Fisuel Seminar – 15-16 of October 2024

Barcelona – Spain

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Extending the project of inspection regimes to non-domestic area

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A methodological approach

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WHICH INSTALLATIONS FALL IN THE "NON-DOMESTIC" CATEGORY?

Very different domains fall into the “non-domestic” category:

- Shops, supermarkets, malls…
- Hospitals, medical centre, nursing homes…
- Schools, high-schools, daycare…
- Swimming pools, stadiums, sports halls, gyms…
- Cinemas, museums, theatres…
- Underground car parks, services stations, storage spaces…
- Commercial buildings, offices buildings, industries, plants…

Etc.

A very generic approach shows that 2 types of buildings can be roughly distinguished:

- Buildings with public access
  - categories according to their activity/capacity

- Buildings with restricted access (for workers)
  - categories according to their activity/risk level

(+ High rise buildings, which definition vary depending on the country)

Related inspection regimes:

Buildings with public access	Buildings with restricted access
Law / Regulation	Insurances

Proposed methodology: Approach through a **taxonomy** of buildings

👉 The example of France shows the difficulty of the exercise

French case:
categorization of buildings with public access

These buildings are defined through 2 criteria:

- **Type** which depends on the nature of the operation (activity)
- **Category** which depends on the size of the establishment (capacity)

There are **14** different specific **types** defined by a letter:

J: Reception facilities for the elderly and disabled
L: Hearing rooms, conference rooms, meeting rooms, performance rooms or multi-purpose rooms
M: Retail stores, shopping centres
N: Restaurants and bars
O: Hotels and guest houses
P: Dance halls and games rooms
R: Early learning, teaching and training establishments, holiday centers, leisure centers without accommodation
S: Libraries, documentation centres
T: Exhibition halls
U: Care establishments
V: Places of worship
W: Administrations, banks, offices
X: Indoor sports facilities
Y: Museums

In addition to these 14 specific **types**, there are **8** '*special*' types:

PA: Outdoor establishments
CTS: Marquees, tents and structures
SG: Inflatable structures
PS: Covered car parks
GA: Stations accessible to the public
OA: High-altitude hotels and restaurants
EF: Floating establishments
REF: Mountain refuges

▶ The **category** is defined according to the number of public and staff admitted into the building:

1st category: over 1,500 people
2nd category: from 701 to 1,500 people
3rd category: from 301 to 700 people
4th category: 300 people and below, except for buildings included in the 5th category
5th category: buildings which the number of public does not reach the minimum figure set by the safety regulations for each type of operation

👉 To summarize, for buildings with public access, there are:

22 types

5 categories

This means potentially **110** possible combinations for which the legislation can differ.

This is only for buildings with public access, to draw a full picture, **high rise buildings** (10 types) and buildings with restricted access need to be also considered…

Conclusion:

Unlike for residences, electrical safety for larger buildings seems better regulated. However, this is an **assumption**.
To verify it requires a detailed **regulatory review** covering the **various types of buildings** at the **national level**.

Proposed methodology:

To carry out a study (even partial) of inspection regimes for electrical installations in non-domestic sector, it is necessary to establish a shared classification (**taxonomy**) of buildings in order to have a **common language** and **study perimeters**.

ICA Europe

Stand point

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Data from the BSO

https://building-stock-observatory.energy.ec.europa.eu/factsheets/

EU

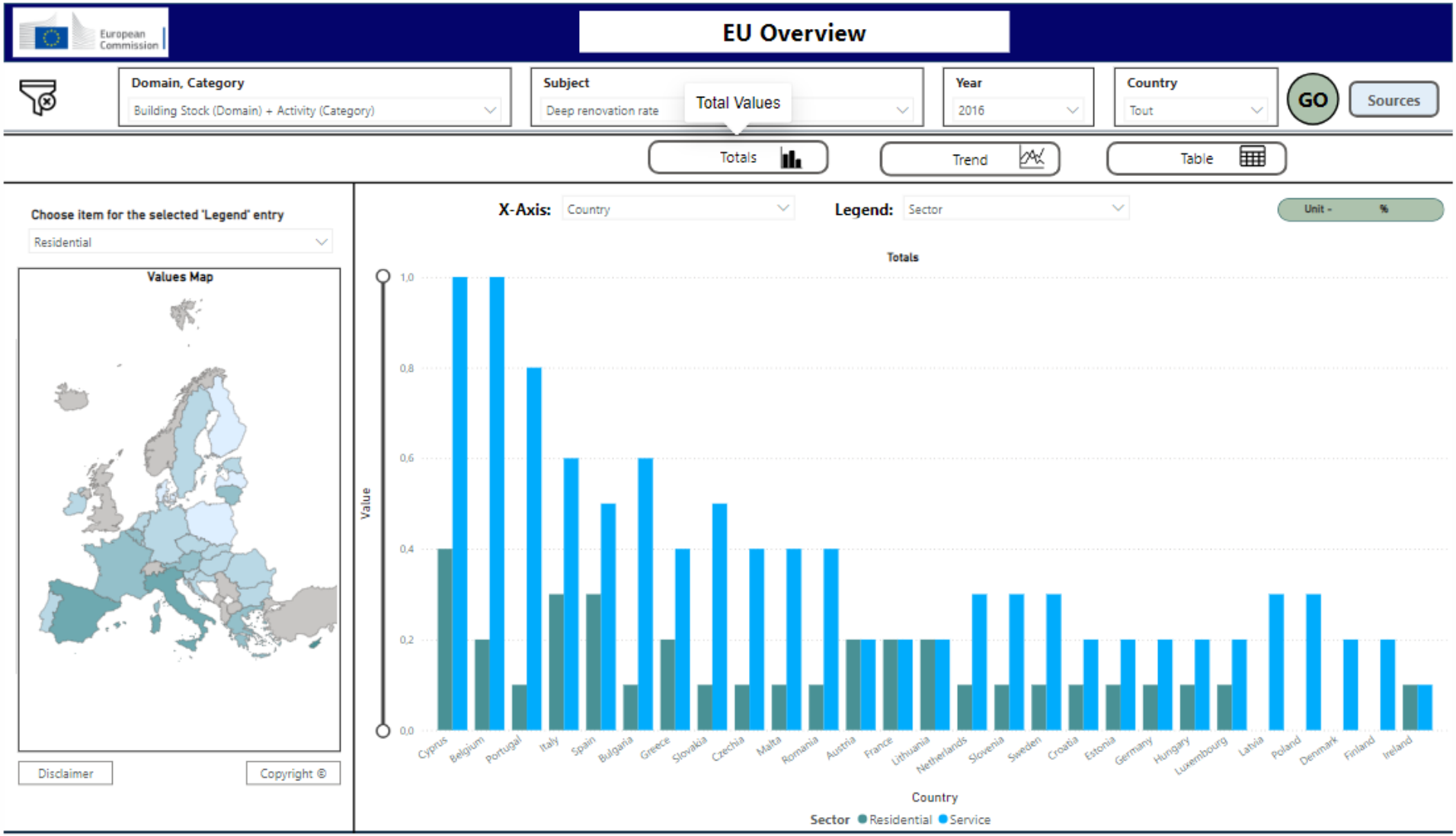
Country

EU27

1. Building Stock

	Buildings 2020	Floor area (sqm) 2020	
total	111,58M	27 229M	
residential	101,47M	18 408M	(91% 68%)
services	10,11M	8 821M	

Deep Renovation (EU) or Deep Energy Renovation is a term for a renovation that captures the full economic energy efficiency potential of improvement works, with a main focus on the building shell, of existing buildings that leads to a very high-energy performance.


European Commission
EU Overview
Domain, Category
Building Stock (Domain) + Activity (Category)
Subject
Deep renovation rate
Total Values
Year
2016
Country
Tout
GO
Sources
Totals
Trend
Table
Choose item for the selected 'Legend' entry
Residential
Values Map
Disclaimer
Copyright ©
X-Axis: Country
Legend: Sector
Unit - %
Totals
Value
1,0
0,8
0,6
0,4
0,2
0,0
Cyprus
Belgium
Portugal
Italy
Spain
Bulgaria
Greece
Slovakia
Czechia
Malta
Romania
Austria
France
Lithuania
Netherlands
Slovenia
Sweden
Croatia
Estonia
Germany
Hungary
Luxembourg
Latvia
Poland
Denmark
Finland
Ireland
Country
Sector Residential Service

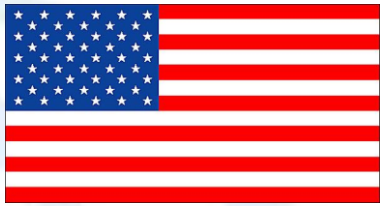
ICA Europe opinion:

👉 In the EU, the residential building park is predominant and is the less renovated sector

👉 When it comes to buildings, it is of an interest to focus on apartment buildings

US Fire Administration

https://www.usfa.fema.gov/statistics/nonresidential-fires/electrical.html



National estimates

The 2022 national estimates for non-residential building **electrical malfunction fires** and loss show that there were:

- **8,000 fires (*vs* 48,000 in residential)**
- **$374,500,000 in dollar loss**

Overall trends

Overall trends for non-residential building **electrical malfunction fires** and loss for the 10-year period of 2013 to 2022 show the following:

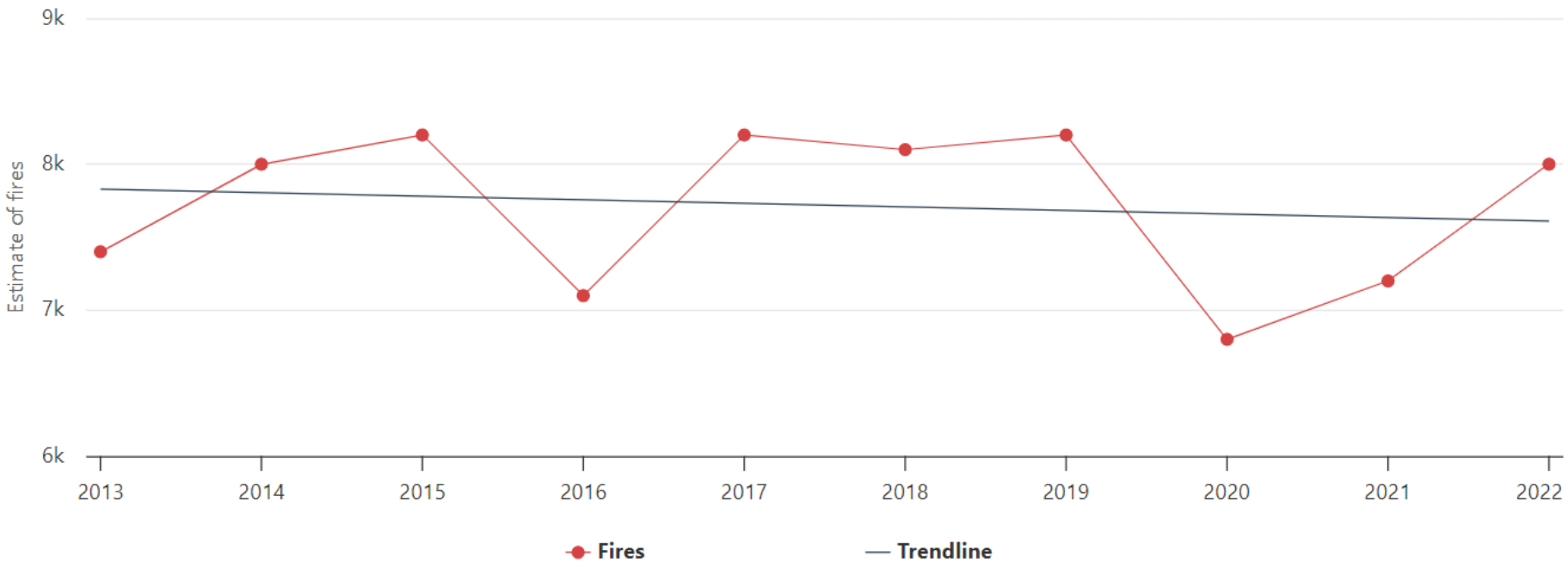
- **A 3% decrease in fires**
- **An 8% increase in dollar loss**

US Fire Administration

Fires | $ Loss

Nonresidential building electrical malfunction fires (2013-2022)

View data in a table | Download chart



👉 Need for data, statistics for EU

👉 Do FISUEL members can access such figures for their respective jurisdiction (or other international sources)

MERCI – THANKS