

Reporting template of the European Union on the Member States application of national definitions of Nearly Zero Energy Buildings

Items and assessment categories which are mandatory due to the EPBD or RED are explained or referenced by an example in the column "EPBD / RED requirement". The source is given in the column to its left. Additional typical definition categories that are not mandatory EPBD requirements are included to give the possibility to explain what is defined beside and beyond the EPBD and RED. These categories are differentiated by colour (dark grey letters). For each aspect a number of possible choices is given in a combo box. Explanatory texts and figures are shown by a click in the according cells. Comments and explanations should be entered in the cells on the right.

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			2013	
Energy benchmark of current version			other	
Integration and consideration in national directive			considered	
2. Field of application	EPBD / RED requirement	EPBD / RED reference	Content in Member States national definition	Explanation, comment, source
2.1 building category <ul style="list-style-type: none"> ▪ single-family houses ▪ apartment blocks ▪ offices ▪ educational buildings ▪ hospitals ▪ hotels and restaurants ▪ sports facilities ▪ wholesale and retail trade service buildings ▪ other types of energy-consuming buildings 	<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.</i>	EPBD article 9.1a/b EPBD annex I	possible possible possible possible possible possible possible possible	
2.2 new/retrofit buildings	<i>New, and existing buildings that are subject to major renovation, should meet minimum energy performance requirements adapted to the local climate. Member States shall furthermore [...] stimulate the transformation of buildings that are refurbished into nearly zero-energy buildings.</i>	EPBD preamble recital 15 EPBD article 9.2	new and retrofit	The definition of the major renovation from EPBD recast is implemented into the law

2.3 private/public buildings	<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.</i>	EPBD article 9.1a/b	private/public	
2.4 In case that a additional or separate definiton(s) exists (e.g. for different building types), please add a new sheet by using the button on the right (to use this option Excel macros need to be activated).			click to add new sheet	
3. Energy Balance / Calculation				
3.1 balance type	<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 Energy performance of a building means the calculated or measured amount of energy needed to meet the energy demand [...]</i>	EPBD article 2.2 EPBD article 2.4	virtual balance between demand and generation	
3.2 physical boundary	<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.</i>	EPBD article 1.2a EPBD article 2.1	single building	
3.3 system boundary demand / energy uses included				
▪ space heating, domestic hot water	<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.</i>	EPBD article 2.4	considered	
▪ ventilation, cooling, air conditioning			considered	not at category of family houses and apartment buildings
▪ auxiliary energy			considered	
▪ lighting			considered	not at category of family houses and apartment buildings
▪ plud loads, appliances, IT			not considered	
▪ central services			not considered	
▪ electric vehicles			not considered	
▪ embodied energy			not considered	

3.4 system boundary generation / renewable energy sources included				
▪ generation on-site	<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.</i>	EPBD article 2.2	considered	
	<i>[...] 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.</i>	EPBD article 2.6		
▪ generation near by	<i>[...] minimum levels of energy from renewable</i>		considered	
▪ generation external	<i>sources [...] to be fulfilled, inter alia, through district</i>	EPBD article 13.4	not considered	
▪ crediting	<i>heating and cooling [...].</i>		not considered	
3.5 balance period / calculation step	<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 [...]</i>	EPBD preamble recital 9	yearly	
	<i>[...] 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 [...]</i>	EPBD preamble recital 10		
3.6 monthly accounting limitation			select and describe right	
4. Accounting System				
4.1 normalization	<i>[...] including a numerical indicator of primary energy use expressed in kWh/m² per year</i>	EPBD article 9.3a	gross floor area	total floor area calculated from external dimensions

4.2 primary metric	<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.</i></p> <p><i>[...] including a numerical indicator of primary energy use expressed in kWh/m 2 per year.</i></p> <p><i>[...] primary energy' means energy from renewable and non- renewable sources which has not undergone any conversion or transformation process</i></p>	<p>EPBD Annex 1</p> <p>EPBD 9.3a</p> <p>EPBD article 2.5</p>	primary / source energy (renewable part not included)	<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 ammended).</p>
4.3 secondary metric			select and describe right	
4.4 symmetric or asymmetric weighting			select and describe right	
4.5 time dependent weighting	<p><i>Primary energy factors [...] may be based on national or regional yearly average values and may take into account [...] European standards</i></p>	EPBD 9.3a	static conversion factors	
5. Further requirements				
5.1 fraction of renewables	<p><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 [...]</i></p> <p><i>[...] The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources [...]</i></p>	<p>RED article 13.4</p> <p>EPBD article 2.2</p>	defined	
5.2 temporal performance				

▪ load match			select and describe right	
▪ grid interaction			select and describe right	
5.3 energy performance or rating requirements	<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 [...]</i>	EPBD article 2.2	defined	standard rating is used
▪ energy performance indicator	<i>The energy performance [...] shall [...] include an energy performance indicator and a numeric indicator of primary energy use [...]</i>	EPBD Annex 1	defined	kWh/(m2.a)
▪ numeric indicator of primary energy use			defined	kWh/(m2.a)
5.4 general framework / prescriptive requirements	<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</i>	EPBD Annex 1	defined	U-values are given after Slovak standard STN 73 0540-2: 2012
5.5 definition of comfort level & IAQ requirements (for winter and summer season, beside other national directives)	<i>This Directive [...] takes into account [...] indoor climate requirements [...]</i> <i>The methodology shall [...] take into consideration: [...] indoor climatic conditions [...]</i> <i>That includes [...] indoor air-quality, adequate natural light [...].</i>	EPBD article 1.1 EPBD Annex 1 EPBD preamble recital 9	defined	Indoor climate conditions after STN 73 0540-3: 2012

5.6 monitoring procedure	<p><i>[...] energy performance of a building means the calculated or measured amount of energy needed [...]</i></p> <p><i>Member States shall encourage the introduction of intelligent metering systems [...] and the installation of automation, control and monitoring systems [...]</i></p>	<p>EPBD article 2.4</p> <p>EPBD article 8.2</p>	<p>defined</p>	<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 calculations.</p>