AUSTRIA

The total energy saving and emission reduction potential by consequently improving insulation solutions in industry

Energy saving potential: 343 ktoe

Emission reduction potential: 885 kt

The industrial insulation energy saving potential by different energy sources (in ktoe):

- **COAL: 20,6**
- **GAS: 168,6**
- **ELECTRICITY: 1,4**
- **OIL: 25,1**
- **HEAT: 18,0**
- **BIOMASS: 109,4**

The industrial insulation potential to reduce the energy consumption and carbon emissions by industry sector:

Potential by sector in Austria	Energy savings (ktoe)	CO_2 eq. emission reduction (kt)
Electricity sector*	47	135
Chemical industry	42	103
Refineries	17	59
Paper & Pulp	73	184
Food industry	25	64
Non-metallic minerals	34	92
Steel industry	25	71
Machinery	17	44
Wood industry	42	87
Non-ferrous metal	6	15
Transport equipment	5	11
Textile	3	8
All other sectors	5	13
TOTAL	**343**	**885**

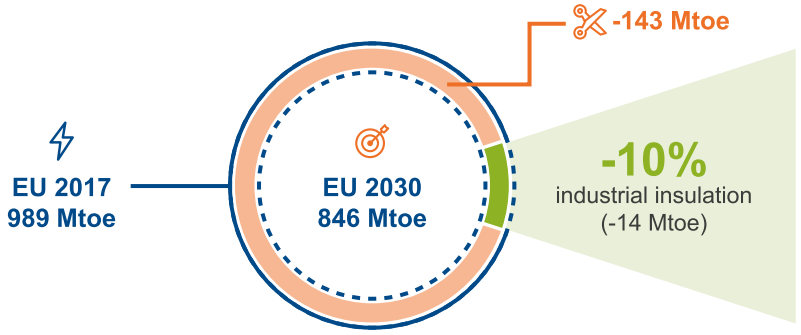
**Gas, Coal, Oil, Biomass Technologies*

EU 27 to be climate-neutral by 2050

The European Union has set itself the ambitious goal to be climate-neutral by 2050, with net zero CO_2 emissions. Decarbonising EU industry is one of the major challenges to reach this target. The good news is that there are effective short-term industrial insulation solutions which are cost-effective to the asset owners and ready to deliver.
The EiiF Study 2020 analyses that 14 Mtoe of energy can be saved by improving insulation standards in industry, offering the potential to reduce the EU's CO_2 emissions by 40 Mt every year.

Industrial insulation could deliver 10% to reach the EU's Energy Efficiency Target 2030

By consequently upgrading EU industry with well performing insulation systems about 14 Mtoe of energy could be saved representing 10% of what is needed to close the gap (143 Mtoe) between the EU's total energy consumption of 989 Mtoe (2017) to the targeted maximum of 846 Mtoe in 2030.



Electricity sector*	-3.100
Chemical industry	-2.100
Refineries	-1.600
Paper & Pulp	-1.300
Food industry	-1.300
Non-metallic minerals	-1.200
Steel industry	-900
Machinery	-700
All other industries	-1.900

**Gas, Coal, Oil, Biomass Technologies*

Total energy consumption EU 27

Energy savings to reach 2030 target

Insulation energy saving potential by industry sector (ktoe)

Why is there still such a high industrial insulation potential in EU's industry?

Several factors contribute today to the tendency in industry to insulate less rather than implement more energy efficient insulation systems: the pressure to reduce investment and maintenance costs, an increasing lack of insulation knowhow and split responsibilities for energy and maintenance budgets. The energy efficiency level of insulation in Europe's industrial installations is relatively low.

The existing insulation systems and technical requirements most often solely focus on safety to keep surface temperatures below 55 °C. Moreover, many plants in the EU 27 are aging and in a dire need for insulation repair.

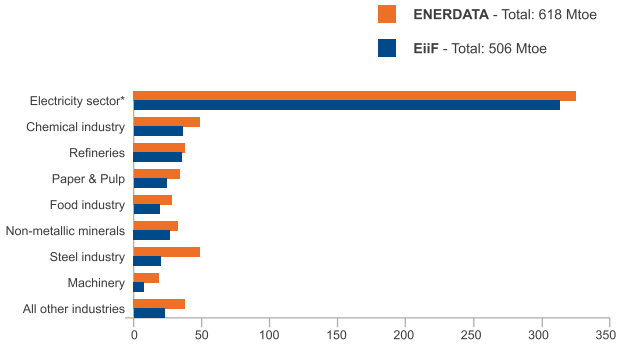
The biggest part of the growing but with energy efficient insulation easily avoidable carbon emissions in industry comes from equipment without insulation or covered with damaged insulation.

Depending on the temperature, the increasing share of uninsulated or damaged insulation systems today varies from 10% to 2%. Insulating uninsulated equipment and repairing damaged insulation offers a large CO_2 and energy saving potential with short payback periods (two years on average and often just a few months).

LOW-TEMPERATURE	MIDDLE-TEMPERATURE	HIGH-TEMPERATURE
< 100 °C	100 °C - 300 °C	> 300 °C
10%	**6%**	**2%**

About the EiiF analysis

EiiF used as the source of information the database from ENERDATA and the Odyssee-Mure EU project. For its analysis to define the carbon emission reduction potential of industrial insulation EiiF consequently used only the data for energy consumption by industry branch which can be influenced by insulation systems. For example, the electricity consumed in mechanical work is not considered, as it cannot be improved by insulation.



**EiiF considered exclusively gas, coal, oil and biomass technologies in its study. However, insulation energy efficiency potential exists also in carbon free technologies like nuclear and some renewables.*

More information can be found in EiiF's White Paper and on www.eiif.org/publications