

Overview of building renovation development towards Nearly Zero Energy Buildings in Slovakia

Jan Magyar

Slovak Innovation and Energy Agency

International conference
Energy efficiency policies toward 2030
– opportunities and challenges for Central Europe
Prague, 26.11.2018

- **Definition of NZEB and legal documents**
- **Technical requirements and standards**
- **Conceptual documents**
- **Support programmes & SIEA**

Definition of NZEB and legal documents

Act No. 555/2005 on Energy Performance of Buildings as amended - §2 (8):

A building with nearly zero energy need means a building with **very high energy performance**.

Nearly zero or very small amounts of energy needed for use of such building must be ensured by effective thermal protection and at high level by **energy supplied from renewable sources** located in or near the building.

Definition of NZEB and legal documents

Act No. 555/2005 on Energy Performance of Buildings as amended - §4 (1); §4b (1):

The new building **must meet the minimum energy performance requirements as defined by the technical standards.**

If it is technically, functionally and economically feasible, the minimum requirements for the energy performance of **new buildings** must be also met by the **existing building after its major renovation.**

Buildings with nearly zero energy need must be

- (a) **after 31 December 2018** all new buildings in which they are located and owned by public authorities; and
- (b) **from 31 December 2020** all new buildings.

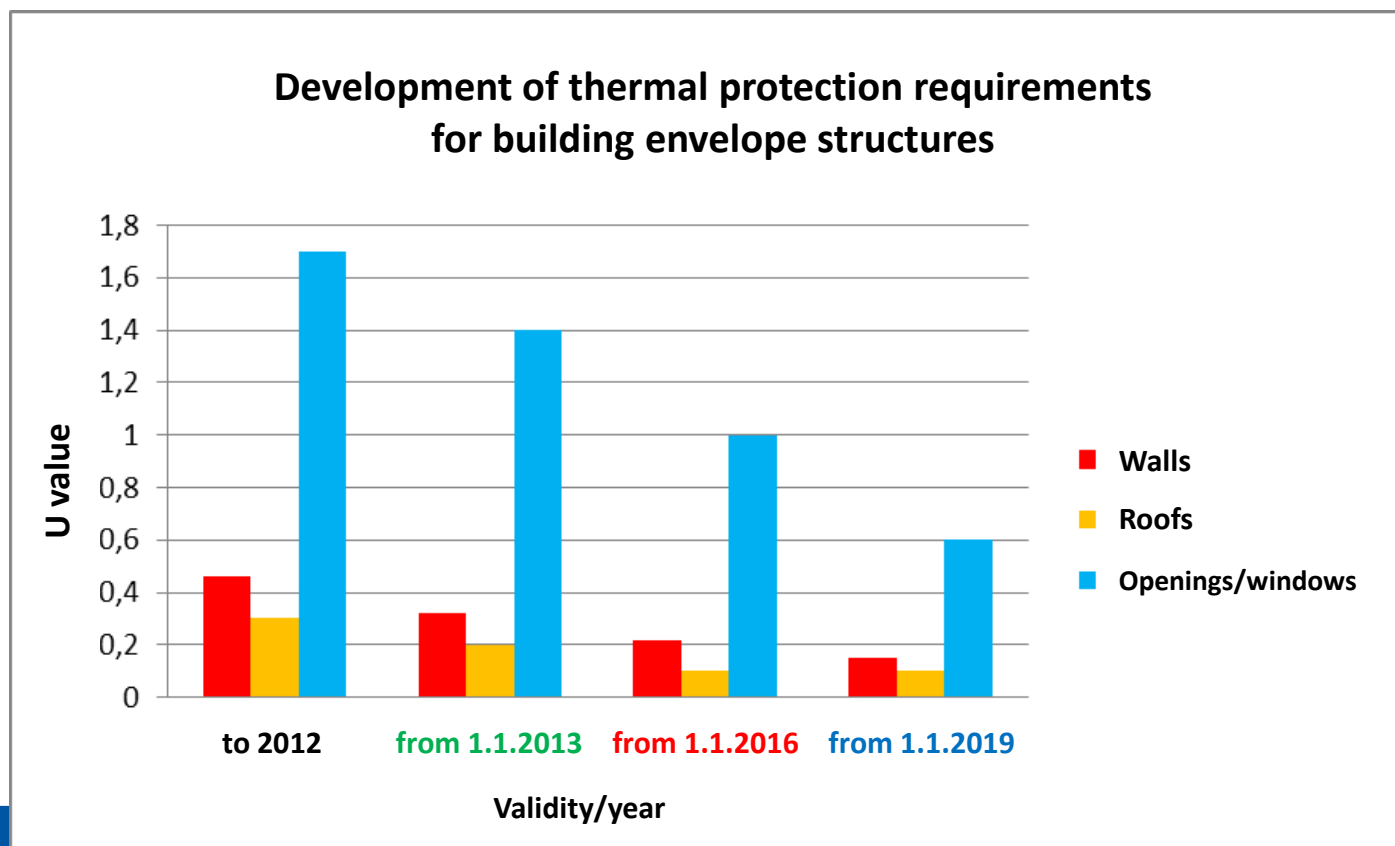
Definition of NZEB and legal documents

Decree No. 324/2017, Annex 3 - Scale of energy classes – primary energy (am. 364/2012):

Building categories	Triedy energetickej hospodárnosti budovy								
	A0	A1	B	C	D	E	F	G	
Global indicator – primary energy in kWh/(m ² .a):	single family houses	≤ 54	55–108	109–216	217–324	325–432	433–540	541–648	> 648
	multi family houses	≤ 32	33–63	64–126	127–189	190–252	253–315	316–378	> 378
	office buildings	≤ 61	62–122	123–255	256–383	384–511	512–639	640–766	> 766
	school buildings	≤ 34	35–68	69–136	137–204	205–272	273–340	341–408	> 408
	hospitals	≤ 98	99–197	198–393	394–590	591–786	787–982	983–1179	> 1179
	hotels and restaurants	≤ 82	83–164	165–328	329–492	493–656	657–820	821–984	> 984
	sport facilities	≤ 46	47–92	93–181	182–272	273–362	363–453	454–543	> 543
	retail & merchant buildings	≤ 107	108–213	214–425	426–638	639–850	851–1062	851–1275	> 1275

NZEB from from
from 01.01.2019 01.01.2016 01.01.2013

Technical standard STN 73 0540-2: 2012



Conceptual documents

- **National plan to increase the number of nearly zero energy need buildings (2012)**
<https://www.mindop.sk/ministerstvo-1/vystavba-5/stavebnictvo/dokumenty-a-materialy/narodny-plan-zamerany-na-zvysovanie-poctu-budov-s-takmer-nulovou-potrebou-energie-pdf-0-9mb>
- **Update of the Strategy for the Renovation of the Residential and Non-Residential Buildings Stock in the Slovak Republic (2017)**
<http://www.rokovania.sk/Rokovanie.aspx/BodRokovaniaDetail?idMaterial=26495>
- **Long-term renovation strategy according to 2nd recast of EPBD (2018/844/EU)**
(in preparation – 2019/2020)
- **Action Plan on Energy Efficiency for the years 2017-2019 with a view to 2020 (2017)**
<http://www.rokovania.sk/Rokovanie.aspx/BodRokovaniaDetail?idMaterial=26443>
- **National energy and climate plan according to Governance of the Energy Union Regulation**
(in preparation – 2018/2019)

Support programmes & SIEA

SIEA - Energetics, energy efficiency (EE) and renewable energy sources (RES)

- We produce **ENERGY AUDITS, STRATEGIES AND STUDIES**.
- We have extensive experience with **EDUCATION** domestic and foreign experts in the field of energy efficiency and RES.
- **MONITORING** and analyzing energy efficiency and the sustainable use of RES.
- We evaluate and **PROMOTE PROJECTS** aimed at saving energy, sustainable use of renewable and alternative energy sources and combined production of electricity and heat.
- Preparing documents for the amendment of the **ENERGY LEGISLATION**.
- We provide free **ENERGY CONSULTANCY/ADVICE** for households, businesses and the public sector.
- We participate in **INTERNATIONAL PROJECTS** in the field of energy efficiency and the sustainable use of RES and represent Slovakia in international institutions.

Support programmes & SIEA

SIEA - Innovations

- Prepare and implement **SUPPORTING MECHANISMS**.
- **ANALYZING** the innovative potential of industries.
- We provide **ADVICE** to implement research results into practice.

SIEA – Support from EU Structural Funds

The SIEA provides for the **IMPLEMENTATION OF CALLS AND NATIONAL PROJECTS** in two operational programs managed by the Ministry of the Environment of the Slovak Republic and the Ministry of Education of the Slovak Republic.

Areas of support

OP Quality of the environment

- **Renovation of public buildings**, increasing energy efficiency in businesses, utilization of RES, energy audits and implementation of resulting measures, reconstruction of central heating supply networks

OP Research and innovation

- Buying innovative technologies, introducing innovative products and processes

Support for renovation of public buildings (EU Structural Funds) administered by SIEA

OP Quality of environment

Specific target 4.3.1: **Reduction of energy consumption in the operation of public buildings**
Condition: energy saving measures in the building **must be proposed beyond the minimum energy performance requirements** for buildings under generally binding legislation - **NZEB**

status: 1.11.2018	Call No. 6 (12/2015 – 10/2016)	Call No. 19 (02/2017 – 02/2018)	Call in preparation (11/2018)
Allocation amount total	160 mil. EUR	214 mil. EUR	50 mil. EUR
- for municipalities/HTU	115 mil. EUR	154 mil. EUR	-
- for central government/public institutions	45 mil. EUR	60 mil. EUR	50 mil. EUR
Projects submitted	473	619	
Non Repayable Financial Contribution (NFC)	199,5 mil EUR	320 mil. EUR	
Projects approved	296	455	
NFC	129 mil. EUR	233,8 mil. EUR	
Projects finalized	87	-	
NFC	28,6 mil. EUR	-	

Source:
SIEA - status: 1.11.2018

Call No. 39 Low carbon strategies for municipalities, cities, regions – energy concepts **incl. NZEB** (total allocation 7 mil. EUR) (www.op-kzp.sk, www.siea.sk/aktualne-vyzvy)

Other SIEA activities related to NZEB

Increase of awareness and education

- „Live by Energy“ – information campaigns (targeted roundtables, conferences, TV broadcasting, publications, SIEA website)
- „Live by Energy“ Consultancy/Advice centres in 4 (6) regional cities, i.a. for households and public sector
- energy analysis for municipalities
- international H2020 projects: Build Up Skills StavEdu, CraftEdu (craftsmen)



Demonstration and pilot projects – international INTERREG projects:

- INCI NZEB & EMMA (support for legislative framework, action plan, support documents for public institutions, stakeholder workshops, renovation concept of school to NZEB standard ...)



other activities in Slovakia:

- State Housing Development Fund, MUNSEFF III, H2020 educational project IngREES ...

THANK YOU FOR YOUR ATTENTION!

Jan Magyar

Slovak Innovation and Energy Agency
Dept. of International Cooperation
Bajkalská 27, 827 99 Bratislava, Slovak Republic
jan.magyar@siea.gov.sk