

Investing in the European buildings infrastructure – An opportunity for the EU’s new investment package

The triple targets of the new European Commission’s 300 billion Euro investment package for Europe - jobs for the young, the revival of the economy and the stimulation of growth – can be achieved in one go if a significant part of the investment is spent in the right sectors. Just 20% of the package, i.e. 60 billion Euro, would be sufficient to kick-start the market for building renovation.

It is widely recognized that Europe’s buildings encompass a significant investment opportunity, as they are in dire need of renovation. So how can this be achieved?

The EU has app. 24 billion m² of useful floor area, roughly equivalent to the surface area of Belgium. About 75% of today’s building stock will still be in use in 2050.

Therefore, to achieve Europe’s decarbonisation, energy security and resource efficiency goals¹, 3% of this space should be renovated annually, leading to a significant reduction in energy consumption. However, the current average renovation rate is just around 1%, and the actual depth of renovation in all the EU countries is very far from achieving cost-effective levels. Several analyses revealed that such a deep and faster renovation of the EU building stock until 2050 will require between 600 and 900 billion Euro investment (present value). As a result of this investment, the energy consumption of EU buildings will be between 50% and 70% less than today, the carbon emissions from the building sector may be reduced by 80-90% and the net societal cost-savings may be 10 times higher than investments².

In addition, this significant reduction of energy consumption in the building sector will be reflected in a much lower import dependency and higher security of the Union’s energy sector. In a nutshell, investing in energy renovation of buildings will shift expenditure on energy imports to a profitable investment in the EU economy while benefits are largely distributed to all citizens.

¹ As defined in COM (2011) 112: A Roadmap for moving to a competitive low carbon economy in 2050, COM (2011) 885: Energy 2050 Roadmap, and COM(2011) 571: Roadmap to a Resource Efficient Europe

² BPIE 2011 study “Europe’s buildings under the microscope”.

A European Marshall Plan for the renovation of the European buildings infrastructure could be implemented by allocating a significant share of the 300 billion Euro package to this purpose, delivering the triple targets of the investment package.

Stimulate growth

In order to kick-start this process, an average investment of 273 Euro/m² is needed³ to achieve a deep renovation in the next three years. If just 3% of the floor space were renovated to a deep level annually, the total amount from 2015 to 2017 would add up to roughly 197 billion Euro for the period. This is the size of the investment opportunity which funders can benefit from. Past experiences with investment programmes in the building sector have shown that a leverage factor of 4 to 5 can be achieved realistically, as experienced with EIB, EBRD and KfW programmes.

This means that only a quarter of the 197 billion Euro investment opportunity, i.e. 40 billion Euro, would be sufficient to stimulate this investment.

Revive the economy

The EU construction industry has been severely affected by the economic crisis, with some countries losing more than half the jobs in the sector; and it still needs to recover. More than 90% of the construction companies are SMEs, and the sector has a very high employment rate per unit of value creation.

Therefore, the economic activity associated with a threefold growth of renovation activities would be enormous. Currently, the construction industry activities which can be attributed to renovation is estimated at 283 billion Euro value added⁴, which is 4% of the value added of the non-financial business community. Tripling this would lead to an economic value creation of almost 850 billion Euro. This is a value for direct activities in the construction industry, not taking into account the positive follow-on effects in creating indirect and induced jobs in the supply chain industry (for energy efficient materials and equipment, renewable energy technology) and in the service sector, increased income taxes from additional employment, reduced public subsidies for heating and unemployment support, etc.

³ BPIE modelling

⁴ EC Joint Research Centre, Dr. Yamina Saheb, based on Eurostat figures.

Create jobs for the young

Clearly, such an initiative requires increased training and education. Today, jobs in the construction industry are not low skills jobs anymore. Construction works on building sites require skills and understanding. Failure to execute the works to the highest quality standards will result in problems in the buildings' performance later, leading to missed energy savings, to dissatisfaction of owners and occupiers and to a loss of trust in the buildings industry.

It is therefore essential to improve and speed up training measures in the many trades involved in renovating the building stock. This includes not only blue collar workers, but also designers, architects, building component suppliers and a raft of people in the financing industry.

A European wide training campaign, organized by Europe's regions and member states, would provide a much needed push in skills and in employment opportunities. If only a fifth of the current work force in buildings construction⁵, i.e. 2.3 million people, would receive training at a cost of 10,000 Euro per training in the next three years, this would result in a 23 billion Euro up-skilling opportunity.

Increasing the average renovation rate from 1 to 3% would increase the employment rate in a similar ratio.

In addition, R&D to bring innovative technologies to the market should receive further support. Insurance mechanisms should reduce the risk for investors and owners willing to implement most recent cutting edge technologies in upgrading their buildings. A particular focus should be:

- development of packaged offsite construction techniques that provide the opportunity for significant cost reduction and increased speed of installation through mass production techniques (c.f. Energiesprong in The Netherlands⁶)
- development of smart grid solutions, so that buildings become a positive part of the energy infrastructure and the opportunity to exploit local and regional renewable energy resources is fully developed.

⁵ Idem, 11.5 million people in Europe

⁶ <http://energiesprong.nl/transitionzero/>

The reindustrialization of Europe - Adding up the figures:

The reindustrialization of Europe is considered a top priority of the European Commission. An EU-wide stimulus for the renovation of the building stock would provide an encouraging signal for the construction industry, for building material suppliers and for energy efficiency/renewable technologies and service providers to invest into new production capacity in Europe. A public investment of 40 billion Euro to stimulate building renovation and 20 billion Euro into training and upskilling would result in industry investments with a high leverage factor.

Making the infrastructure of Europe's built environment, its offices, schools, factories, public buildings and homes future-proof and resilient against shocks in the energy supply system is essential to achieving the vision of a European Energy Union as outlined by Commission Vice President Maroš Šefčovič. This proposed support package for building renovation is fully aligned with his five pillars for energy union:

- **Energy security and solidarity** – cutting energy demand and generating more renewable energy in and on buildings will cut the EU's energy bill and improve security. Solidarity by all MS in supporting building renovation will ensure the benefits are felt across the EU.
- **Improved energy infrastructure** – disaggregated energy supply at the point of consumption, i.e. the building, will massively increase the resilience of EU's energy infrastructure.
- **Modulation of demand** – Vice President Šefčovič said "Energy efficiency has to be perceived more as the first energy source." As buildings are the largest consumer of energy in the EU (40%), this sector is where the biggest contribution to demand reduction can be effected.
- **Decarbonisation of the energy mix** – maximizing the potential for buildings to generate their own energy from local renewable sources, or to connect to low carbon district heating and cooling systems, can make a significant contribution to the decarbonisation agenda.
- **Research and innovation** – Europe can become a world leader in building renovation, building on existing strengths in this sector.

The allocation of an appropriate share of the 300 billion Euro investment package should not miss the big opportunity in the building sector to contribute to the achievement of Europe's priority targets.

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