



**Fit for the 21st
century: how the EU
energy efficiency
legislation can deliver
quality of life for
European citizens**

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International

EUs building stock

33%

of all energy in EU is used for **transport**



26%

of all energy in EU is used by **industry**



41%

of all energy in EU is used by **buildings**



2/3 of energy consumption in buildings is used for heating, cooling and ventilation

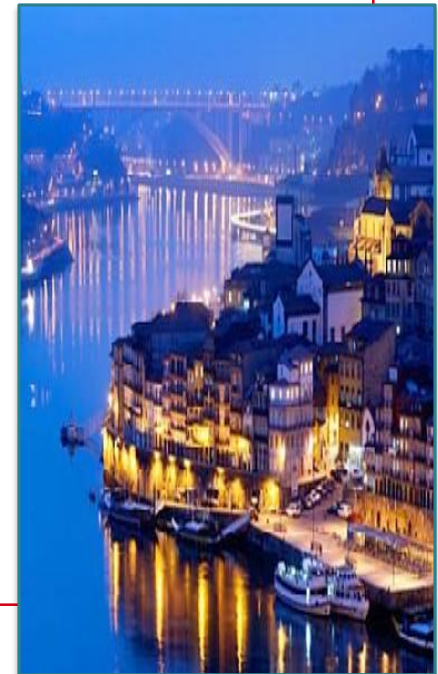
EUs Building stock

Scale of the Opportunity

- 210 Million buildings (most of them poorly performing)
- Up to 90% still occupied and in use in 2050
- 80 Million Europeans live in damp / leaky buildings
- 10.8% of the European population unable to keep their home adequately warm
- New construction rate less than 1%
- Renovation rate app 1%

Technologies Exist Today

- Reduction of 80% in Energy Use is possible
 - with current technologies and processes



EUs Building stock

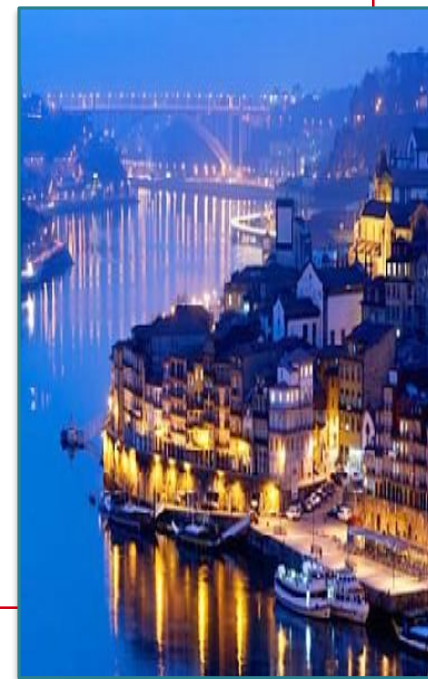
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HUGE OPPORTUNITY

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EUs Construction Sector

- More than 9 % of EU GDP
- Dominated by SMEs - over 3 mill enterprises - 92% micro-enterprises with less than 10 employees
- Large enterprises represent less than 1%
- Buildings are build according to building codes – less than 1% with better performance
- The majority of buildings are owned by ‘amateurs’

(Source: Transformation of the EU building Stock, OpenExp 2016. EBC and Renovate Europe)

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The construction sector needs legislation

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High Benefits from EE Renovation

Public Finances: €39bn per year

Boost to Public Finances in 2020

Rising to €78bn per year by 2030

New Direct Net Jobs: 1.1 million

Local, Permanent Jobs in Construction;

This Leads to over 2 million Total New Jobs

Boost to EU GDP: 0.7% per year

Estimate Increase in Construction Output is
in the Range €670 to €830bn per year
(from 2020)



Additional benefits

- Outdoor pollution
 - annual retrofit rate of 2% will cause a reduction of 9% particulate matter (DMI/Eurima)
- Impact on health and societal costs
 - 78678 saved life years annually
 - 6,64 billion €/year savings in societal costs (1,5-40 billion €/year)
- Energy poverty
 - For every 1% improvement in energy efficiency, three million more homes can be properly renovated and seven million citizens lifted out of energy poverty
- Energy Security
 - Buildings use a significant 61% of all imported gas

Legislation as driver

- The Energy Performance of Buildings Directive with the target for new buildings to become NZEB by 2021 has been a huge success !
- We need a similar approach for renovating the existing building stock
- We know where we should be – an NZEB stock by 2050 – but industry cannot drive this transformation alone – we need cooperation at all levels