

Energy and CO₂ savings potential of industrial insulation in Germany

The energy savings potential of industrial insulation is large and exists across all regions, sectors, equipment and operating temperatures. The total cost-effective savings potential amounts to about 106 PJ and 8.7 Mt CO₂ per year, of which

- **80 PJ and 6.3 Mt CO₂ per year in industry, and**
- **26 PJ and 2.4 Mt CO₂ per year in fossil fuel-fired power generation.**

The annual savings potential is more than:

- The energy consumption of 1 500 000 households
- The CO₂ emissions of 4.3 million middle class cars each running 12 500 kilometres per year.

A large part of this potential can be tapped cost-effectively with payback times less than one year:

- Insulating bare surfaces to cost-effective levels and repairing damaged insulation in industry requires initial investments of about 180 million euros.
- This one time investment would represent an energy savings potential of about 75% of the total potential, which would save industry 750 million euros every year.

How to tap the potential?

Step 1: Insulate uninsulated parts and replace damaged insulation

If all uninsulated parts would be insulated, and damaged insulation would be repaired, this would reduce industrial energy consumption by approximately 4%.

Step 2: Evaluate the cost-effectiveness of insulation and consider upgrading

Insulating all surfaces to cost-effective levels would avoid about two-thirds of current heat loss.

Step 3: Involve insulation experts early in the planning process of a new build, overhaul or retrofit to realise cost-effective and energy saving levels*

Sufficient space available is key to enabling realisation of cost-effective and energy-efficient insulation levels.

* EiiF certified TIPCHECK engineers (Technical Insulation Performance Check) carry out independent energy appraisals and evaluate the money and energy savings potential. More information on www.eiif.org

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