

# Additional technical Criteria for a Holistic Building Standard Framework

## First Draft by Dr. Schulze Darup

### Criteria for new buildings and energetic modernisation

- Goal: Top-Runner techniques
  - New buildings: Standard Passive-House / Plus energy house as soon as possible (Individual timelines per country are necessary)
  - Energetic modernisation: Standards basing on top-runner techniques (standard follows the code for new buildings with a small time and efficiency gap)
- Principals
  - CO<sub>2</sub>-based (but not CO<sub>2</sub>-only)
  - Net and final energy demand
  - Positive energy balance (building or quarters)
  - Minimize peak electricity demand (new)
- Energetic process as chance for the development of the building stock with high architectural & cultural targets

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Timeline for the development of an efficiency code, divided in three groups with different rates

Zone	Short term measures	Max. CO <sub>2</sub> -Emission of the buildings [kg/m <sup>2</sup> a]				
		2020	2025	2030	2035	2040
1*	Training programme for experts to achieve the following results (comment see below)	10	0	-10	-20	
2	Training programme; from pilot projects to broad effect; market launch of efficiency techniques	Indiv.	10	-5	-10	-20
3**	Training programme; first pilot projects; market launch of efficiency techniques; network of partners for efficiency		10-20	0	-10	-20

\* Zone 1: e. g. European countries like Denmark, Germany, Netherlands, innovative North-American regions & n. n.

\*\* Zone 3: Countries without developed markets for efficiency techniques – n. n. / Zone 2: intermediary

Modernisation of the building stock: Timeline for the development of standards

Zone	Short term measures	Max. CO <sub>2</sub> -Emission of the buildings [kg/m <sup>2</sup> a]					Renov. rate
		2020	2025	2030	2035	2040	% p. a.
1*	Training programme for experts; from pilot projects to broad effect; continuance of network	20	10	0	-10	-15	1.5 – 2.0 %
2	Training programme; pilot projects & broad effect; market launch of efficiency techniques	Indiv.	20	10	0	-10	1.2 – 1.7 %
3**	Training programme; first pilot projects; market launch of efficiency techniques; network of partners for efficiency		Indiv.	20	5	-5 / -10	Target: 1.5 %

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### Decarbonisation Plan for each country

- Target: (almost) climate neutrality for the building stock in most of the nations till 2050 (Paris agreement 2015)
- Balance between efficiency and renewables:
  - efficiency measures for a final energy reduction of 40 to 60 per cent on average
  - basis for supplying the remaining energy demand by renewables
- Decarbonisation plan for each country
  - Energy use/carbon emissions of the existing building stock & modernisation rate
  - timeline of the energy standards (new buildings & modernized buildings)
  - balance between efficiency and regenerative energy
  - Special circumstances of countries as economic, climatic, social and cultural aspects
  - Target: roadmap for climate neutrality till 2050