# Fire safe buildings: the opportunity of renovation strategies

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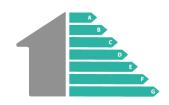


# **Energy Performance of Buildings Directive (EPBD)**



#### Article 2a, §7

Each Member State may use its long-term renovation strategy to address **fire safety** and risks related to intense seismic activity affecting energy efficiency renovations and the lifetime of buildings.



#### Article 7 §5

Member States [...] shall address the issues of healthy indoor climate conditions, fire safety and risks related to intense seismic activity.

#### **Our view**

Fire safety must be considered for all buildings during design, construction, renovation and operations.

Like all safety aspects, this is covered by national building codes and a full range of other regulations.

The EPBD now highlights that the renovation of a building is also an opportunity to enhance fire safety.





Draft framework presented at the FIEP in June 29 and discussed with several stakeholders. Suggested as a way to structure exchange of information between Member States.

1. Regulation at Member State level, adequate compliance and enforcement

2. Adequate European harmonized standards to be used in Member States regulatory framework

3. Holistic approach "BIO"

3.1 **B**uilding

3.2 Installations

3.3 Organisation



#### What should be considered in the regulatory approach?

1. Member State level regulation and enforcement

✓ Market surveillance

**Enforcement of regulation** 

- 2. European harmonized standards
  - 3. Holistic approach "BIO"

3.1 **B**uilding

3.2 **I**nstallations

3.3 **O**rganisation



What should be considered in the regulatory approach?

- 1. Member State level regulation and enforcement
- 2. European harmonized standards
  - 3. Holistic approach "BIO"

3.1 **B**uilding 3.2 Installations 3.3 **O**rganisation

# How to test and declare performance

- ✓ For construction products
- ✓ For large scale façade testing
- ✓ For equipments
- **√** ...



What should be considered in the regulatory approach?

- 1. Member State level regulation and enforcement
- 2. European harmonized standards
  - 3. Holistic approach "BIO"

3.1 **B**uilding

3.2 **I**nstallations

3.3 **O**rganisation Performance requirements adapted to building category



What should be considered in the regulatory approach?

- 1. Member State level regulation and enforcement
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3.1 Building 3.2 Organisation

# Performance requirements adapted to building category

- Limitation of fire/smoke spread...
- ✓ Large scale façade testing (system approach)
- Escape routes
- ✓ Compartmentation
- ✓ Fire safety engineering
- √ Fire fighting strategy

**√** ...



What should be considered in the regulatory approach?

3.3

- 1. Member State level regulation and enforcement
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3.1 3.2 **B**uilding Installations **O**rganisation Requirements adapted to building category

- **Detection**
- **Suppression (sprinklers)**
- **Smoke control**
- Fire fighting



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3.1 **B**uilding 3.2 Installations 3.3 **O**rganisation

- ✓ Construction process management and control
- ✓ Maintain fire safety design
- ✓ Regular fire safety checks
- Inspections of electrical/gas installations and equipments
- ✓ Roles & responsibilities
- Prevention, awareness, and education
- Fire fighting organization and equipment
- **√** ...

# The opportunity of building renovation



The starting point: ensure quality and compliance of renovation works with the relevant building regulations and producers guidelines.



- Construction products are subject to stringent regulations to declare their performance. Application specific performance requirements are defined by the national building codes.
- ✓ System performance must be considered (e.g. large scale façade testing) rather than material properties alone.
- ✓ Organic products (wood, bio-based materials, plastics, composites...) are combustible but can be used safely in their intended building applications, as shown by thorough performance-based testing.

#### The opportunity: check essential elements for fire safety



- Inspection of electrical and gas installation and appliances;
- ✓ Smoke detection and alarms;
- ✓ Escape routes and compartmentation;
- ✓ Possibility sprinklers for taller buildings or vulnerable occupants.

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