



Integrated  
Photovoltaic  
Conference

25 – 26 November 2025  
Chamber of Commerce  
Florence, Italy

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INCREASE project & SolarPower Europe

# **Fireproofing BIPV: Overview and comparison of building fire safety regulations in INCREASE demonstration site countries**

Organised by

**etaflorence** \* **renewableenergies**

# INCREASE

1. **effective advancements towards uptake of PV integrated in buildings & infrastructure**
2. **Start: 1 October 2023 for 54 months**
3. **22 partners from 8 countries**
4. **9 demo-sites**
5. **9 Work-Packages**



- **Increase focuses on innovations in PV module design and operation guidelines to enhance aesthetics, reduce glare, and improve environmental impact and fire resistance.**
- **IPV facade, roof concepts, and noise barriers, providing practical guidance through pilots and rigorous testing.**
- **IPV uptake to maximise the role of IPV in the decarbonisation of the European building stock with stakeholder engagement, standards, awareness rising and enabling framework.**



Visit the Increase website!



# Consortium Partners

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This work has received funding from the Swiss State Secretariat of Education, Research and Innovation (SERI).



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# Fireproofing BIPV: Overview and comparison of building fire safety regulations in INCREASE demonstration site countries

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## Contents of the paper

Introduction

European framework for construction products: CPR & implication for BIPV products

Overview of fire safety regulations in Increase demonstration site countries: Belgium, Estonia, France, (Montenegro), Spain, Switzerland

Comparative analysis of fire safety regulations

- Building classification and fire ratings

- Commonalities and differences in regulatory approaches

- Fire safety requirements

- Typology of IPV projects and associated fire safety considerations

Discussion and policy recommendations

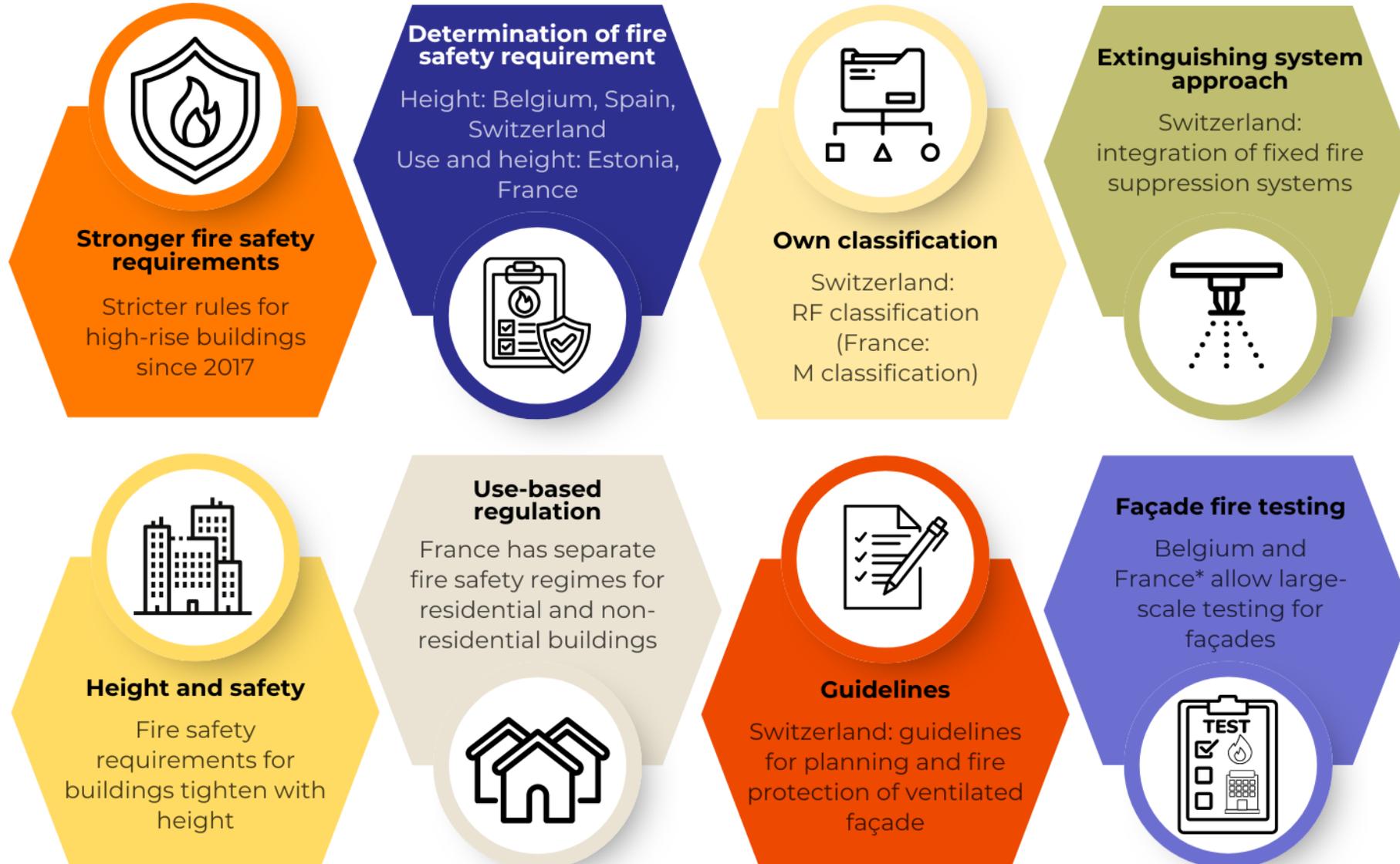
Conclusion

Annexes: I EN 13501, II Estonia, III France, IV Spain, V Switzerland

BIPV elements can only achieve Euroclass B to F according to EN 13501

# Comparative analysis of regulatory approaches

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# Requirements comparison

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	Belgium	Estonia	France		Spain	Switzerland	BIPV feasibility
			Residential	Non-residential			
Low-rise building	< 10 m C-D	B-D	D	C-D	< 10 m D-s3	< 11 m D-E	High - Moderate
Mid-rise building	10-25 m B-s3	B-D	≤ 28 m A2	C-D	≤ 18 m C-S3	11-30 m B-C	Moderate - Low
High-rise building	> 25 m A2-s3	B, d0	≤ 50 m A2	C-D	> 18 m B-s3	> 30 m A2	Low - Impossible
Roof requirements	B <sub>ROOF</sub> (t1)	B <sub>ROOF</sub> (t2-t4)	B-D <sub>ROOF</sub> (t3)	B <sub>ROOF</sub> (t3)	B <sub>ROOF</sub> (t1)	C <sub>ROOF</sub> /D <sub>ROOF</sub>	High

# Typology of BIPV projects

	Low-rise building 	Mid-rise building 	High-rise building 	High-risk building 
Height	< 10-11 m	11-30 m	> 30 m	Variable
Fire safety requirements	D-C classes	C-B classes	B-A classes	B-A classes
BIPV feasibility	High - Moderate	Moderate - Low	Low - Impossible	Low - Impossible
BIPV feasibility with large-scale testing	High - Moderate	Moderate - High	Moderate	-

# Policy recommendations

1. Harmonise BIPV standards at European level to streamline compliance and reduce duplication.
2. Introduce performance-based compliance pathways, including large-scale fire testing, in national regulations.
3. Develop BIPV-specific fire testing methodologies that address both material and operational risks.
4. Establish clear national guidelines to bridge regulatory gaps until harmonisation is achieved.
5. Support further research and data sharing to inform future standardisation and improve fire safety solutions.



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# Thank you!



This is an initiative of



 **Co-funded by  
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Grant N°101096126. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

**Project funded by**

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