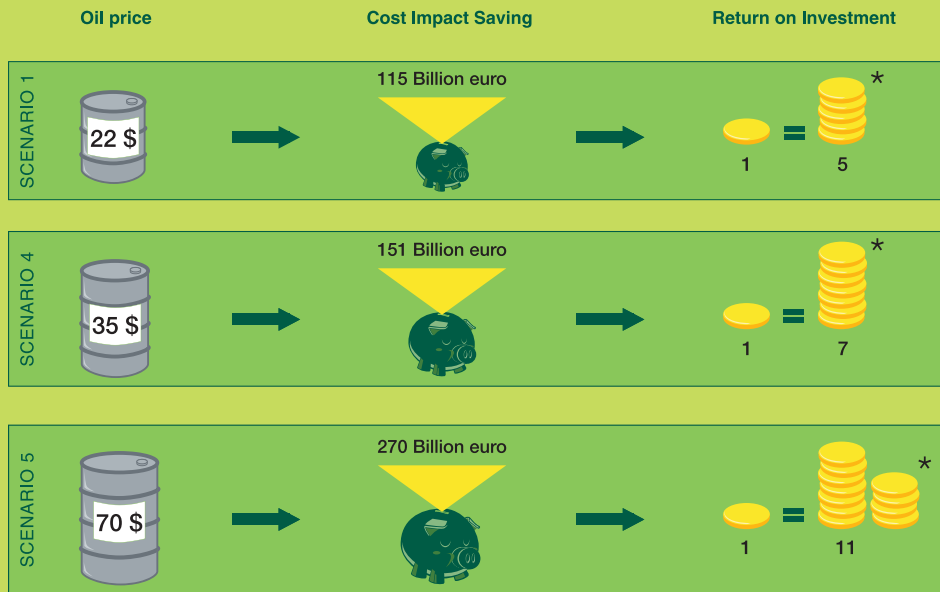


How Costs Impact Savings and Return on Investment

The following diagram shows the impact of different oil price scenarios both on the total annual cost saving potential from energy efficiency in buildings as well as on the return on investment that is obtained over a 30 year period.



* The return on investment is based on a 30 year period and the measure examined is the insulation of a pitched roof of a residential building in a moderate climate.



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Buildings waste 270 billion EURO a year

Can Energy Ministers fix it? Yes they can!

- At current energy prices Europe is wasting **270 billion EURO** a year through a lack of basic energy efficiency measures in buildings, such as roof and wall insulation;
- This is the equivalent of giving every single EU citizen a tax rebate of **640 EURO** a year;
- Can we fix it? Yes we can!

To find out how visit: www.eurima.org/270yeswecan



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Background on Ecofys VI Study – How the Calculations are Made

Ecofys – A Leading Energy and Environment Consultancy

Established in 1984, Ecofys specialises in energy saving and renewable energy solutions. As part of the Econcern group, they offer research and consultancy services as well as product development.

Over the years Ecofys has conducted extensive research and completed projects for many energy companies, housing corporations, building companies, international and local authorities, and energy consumers around the world. With more than 200 employees in seven countries, they are one of the largest consultancy firms in sustainable energy and climate policy.

The EURIMA Ecofys Studies

EURIMA has commissioned Ecofys to create six reports showing tangible facts and figures explaining why energy efficiency is so important for Europe. The first report commissioned by EURIMA, Ecofys I showed the potential energy savings and CO₂ emissions reduction of energy efficient buildings (40% of energy is used in buildings). Ecofys II demonstrated how much of this potential would be captured by the Energy Performance in Buildings Directive and how to capture the rest (90% of the potential savings lie outside the Directive). Ecofys III demonstrated that energy efficiency in buildings, in particular insulation, is the most cost-efficient way for Europe to reduce its consumption of energy whilst supporting competitiveness. Ecofys IV and V, extended this research to cover the new Member States of the EU (the so-called EU 10).

Ecofys VI builds upon both Ecofys III and IV-V to demonstrate the impact of the new energy price situation on the cost-effectiveness of energy efficiency measures across the EU 25 as well as demonstrating the impact of a number of different energy price scenarios on the cost savings from energy efficiency measures.

Ecofys VI - Looking Forward at Possible Trends in Energy Prices

Estimating the potential energy cost savings from effective insulation over thirty years presents one key problem: how can we factor in the likely trend in energy prices for this period?

The Ecofys VI study takes on this challenge by looking at five different possible future energy scenarios and presenting the cost saving potential from insulation that each of these scenarios would deliver. In all scenarios, insulation and energy efficiency measures are demonstrated to save money over their lifetime. However, in terms of communication, EURIMA has taken one of the scenarios as a basis. The scenario we are using for communication is the so-called high-price scenario (Scenario 5 from Ecofys VI). This scenario demonstrates what would be the savings if oil prices are to remain at current high levels.

Determining the Cost Savings from Energy Efficiency

The climatic zones

In order to estimate the potential energy cost savings within the EU15 the countries were divided into three climatic zones:

- **Cold:** Finland and Sweden
- **Moderate:** Austria, Belgium, Denmark, France, Germany, Ireland, Luxembourg, The Netherlands, United Kingdom
- **Warm:** Greece, Italy, Portugal, Spain

For the same purpose the EU10 countries (excluding Malta and Cyprus which only represent 1% of the household CO₂ emissions from the new Member States and have low specific heating-related emissions) were grouped into three zones:

- **Zone 1:** Estonia, Latvia and Lithuania
- **Zone 2:** Poland
- **Zone 3:** Czech Republic, Hungary, Slovakia and Slovenia

The costs

Capital costs – two approaches were taken

- **Non-coupled:** In this scenario, all costs, including the total labour costs, materials, applicable taxes, overheads as well as the profits needed to undertake the energy-saving measure;
- **Coupled:** In this scenario, it is presumed that a renovation measure is already taking place (e.g. for a leaky flat roof) and that only the additional costs related to improving the thermal characteristics are included. For the costs set out in the nutshell the figures are based on the coupled scenario. In a few cases non-coupled figures were used, as certain energy efficiency measures can only be done in this way.

Operational and maintenance costs

- **Maintenance costs:** The maintenance costs for insulation are negligible but when comparing insulation against other measures, such as installations like heat exchangers, solar panels or boilers, then the annual maintenance costs for these measures are taken into account.
- **The service lifetime:** A period of 30 years was taken as the reference lifetime of the measures in terms of its cost-effectiveness and savings potential. In reality, insulation measures perform as long as the house itself, often reaching an effective lifetime of 70/100 years.