levels of constructions. The national plan also focuses on the requirements, conditions and methods for increasing the number of NZEBs, in order to meet the legal requirements. In new buildings, a minimum of 50% of primary energy should be covered by RES by 2020 (a 12% of the total energy needs in the housing stock and an 8% in the public sector should be covered by RES by 2020). The document was approved as a dynamic document, which will be annually updated.

3 Intermediate targets for improving the energy performance of new buildings in order to ensure that by 31 December 2020 all new buildings are nearly zero-energy buildings

Please report the 2015 targets ensuring that by 31 December 2020 all new buildings are nearly zero-energy buildings. Also explain how they relate to and help to ensure that all new buildings are nearly zero-energy buildings by 31 December 2020.

What are the qualitative and quantitative 2015 targets for all new buildings?

3.1.1 Qualitative 2015 targets: Interim energy related requirements for new residential and non-residential buildings

Requirements on fraction of renewable energies:

Requirements on useful energy demand:

Requirements on primary energy demand:

3.1.2 Quantitative 2015 targets: Share of nZEB according to official nZEB definition on all newly constructed buildings (define reference parameter e.g. number of buildings, floor area, volume etc.):

Miscellaneous:

From your point of view, how close is your country at the moment in achieving this target? In case there is no target defined yet, please indicate when it is expected to have such a target.

Slovakia introduced a legislative framework – the Act No. 555/2005 Col. on energy performance of buildings, as amended. This law specifies that, after the 31st of December 2018, all new public buildings and, after the 31st of December 2020, all new buildings should be constructed as NZEBs.

Slovakia prepared a *National plan for increase of the number of nearly zero energy buildings*. This action plan introduces the starting points and determines the requirements on the energy levels of constructions. The national plan also focuses on the requirements, conditions and methods for increasing the number of NZEBs, in order to meet the legal requirements. In new buildings, a minimum of 50% of primary energy should be covered by RES by 2020 (a 12% of energy needs in the housing stock and an 8% in the public sector should be covered by RES). The document was approved as a dynamic document, which will be updated annually.

From 1 January 2013 the minimum requirements for new buildings are Energy class B.

From 1 January 2016 the minimum requirements for new buildings will be tightened (more strict) to Energy class A1.

From 1 January 2018 the requirements for new buildings will be tightened (more strict) to Energy class A0 for public buildings.

From 1 January 2020 the requirements for new buildings will be tightened (more strict) to Energy class A0 for all types of buildings.

4 Intermediate targets for improving the energy performance of new buildings in order to ensure that by 31 December 2018, new buildings occupied and owned by public authorities are nearly zero-energy buildings

Please report here the 2015 targets ensuring that by 31 December 2018 all new public buildings are nearly zero-energy buildings. Also explain how they relate to and help to achieve that by 31 December 2018, all new public buildings are nearly zero-energy buildings

What are the qualitative and quantitative 2015 targets for all new buildings occupied and owned by public authorities?

4.1.1 Qualitative 2015 targets: Interim energy related requirements for new public buildings

Requirements on fraction of renewable energies:

Requirements on useful energy demand:

Requirements on primary energy demand:

4.1.2 Quantitative 2015 targets: Share of public nZEB according to official nZEB definition on all newly constructed public buildings (define reference parameter e.g. number of buildings, floor area, volume etc.):

Miscellaneous:

From your point of view, how close is your country at the moment in achieving this target? In case there is no target defined yet, please indicate when it is expected to have such a target.

All targets that ensure that all new public buildings are nearly zero-energy buildings by 31 December 2018 are set in *Long-term strategy on activation of investment into buildings renovation* (this strategy is under preparation). In order to implement Article 5 of the Directive 2012/27/EU on Energy Efficiency (EED), the MDVRR SR started preparing a database of the public buildings constructed in the Slovak Republic and drew up plans and methods for increasing the number of NZEBs in public sector and how to promote major renovations in the housing stock and public buildings.

Launching of information campaigns:

In September 2012, the MDVRR SR, together with the Slovak Innovation and Energy Agency (SIEA), started preparation of an information campaign, mainly addressed towards end users, that also attempts to reach relevant stakeholders. The information campaign is at an initial stage; it focuses on the explanation of the measures proposed for major renovations in the public buildings, as well as on the content and importance of EPCs. Over the last two years, numerous different events, conferences, seminars, workshops and fairs have been organised on similar topics. During these promotional activities, the MDVRR SR, SIEA and Building Testing and Research Institute (TSUS) had a strong presence and stressed the importance of implementing the measures focused on saving energy.

5 Policies and measures for the promotion of all new buildings being nearly zero-energy buildings after 31 December 2020

5.1 Residential buildings
5.1.1 Relevant regulations
5.1.2 Relevant economic incentives and financing instruments
5.1.3 Energy performance certificates' use and layout in relation to nZEB standard
5.1.4 Supervision (energy advice and audits)
5.1.5 Information (tools)
5.1.6 Demonstration
5.1.7 Education and training
5.2 Non-residential buildings
5.2.1 Relevant regulations
5.2.2 Relevant economic incentives and financing instruments
5.2.3 Energy performance certificates' use and layout in relation to nZEB standard
5.2.4 Supervision (energy advice and audits)
5.2.5 Information (tools)
5.2.6 Demonstration
5.2.7 Education and training
5.3 From your point of view, how would you evaluate the current measures that are in force? Please also try to describe the existing gap between what is in force and what should be in force in order to ensure that after 31 December 2020, all new buildings are nearly zero-energy buildings. Are there precise measures planned for the future?

Not set yet.

6 Policies and measures for the promotion of all new buildings occupied and owned by public authorities being nearly zero-energy buildings after 31 December 2018

6.1 All new buildings occupied and owned by public authorities
6.1.1 Relevant regulations
6.1.2 Relevant economic incentives and financing instruments
6.1.3 Energy performance certificates' use and layout in relation to nZEB standard
6.1.4 Supervision (energy advice and audits)
6.1.5 Information (tools)
6.1.6 Demonstration
6.1.7 Education and training
6.2 From your point of view, how would you evaluate the current measures that are in force? Please also describe the existing gap between what is in force and what should be in force in order to ensure that after 31 December 2018, all new public buildings are nearly zero-energy buildings. Are there precise measures planned for the future?

Policies and measures for the promotion of the target which obliges all new buildings occupied and owned by public authorities to be built as nearly zero-energy buildings after 31 December 2018 will be covered by *Long-term strategy on activation of investment into buildings renovation* (in order to implement Article 5 of the Directive 2012/27/EU on Energy Efficiency), which is prepared by the MDVRR SR.

7 Policies and measures for the promotion of existing buildings undergoing major renovation being transformed to nearly zero-energy buildings

7.1 Residential buildings
7.1.1 Relevant regulations
7.1.2 Relevant economic incentives and financing instruments
7.1.3 Energy performance certificates' use and layout in relation to nZEB standard
7.1.4 Supervision (energy advice and audits)
7.1.5 Information (tools)
7.1.6 Demonstration
7.1.7 Education and training
7.2 Non-residential buildings
7.2.1 Relevant regulations
7.2.2 Relevant economic incentives and financing instruments
7.2.3 Energy performance certificates' use and layout in relation to nZEB standard
7.2.4 Supervision (energy advice and audits)
7.2.5 Information (tools)
7.2.6 Demonstration
7.2.7 Education and training
7.3 From your point of view, how would you evaluate the current measures that are in force? Please also try to describe the existing gap between what is in force and what should be in force in order to stimulate the transformation of buildings that are refurbished into nZEB. Are there precise measures planned for the future?

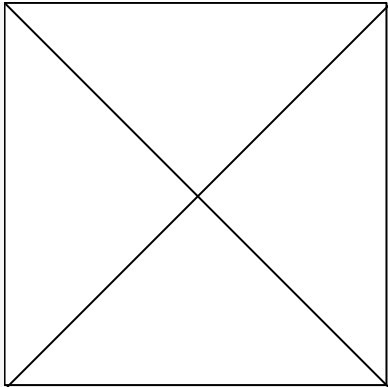
In September 2012, the MDVRR SR, together with the Slovak Innovation and Energy Agency (SIEA), began preparing an information campaign, mainly addressed towards end users that also attempted to reach relevant stakeholders. The information campaign is at an initial stage; it focuses on the explanation of the measures proposed for major renovations in the housing stock, as well as on the content and importance of EPCs. Over the last two years, numerous different events, conferences, seminars, workshops and fairs have been organised. During these promotional activities, the ministry, SIEA and TSUS had a strong presence and stressed the importance of implementing the measures focused on saving energy. Information for owners and users of apartment buildings and family houses is available on www.byvajusporne.sk.

8 Additional Information

Please fill in any additional information on actions taken to increase the number of nearly zero-energy buildings in your country.

9 Possible improvements

Where do you see most room for improvement in order to increase the number of nearly zero-energy buildings in your country? Please also try to give examples for appropriate measures.



Annex- Definition of nZEB

1. General Information		
Country	Slovakia	
Name of regulation ,directive, certification scheme	Act No. 555/2005 Coll. As amended by the act No. 300/2012 Coll.	
Editor of regulation, directive, certification scheme	Ministry of Transport, Construction and Regional development of SR	
Year of introduction of current version	Click and choose. 2013	
benchmark of current version (Select one)	<input type="radio"/> Energy Autonomous building <input type="radio"/> Efficient buildings <input type="radio"/> Net zero energy buildings <input type="radio"/> Plus energy buildings <input type="radio"/> Nearly zero energy buildings <input type="radio"/> Zero energy buildigns <input checked="" type="radio"/> Other	
Integration and consideration in national directive	Please add explanation/ comment/ source considered	
2. Field of Application		
2.1 Building category Select one and describe right is this typology included in the directive? Are special requirements or exceptions defined for this typology? If more than one definition exists, you can duplicate this appendix for each of them.		
<i>Member States shall ensure that all new buildings are nearly zero- energy buildings by 31 December 2020 respectively after 31 December 2018 (occupied and owned by public authorities). For the purpose of the calculation buildings should be adequately classified into the [...] categories. References: EPBD article 9.1a/b, EPBD Annex I.</i>		
Category <input type="radio"/> Residential <input type="radio"/> Non-residential <input checked="" type="radio"/> Residential and Non-residential	Please add explanation/ comment/ source	
single family houses	possible	Please add explanation/ comment/ source
apartment blocks	possible	Please add explanation/ comment/ source
Offices	possible	Please add explanation/ comment/ source
educational buildings	possible	Please add explanation/ comment/ source
hospitals	possible	Please add explanation/ comment/ source
hotels and restaurants	possible	Please add explanation/ comment/ source
sports facilities	possible	Please add explanation/ comment/ source
wholesale and retail trade service buildings	possible	Please add explanation/ comment/ source
other types of energy-consuming buildings	possible	Please add explanation/ comment/ source
2.2 New/retrofit buildings		
Select one and describe right. If more than one definition exists, you can duplicate this appendix for each of them.		
<i>New, and existing buildings that are subject to major renovation, should meet minimum energy performance requirements adapted to the local climate.</i>		
<i>Member States shall furthermore [...] stimulate the transformation of buildings that are refurbished into nearly zero-energy buildings. Reference: EPBD preamble recital 15, EPBD article 9.2.</i>		

<input type="radio"/> New buildings <input type="radio"/> Retrofit <input checked="" type="radio"/> New and retrofit	Please add explanation/ comment/ source
2.3 Private/public buildings Select one and describe right. If more than one definition exists, you can duplicate this appendix for each of them. <i>Member States shall ensure that by 31 December 2020, all new buildings are nearly zero- energy buildings and after 31 December 2018, new buildings occupied and owned by public authorities are nearly zero-energy buildings. Reference: EPBD article 9.1a/b</i>	
<input type="radio"/> Private <input type="radio"/> Public <input checked="" type="radio"/> Public and private	Please add explanation/ comment/ source
3. Energy Balance and calculation	
3.1 Balance Type Describe how renewable energy is calculated / included in the energy balance (e.g. renewable heat from solar thermal collectors reduces energy use for heat and DHW; renewable electricity reduces/compensates delivered electricity). <i>[...] The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources</i> <i>Energy performance of a building means the calculated or measured amount of energy needed to meet the energy demand [...]. Reference: EPBD article 2.2, EPBD article 2.4</i>	
<input type="radio"/> energy demand vs energy generation <input type="radio"/> energy import vs energy export <input checked="" type="radio"/> virtual balance between demand and generation <input type="radio"/> not specified <input type="radio"/> other	Please add explanation/ comment/ source
3.2 Physical boundary Select the widest possible boundary and describe right if/which further subdivisions are possible <i>This directive lays down requirements as regards the common general framework for [...] buildings and building units. [...] building' means a roofed construction having walls, for which energy is used to condition the indoor climate. Reference: EPBD article 1.2, EPBD article 2.1</i>	
<input checked="" type="radio"/> single building <input type="radio"/> building unit <input type="radio"/> building unit <input type="radio"/> building site <input type="radio"/> cluster of buildings <input type="radio"/> quarter or city <input type="radio"/> other	Please add explanation/ comment/ source
3.3 System boundary demand / energy uses included Define if this load sector is included in the energy balance calculation (other requirements like maximum consumption values can be described below under item 5, further requirements). <i>[...] energy performance of a building means the calculated or measured amount of energy needed to meet the energy demand associated with a typical use of the building, which includes, inter alia, energy used for heating, cooling, ventilation, hot water and lighting. Reference: EPBD article 2.4</i>	

space heating, domestic hot water	considered	Please add explanation/ comment/ source		
ventilation, cooling, air conditioning	considered	Not at category of family houses and apartment buildings		
auxiliary energy	considered	Please add explanation/ comment/ source		
lighting	considered	Not at category of family houses and apartment buildings		
plug loads, appliances, IT	not considered	Please add explanation/ comment/ source		
central services	not considered	Please add explanation/ comment/ source		
electric vehicles	not considered	Please add explanation/ comment/ source		
embodied energy	not defined	Please add explanation/ comment/ source		
3.4 System boundary generation / renewable energy sources included Select and explain right (e.g. only in building's physical footprint, on-site, on-site incl. import of off-site renewables like pellets, wood chips, rape oil etc.). How is CHP (based on non-renewable energy carriers like natural gas or oil) included? <i>[...] The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby. [...] energy from renewable sources means energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases. [...] minimum levels of energy from renewable sources [...] to be fulfilled, inter alia, through district heating and cooling [...]. Reference: EPBD article 2.2, EPBD article 2.6, EPBD article 13.4</i>				
generation on-site	considered	Please add explanation/ comment/ source		
generation near by	considered	Please add explanation/ comment/ source		
generation external	not considered	Please add explanation/ comment/ source		
crediting	not considered	Please add explanation/ comment/ source		
3.5 Balance period / calculation step What is the defined period of time over which the balance is calculated? Is the calculation period divided into calculation steps (e.g. one hour, one month or one heating and/or cooling season)? <i>[...] The methodology for calculating energy performance should be based not only on the season in which heating is required, but should cover the annual energy performance of a building [...]. Reference: EPBD preamble recital 9 [...] requirements should be set with a view to [...] the cost-optimal balance between the investments involved and the energy costs saved throughout the lifecycle of the building [...]. Reference: EPBD preamble recital 10.</i>				
<input type="radio"/> Life cycle balance <input checked="" type="radio"/> Yearly <input type="radio"/> Seasonal <input type="radio"/> Other	Please add explanation/ comment/ source			
3.6 Monthly accounting limitation Is a monthly accounting limit defined? Is it based on end energy (e.g. monthly electricity generation compensates monthly electricity loads) or on primary energy (any monthly generation compensates any loads)? Are surpluses transferred to an annual balance?				
<input type="radio"/> monthly source based end energy crediting <input type="radio"/> monthly primary energy crediting <input type="radio"/> nothing defined <input type="radio"/> other	Please add explanation/ comment/ source			
4. Accounting system				
4.1 Normalization				
<i>[...] including a numerical indicator of primary energy use expressed in kWh/m² per year. Reference: EPBD article 9.3a</i>				
<input type="radio"/> person <input checked="" type="radio"/> gross floor area	Total floor area calculated from external dimensions			

<ul style="list-style-type: none"> <input type="radio"/> net floor area <input type="radio"/> gross volume <input type="radio"/> net volume <input type="radio"/> usable floor area <input type="radio"/> treated floor area <input type="radio"/> conditioned area <input type="radio"/> other 	
<p>4.2 Primary metric</p> <p>Indicate which metric is used for the energy performance calculation / energy balance and give input on (the source of) the conversion factors on the right. Possible sources are e.g. EN 15603 or national and regional codes.</p>	
<p><i>The energy performance of a building shall be expressed in a transparent manner and shall include an energy performance indicator and a numeric indicator of primary energy use, based on primary energy factors per energy carrier, which may be based on national or regional annual weighted averages or a specific value for on- site production. Reference: EPBD Annex 1.</i></p> <p><i>[...] including a numerical indicator of primary energy use expressed in kWh/m² per year. Reference: EPBD 9.3a</i></p> <p><i>[...] primary energy' means energy from renewable and non- renewable sources which has not undergone any conversion or transformation process. Reference : EPBD article 2.5</i></p>	
<ul style="list-style-type: none"> <input type="radio"/> energy need <input type="radio"/> energy use <input type="radio"/> delivered/site energy <input checked="" type="radio"/> primary / source energy (renewable part included) <input type="radio"/> primary / source energy (renewable part not included) <input type="radio"/> (equivalent) carbon emissions <input type="radio"/> exergy <input type="radio"/> energy costs <input type="radio"/> environmental credits <input type="radio"/> points (labeling system) <input type="radio"/> other 	<p>Calculated are heat need for heating, energy use for technical systems (heating, cooling, HW, ventilation and air-conditioning, lighting), energy use for building/delivered energy and primary energy.</p> <p>Note: Primary energy includes both non-renewable and renewable energy (Act No.555/2005 Col. on energy performance of buildings as amended).</p>
<p>4.3 Secondary metric</p>	
<ul style="list-style-type: none"> <input type="radio"/> energy use <input type="radio"/> energy need <input type="radio"/> delivered/site energy <input type="radio"/> primary / source energy (renewable part included) <input type="radio"/> primary / source energy (renewable part not included) 	<p>Please add explanation/ comment/ source</p>

<input type="radio"/> (equivalent) carbon emissions <input type="radio"/> exergy <input type="radio"/> energy costs <input type="radio"/> environmental credits <input type="radio"/> points (labeling system) <input type="radio"/> other	
4.4 Symmetric or asymmetric weighting	
<input type="radio"/> symmetrical weighting <input type="radio"/> asymmetrical weighting	Please add explanation/ comment/ source
4.5 Time dependent weighting Static: no time dependent weighting (annual constant weighting/factors) Quasi-static: seasonal/monthly average weighting factors Dynamic: weighting factors based on shorter time periods /hourly basis (according to energy offer and demand in the grid)	
<i>Primary energy factors [...] may be based on national or regional yearly average values and may take into account [...] European standards. Reference: EPBD 9.3a</i>	
<input checked="" type="radio"/> static conversion factors <input type="radio"/> quasi static conversion factors <input type="radio"/> dynamic conversion factors	Please add explanation/ comment/ source
5. Further requirements	
5.1 Fraction of renewables Select and describe right if guidelines are given for any fraction of renewable energy and indicate how/at which level a certain fraction is calculated (e.g. solar thermal heat might be a fraction of energy use, electricity from PV a fraction of delivered energy.)	
<i>Member States shall introduce [...] appropriate measures [...] to increase the share of all kinds of energy from renewable sources in the building sector [...]. By 31 December 2014, Member States shall [...] require the use of minimum levels of energy from renewable sources in new buildings and in existing buildings [...] Reference: RED article 13.4</i> <i>[...] The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources [...]Reference : EPBD article 2.2</i>	
<input checked="" type="radio"/> defined <input type="radio"/> not defined <input type="radio"/> defined in other regulation	Please add explanation/ comment/ source
5.2 Temporal performance Describe if any requirements are given for a temporal match between on-site energy load and on-site energy generation (load match) and which calculation procedures are applied.	
<u>Load match</u> <input checked="" type="radio"/> defined <input type="radio"/> not defined	Please add explanation/ comment/ source
<u>Grid interaction</u>	

<input checked="" type="radio"/> defined <input type="radio"/> not defined	Please add explanation/ comment/ source
5.3 Energy performance or rating requirements Are limitations given for a standard energy rating, an energy indicator or maximum demands for heating, cooling, embodied energy, demand of appliances, etc.? If yes, type the values and give explanations on the right <i>nearly zero-energy building means a building that has a very high energy performance [...]. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources [...]. The energy performance [...] shall [...] include an energy performance indicator and a numeric indicator of primary energy use [...]. Reference : EPBD article 2.2, EPBD Annex 1.</i>	
Performance or rating <input checked="" type="radio"/> defined <input type="radio"/> not defined <input type="radio"/> defined in other regulation	Standard rating is used
Energy Performance indicator Is an energy performance indicator defined? If yes, type the values and the according unit.	Defined, kWh/(m ² *a)
Numeric indicator of primary energy use Is a numeric indicator of primary energy use defined? If yes, type the values and the according unit.	Defined, kWh/(m ² *a)
5.4 General framework / prescriptive requirements Describe which guidelines are given for: Thermal characteristics (insulation, thermal bridges, thermal capacity, passive heating, internal loads, solar protection) Efficiency of installations (hot water supply, air-conditioning, lighting fan power) <i>The methodology shall [...] take into consideration: thermal characteristics (thermal capacity, insulation, passive heating, cooling elements, and thermal bridges), heating installation and hot water supply, air-conditioning installations, natural and mechanical ventilation, built-in lighting, the design, positioning and orientation of the building, outdoor climate, passive solar systems and solar protection, [...], internal loads. Reference: EPBD Annex 1</i>	
<input checked="" type="radio"/> defined <input type="radio"/> not defined <input type="radio"/> defined in other regulation	U-values are given after Slovak standard STN 730540-2:2012
5.5 Definition of comfort level & IAQ requirements (for winter and summer season, beside other national directives) Describe which guidelines are given for indoor climatic conditions, minimum or maximum indoor temperature, minimum lighting levels/ daylight availability, minimum ventilation rates/ natural ventilation, indoor air quality, max. CO ₂ levels, etc. <i>This Directive [...] takes into account [...] indoor climate requirements [...] Reference: EPBD article 1.1</i> <i>The methodology shall [...] take into consideration: [...] indoor climatic conditions [...] Reference: EPBD Annex 1</i> <i>That includes [...] indoor air-quality, adequate natural light [...]. Reference: EPBD preamble recital 9</i>	

<input checked="" type="radio"/> defined <input type="radio"/> not defined <input type="radio"/> defined in other regulation	<p>Indoor climate conditions after STN 730540-3:2012</p>
<p>5.6 Monitoring procedure Describe if and how a monitoring mandatory is formulated; calculated or measured values are used; an evaluation of the indoor environmental quality is considered; which calculation step is used.</p>	
<p><i>[...] energy performance of a building means the calculated or measured amount of energy needed [...] Reference: EPBD article 2.4</i> <i>Member States shall encourage the introduction of intelligent metering systems [...] and the installation of automation, control and monitoring systems [...]. Reference: EPBD article 8.2</i></p>	
<input checked="" type="radio"/> defined <input type="radio"/> not defined	<p>Monthly method is used, default and calculated values are used, for standard rating calculated energy use is taken in the view, for operational rating the measured amount of energy consumption for heating is taken for further calculation</p>

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