ČESKÁ RADA PRO ŠETRNÉ BUDOVY
CZECH GREEN BUILDING COUNCIL

WEBINAR: Latest developments regarding EPBD 4

10. 3. 2025

PROGRAM

- Legislative Adaptation of EPBD4 in the Czech Republic
- Impact on New Buildings
- Impact on Existing Buildings
- Q & A

Latest developments in EPBD IV. in Czechia

Marta Gellová

Alliance -The Chance for Buildings

- founded in 2010 as an alliance of major industry associations supporting energy-efficient construction.
- 3 associations: **CZGBC**, **AVMI**, and **ADMD**.
- It represents more than 250 companies in the construction sector—designers and architects, developers, construction companies, manufacturers and suppliers of materials and technologies, consulting and certification companies, and financial institutions.

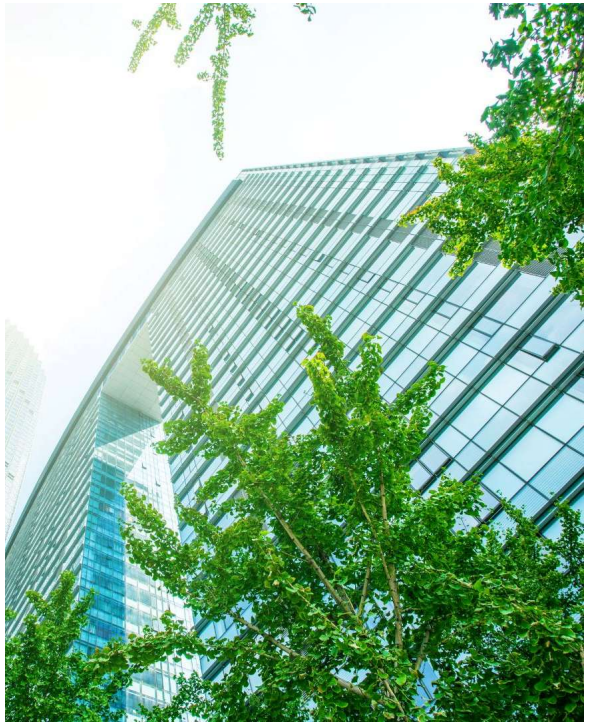
The main goals are:

•To advocate for legislative changes that have a positive impact on people's lives in buildings.

•To connect government, business, and the non-governmental sector.

•To provide strategic consulting.

Strategic focus and activities



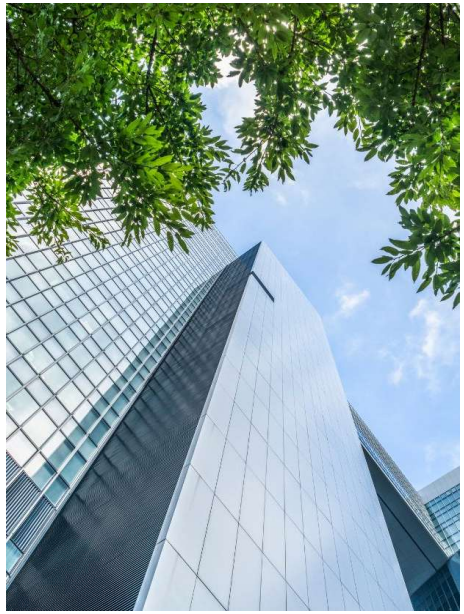
Strategic focus:

- Implementation of EED and EPBD IV.
- New Green Savings (Nová zelená úsporám) + Renovation Rate
- Public Procurement + Circular Economy + Raw Materials Policy
- Taxonomy
- Awareness / PR / Expansion / Elections 2025

Main activities:

- Consultations with Working Groups of Members
- Active participation in Expert groups of several ministries
- Access to Market Case Studies
- Communication and Media Analysis
- Member of International Selection Group for EPBD Transposition
- Involvement in International Professional Associations.
- Participation in International Projects.
- Connections to Politicians, Parliament, and Senate

Energy Performance of Buildings Directive IV.



CH4B Position Paper

- **Joint transposition of the EED (Energy Efficiency Directive)** starting from October 2023 and **EPBD IV (Energy Performance of Buildings Directive)** in May 2024,

- **Proposal for a standard for new buildings (ZEB)**
- **Proposal for a standard for building renovations (ZEBra)**
- **Proposal for a building renovation plan**
- **Proposal for the Building Energy Performance Database (DEN)**

EPBD4: Purpose of this document:

- Provide an overview of the CH4B's view on the implementation of EPBD4.
- Support sustainable construction practices (already in place) .

- **Recommendations:** Addressed to the government and legislative bodies.
- **Conferences and seminars** in the Parliament to support the advocacy and raise the awareness.

Thank you

ŠANCE
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EPBD – change of philosophy

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MINISTRY OF
INDUSTRY AND TRADE

Outline

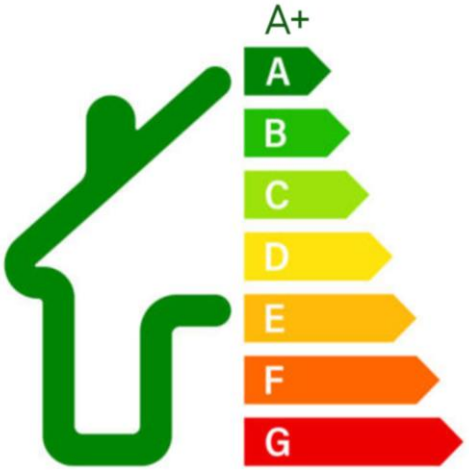
- Introduction
- Philosophy
- Getting closer to the public
- Data
- Closing remarks

Introduction

- Legislative package
  - Achieving the EU's climate target of reducing emissions by at least 55% by 2030
- EU climate neutrality by 2050
  - Buildings as large emitters of CO2
- Directive entered into force 28 May 2024 (+2 years of implementation)

Philosophy

- “Unification”
  - Not really
- Zero emission policy
  - From the building to the materials and beyond
  - New focus on emission
    - New standard – ZEB
      - Stress on heating source
    - Global warming potential



Getting closer to the public

Energy performance certificate

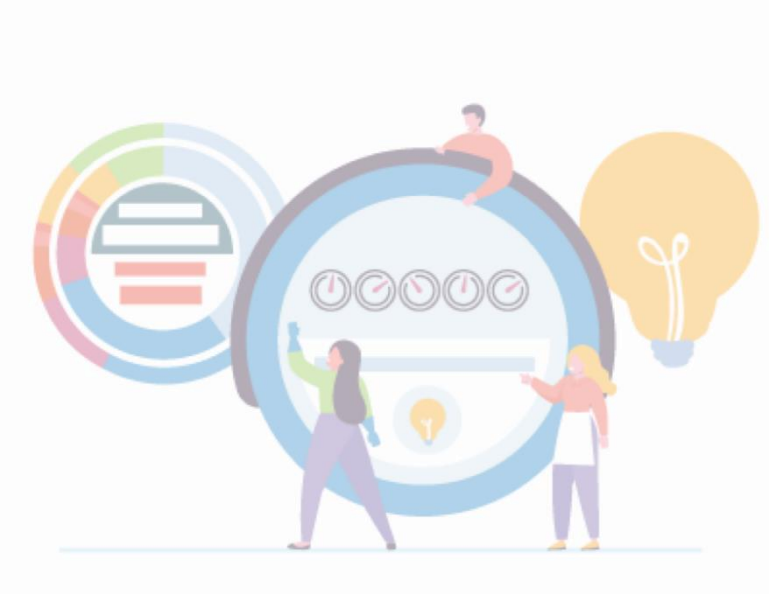
- Largely technical
- Used for comparisons
- Getting more complicated

Renovation passport

- Less technical and easy to understand
- Step by step deep renovation
- Clear aim to provide information to the owners to renovate more easily

Digitalisation

- Stress on data access for all
  - Owners of buildings
  - Managers, Banks
  - General public
- Development of new database
  - Digital building logbook
  - Usage of data



Closing remarks

- EPBD gives tools to involve the public more, important to use them as they were intended
- The timeline is split into several crucial dates, not all starts next year
- We should involve the energy aspect into buildings more
- Emissions matter

Thank you

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ENERGY PERFORMANCE OF BUILDINGS
EPBD 4 DIRECTIVE

JIŘÍ CIHLÁŘ

RICS – CZGBC WEBINAR

10. 3. 2025

CARBON ZERO STRATEGY

ENERGY EFFICIENCY FIRST

↓↓↓↓ **REDUCE ENERGY CONSUMPTION**

CLEAN ENERGY SOURCES

↑↑↑↑ **INCREASE ZERO CARBON ENERGY CARRIERS**

2050

NEUTRALITY CARBON/EMISSION ZERO

EPBD4 STRATEGY

	NEW CONSTRUCTION	RENOVATION	BUILDING STOCK
CURRENT STATE	**NZEB** good envelope low share of renewables	**very moderate** requirements for building parts	**no** requirements
EPBD 4	**2030 (2028)** **ZEB** zero-emission building	**NATIONAL BUILDING RENOVATION PLAN** worst performing building first MEPS – minimum standards **2050** **ZEBra**	

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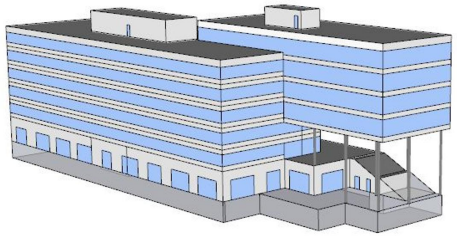
WHAT IS ZERO EMISSION BUILDING?

NEW CONSTRUCTION

ZERO EMISSION BUILDING

3 MANDATORY MAIN FEATURES



1) LOW ENERGY CONSUMPTION

- GOOD ENVELOPE, HEAT RECOVERY, GOOD PASSIVE DESIGN

2) NO FOSSIL FUELS ON SITE

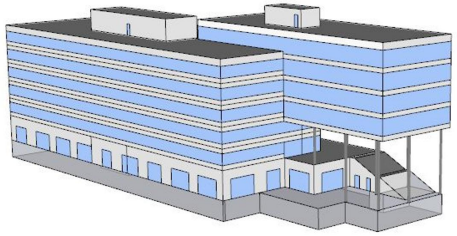
- NATURAL GAS ONLY IN NEARBY / DISTANT PERIMETER (BOILERS, CHP UNITS)

3) ZEB COMPLIANT SOURCES

- ENERGY CONSUMPTION FULLY COVERED ON ANNUAL BASIS
- NON-COMPLIANCE COMPENSATED BY EXPORT OF RENEWABLE ELECTRICITY

ZEB COMPLIANT SOURCES

1) RENEWABLE SOURES – LOCATION BASED



- ON-SITE, NEARBY PERIMETER
- AMBIENT (WATER, AIR, WIND), GEOTHERMAL, SOLAR
- BIOMASS

2) CARBON-FREE SOURCES – MARKET BASED

- DIRECT TRADE/SHARE – PPA, ENERGY COMMUNITY, GUARANTEE OF ORIGIN
- AMBIENT (WATER, AIR, WIND), GEOTHERMAL, SOLAR + NUCLEAR (!!)

3) EFFICIENT DISTRICT HEAT

- DEFINITION IN ENERGY EFFICIENCY DIRECTIVE – MILESTONES TOWARD 2025
- ZEB COMPLIANT ≠ CARBON FREE, ZERO EMMISSIONS
- TYPICALLY - COAL >> NATURAL GAS + STEAM TURBINE (NUCLEAR WASTE HEAT)

MAIN INDICATOR – TOTAL PRIMARY ENERGY

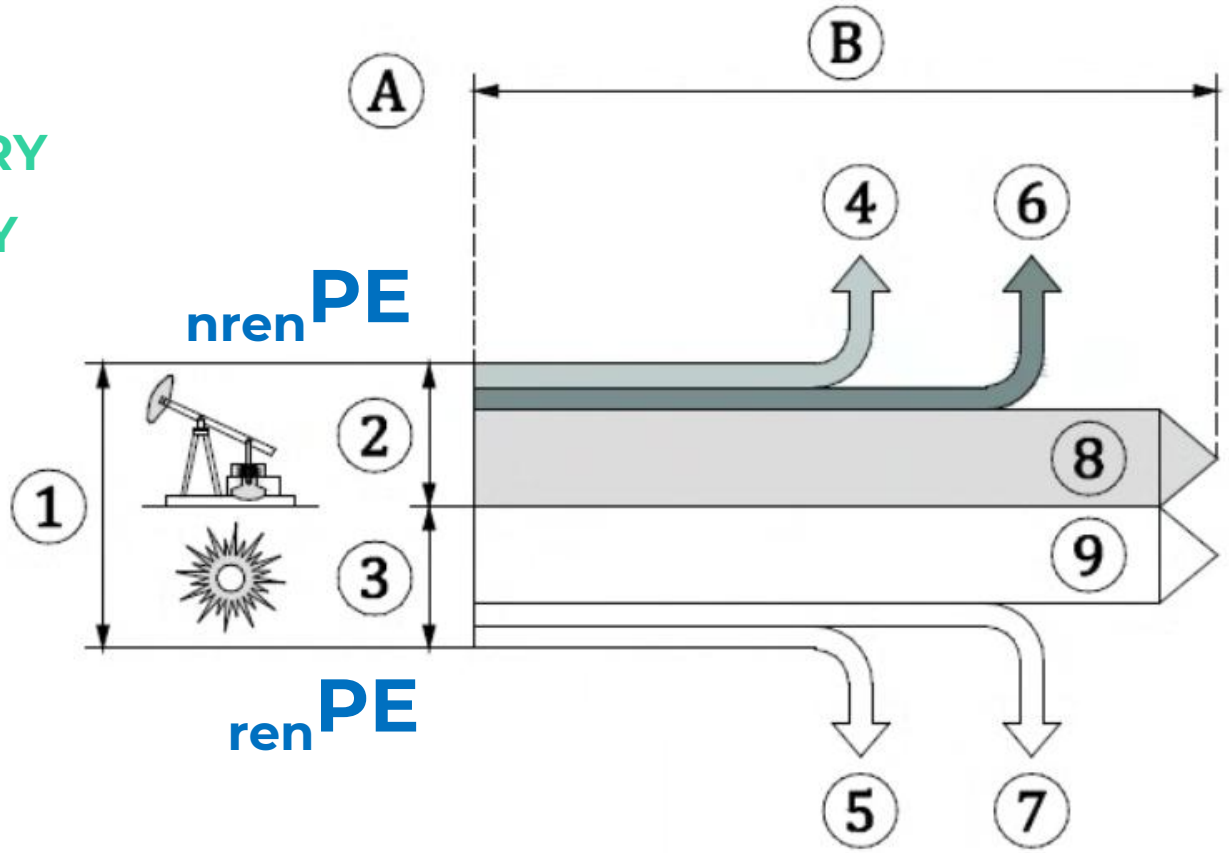
CONVERSION PROCESS

PRIMARY ENERGY

$_{tot}PE$

$_{nren}PE$

$_{ren}PE$



DELIVERED ENERGY = CONSUMPTION

$_{tot}PEF = {}_{non\text{-}ren}PEF + {}_{ren}PEF$ (technical standard ISO 52000-1)

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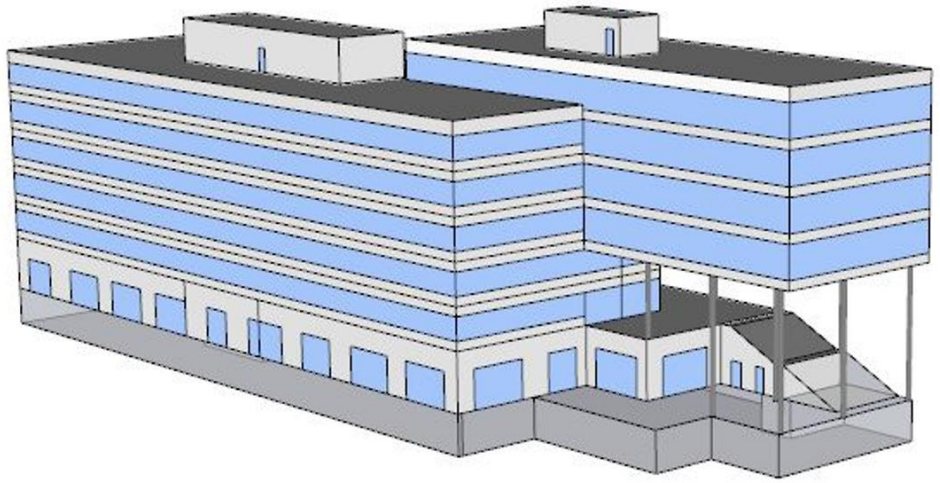
CASE STUDY

TYPICAL OFFICE BUILDING

CASE STUDY – TYPICAL NEW OFFICE BUILDING



BUILDING DESIGN MAIN FEATURES:

1) DISTRICT HEATING / GAS BOLERS
2) HOT WATER – ELECTRICITY HEATERS
3) ENVELOPE – GOOD CURTAIN WALLS
4) MECHANICAL VENTILATION, HEAT REC. 60%
5) LIGHTING EFFICIENCY 115 lm/W
6) NO RENEWABLES

Decree No. 264/2021 Coll.

PRIMARY ENERGY

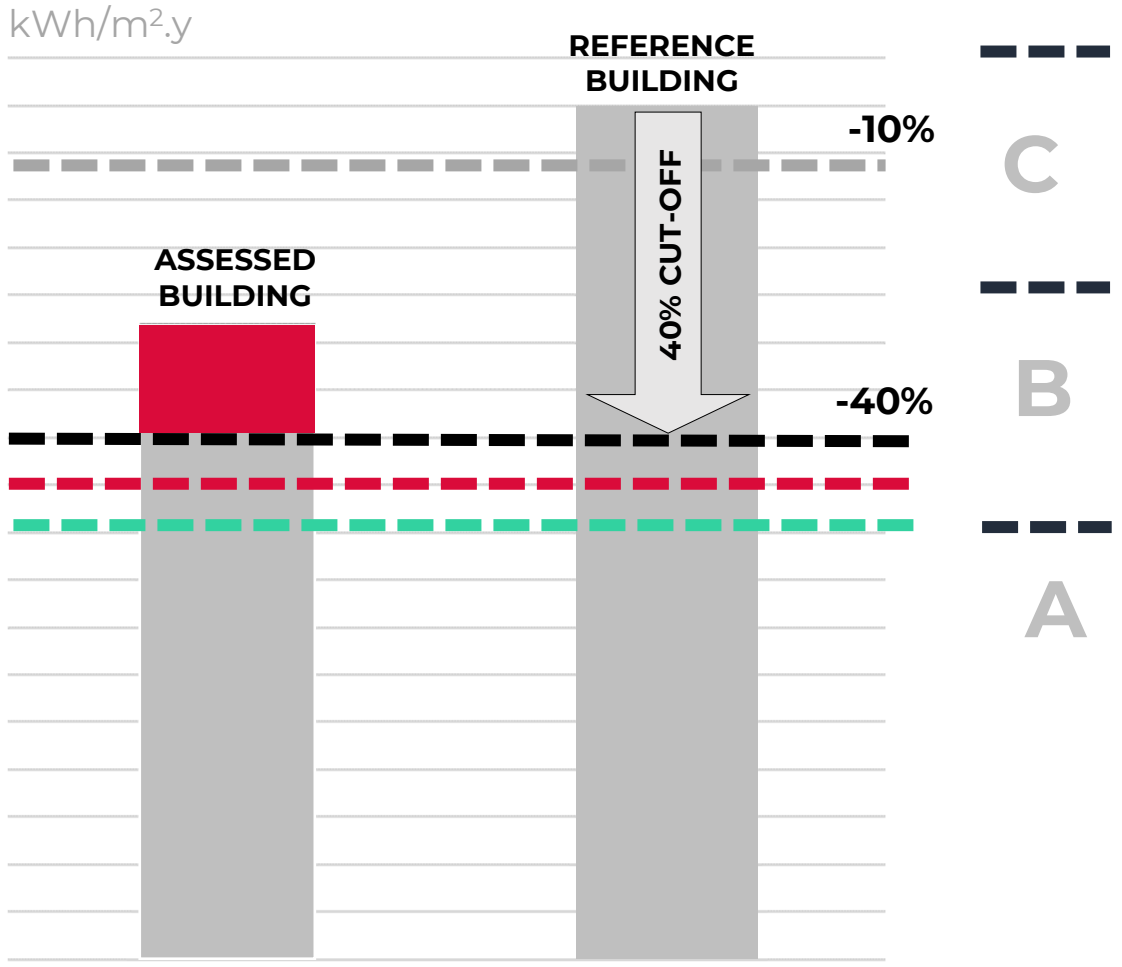
NZEB until 31.12.2021

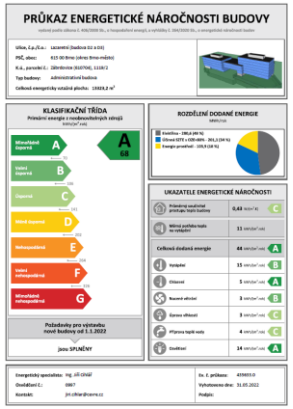
THRESHOLDS:

NZEB 2022+

EU TAX (NZEB –10%)

CLASS A (NZEB -20%)





BEFORE OPTIMIZING

IS BUILDING PERMIT ENOUGH?

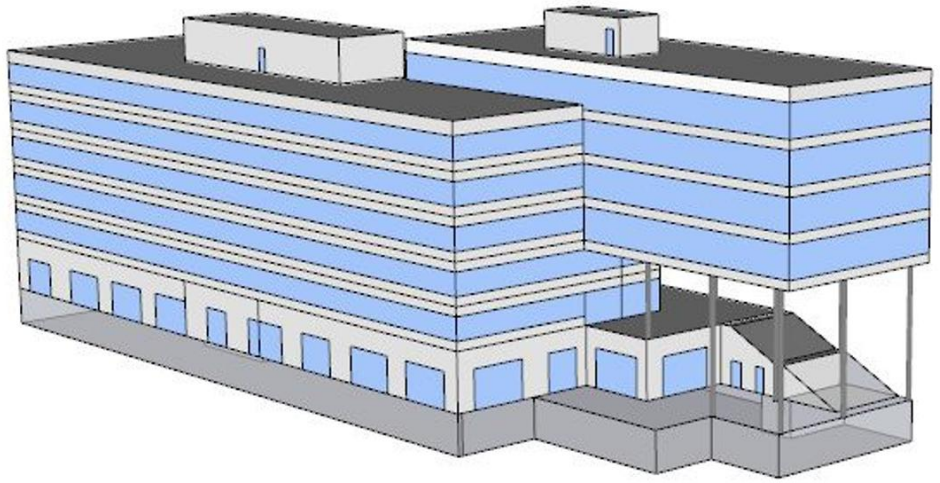
MINIMUM STANDARD EU-TAX

Substantial contribution criteria

Constructions of new buildings for which:

1. The Primary Energy Demand (PED)[343], defining the energy performance of the building resulting from the construction, is at least 10 % lower than the threshold set for the nearly zero-energy building (NZEB) requirements in national measures implementing Directive 2010/31/EU of the European Parliament and of the Council[344]. The energy performance is certified using an as built Energy Performance Certificate (EPC).

SETTING TARGET (BUILDING PERMIT) >>> OPTIMIZING



IMPROVEMENTS:

1) DISTRICT HEATING / GAS BOLERS
2) HOT WATER – ELECTRICITY
3) ENVELOPE – BEST CURTAIN WALLS
4) MECHANICAL VENTILATION, HEAT REC. 70%
5) LIGHTING EFFICIENCY 125 lm/W
6) ROOF PV 20 kWp

EPC AFTER OPTIMALIZATION – EDGE OF BUILDING PERMIT

NZEB = BUILDING PERMIT

BUILDING ENVELOPE

Hodnocení splnění požadavku je vyžadováno u nové budovy a u změny dokončené budovy při plnění požadavku na en tickou náro t budovy podle § 6 odst. 2 písm. a) a písm.b)

			ASSESSED	REFERENCE	
Průměrný součinitel prostupu tepla budovy	$W/m^2.K$	Budova jako celek	0,38	0,38	ANO

DELIVERED ENERGY

Hodnocení splnění požadavku je vyžadováno u nové budovy a u změny dokončené budovy při plnění požadavku na energetickou náročnost budovy podle § 6 odst. 2 písm.b)

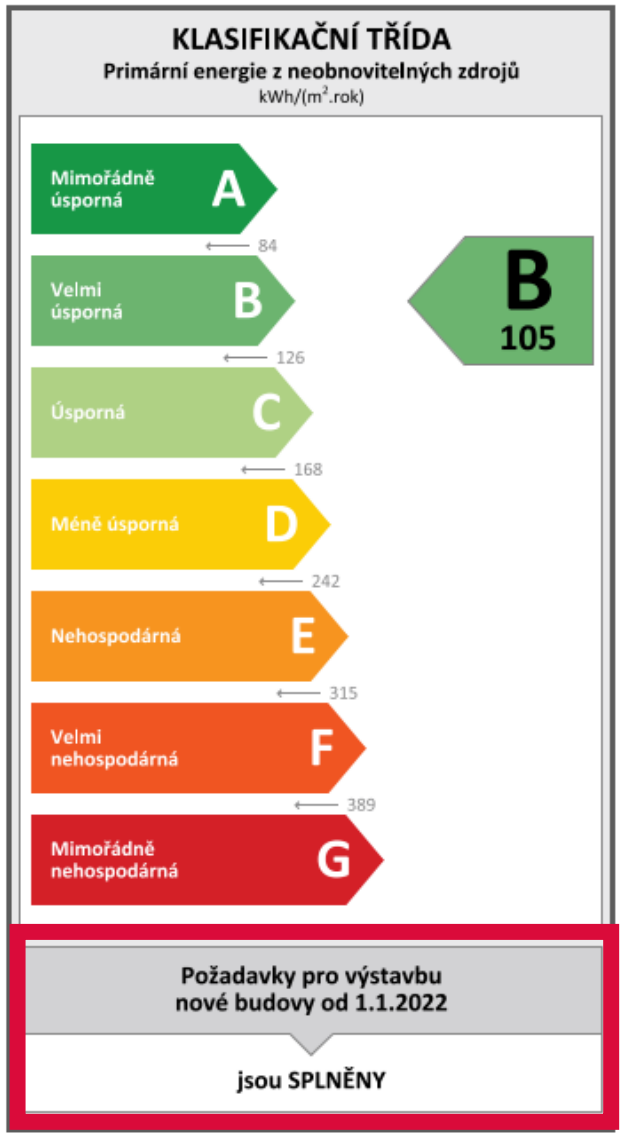
Celková dodaná energie	$kWh/m^2.rok$	Budova jako celek	58	96	ANO

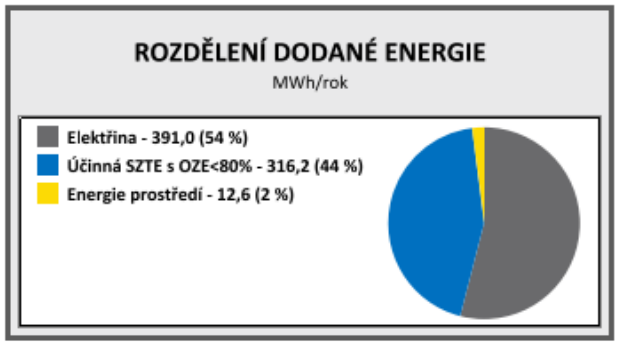
NON-RENEWABLE PRIMARY ENERGY

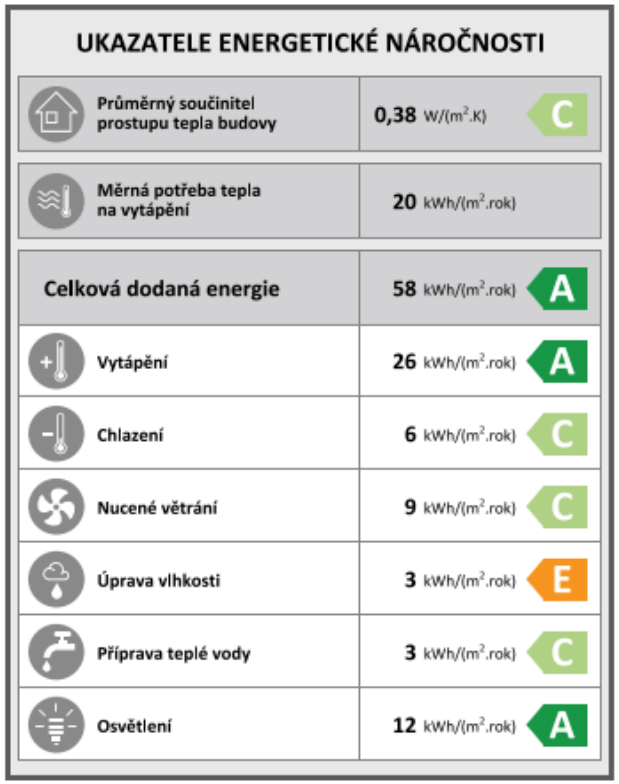
Hodnocení splnění požadavku je vyžadováno u nové budovy a u změny dokončené budovy při plnění požadavku na energetickou náročnost budovy podle § 6 odst. 2 písm.a)

Primární energie z neobnovitelných zdrojů energie	$kWh/m^2.rok$	Budova jako celek	105	105	ANO

EPC AFTER OPTIMALIZATION – EDGE OF BUILDING PERMIT







ZEB STANDARD ??? ON-SITE LIMITS - FEASIBILITY!!!

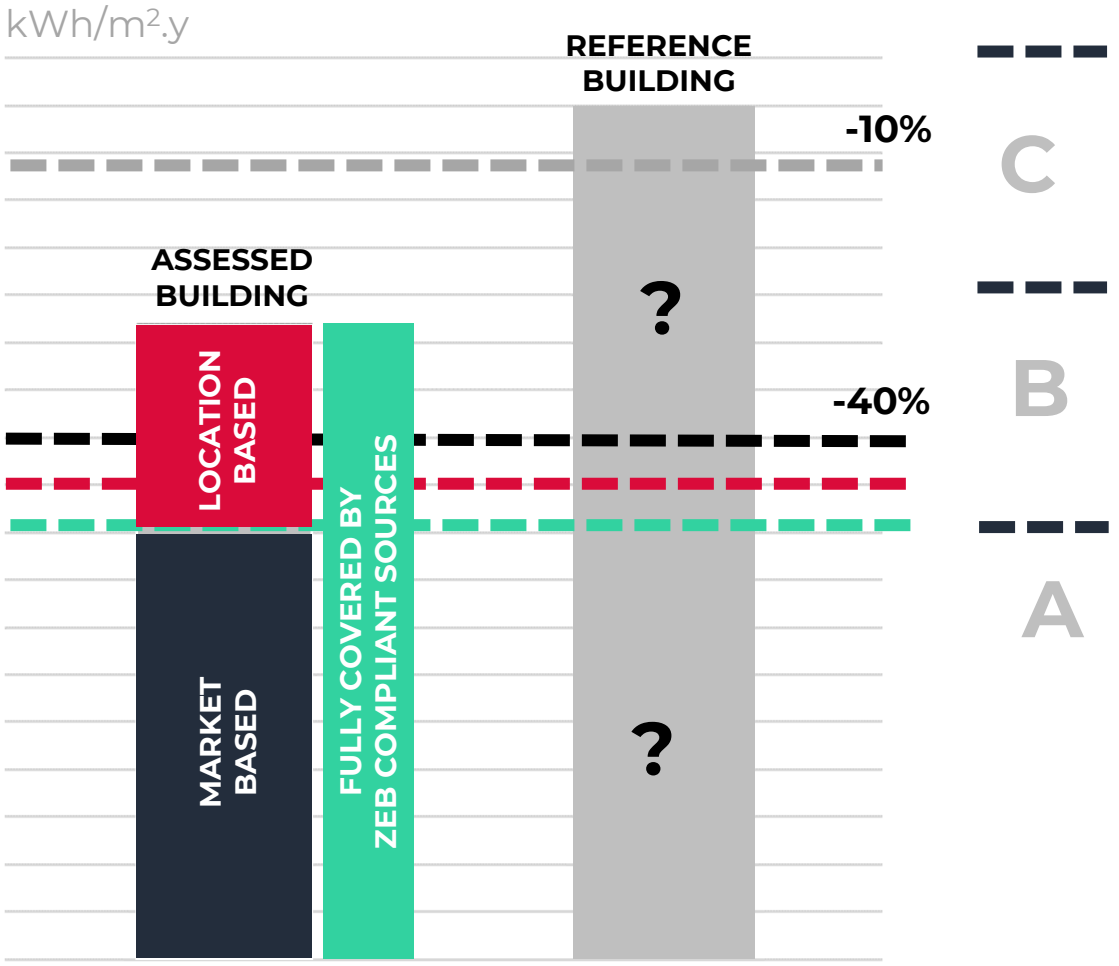
PRIMARY ENERGY

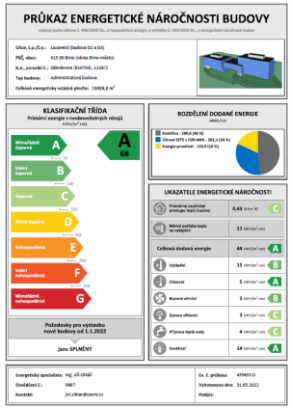
NZEB until 31.12.2021

NZEB 2022+

EU TAX (NZEB –10%)

CLASS A (NZEB -20%)





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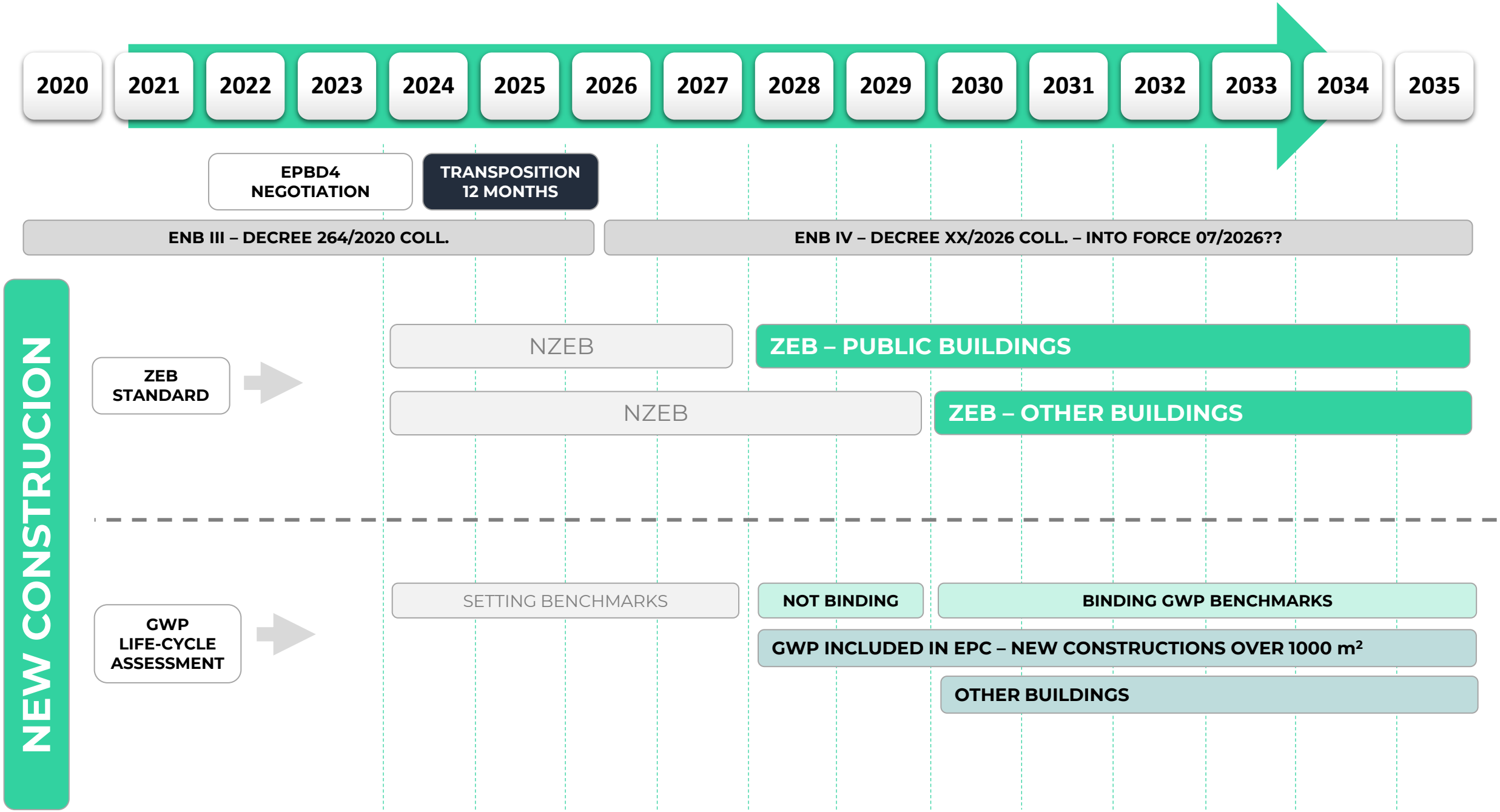
NEW CONSTRUCTION

REQUIREMENTS TIMELINES


2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
EPBD4 NEGOTIATION
TRANSPOSITION 12 MONTHS
ENB III – DECREE 264/2020 COLL.
ENB IV – DECREE XX/2026 COLL. – INTO FORCE 07/2026??
NEW CONSTRUCION
ZEB STANDARD
NZEB
ZEB – PUBLIC BUILDINGS
NZEB
ZEB – OTHER BUILDINGS
GWP LIFE-CYCLE ASSESSMENT
SETTING BENCHMARKS
NOT BINDING
BINDING GWP BENCHMARKS
GWP INCLUDED IN EPC – NEW CONSTRUCTIONS OVER 1000 m²
OTHER BUILDINGS
BINDING DATE – BUILDING PERMIT

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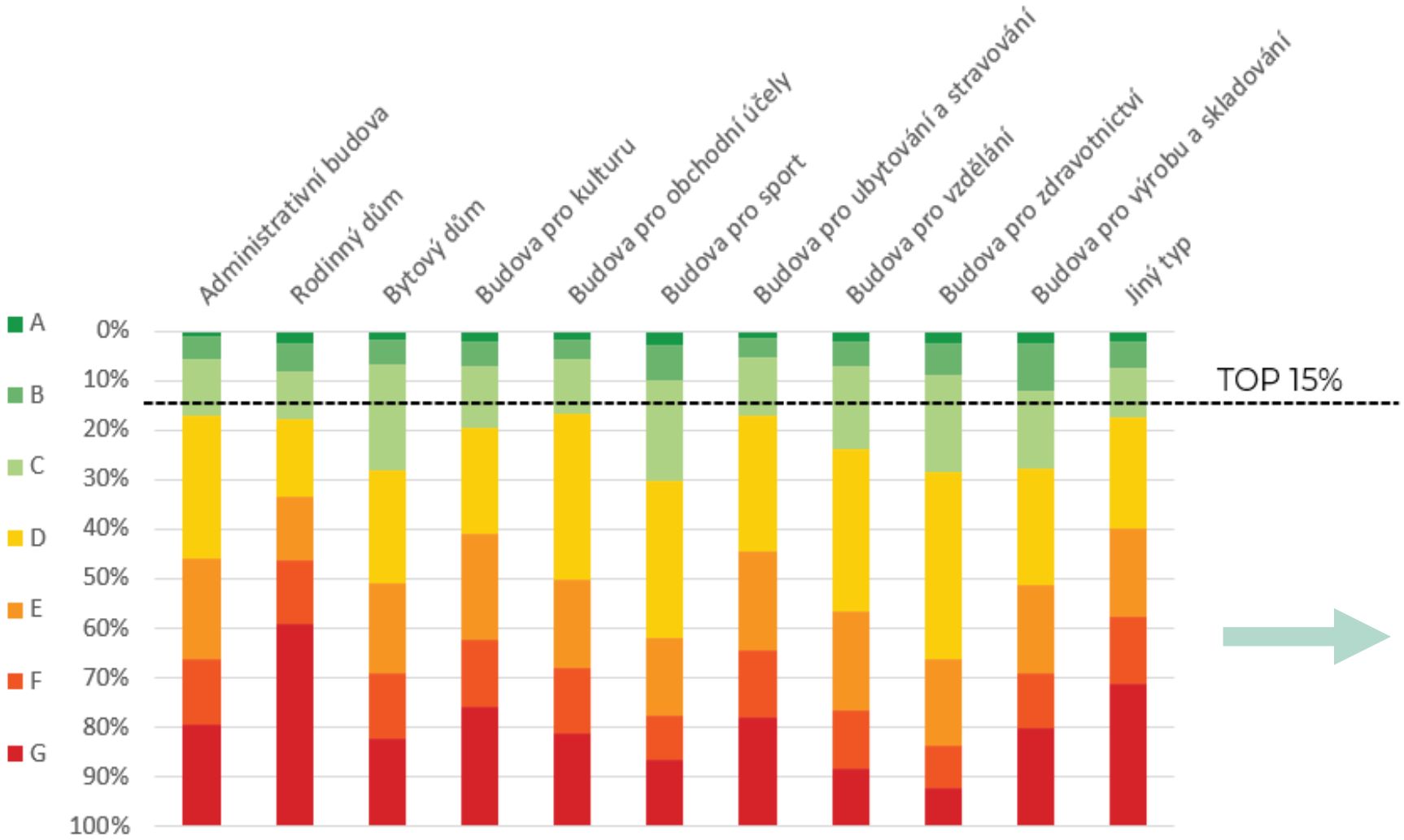
BUILDING STOCK

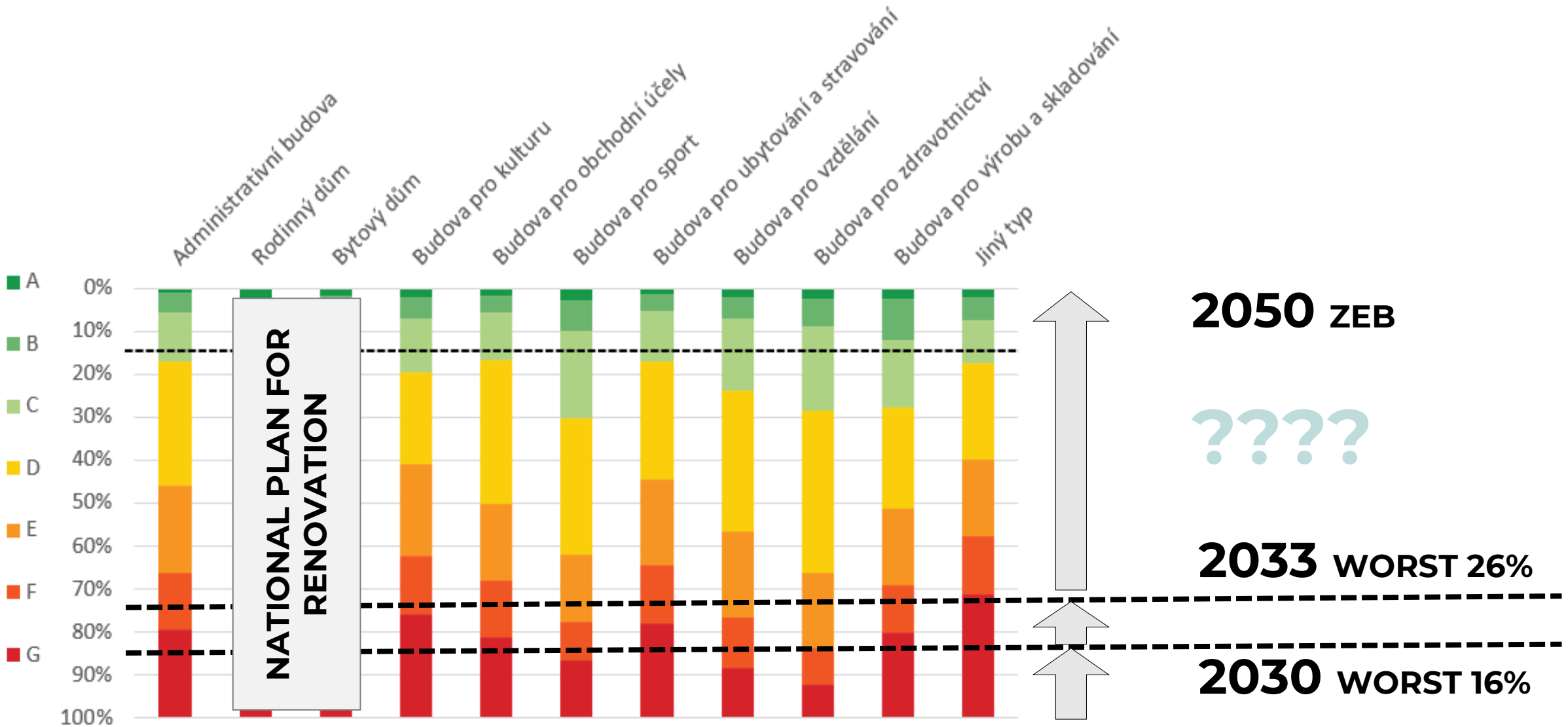
REQUIREMENTS TIMELINES

BUILDING STOCK – ENERGY PERFORMANCE ANALYSIS



EPBD 4
TRESHOLDS

MEPS - WORST PERFORMING FIRST – NON-RESIDENTIAL



MINIMUM ENERGY PERFORMANCE STANDARDS (MEPS)

TRIGGER POINTS

MEPS means rules that require existing buildings to meet an energy performance requirement as part of a wide renovation plan for a building stock or **at a trigger point on the market** such as:

- SALE
- RENT
- DONATION
- CHANGE OF PURPOSE

>>>>>> REGISTRATION IN THE LAND REGISTER

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