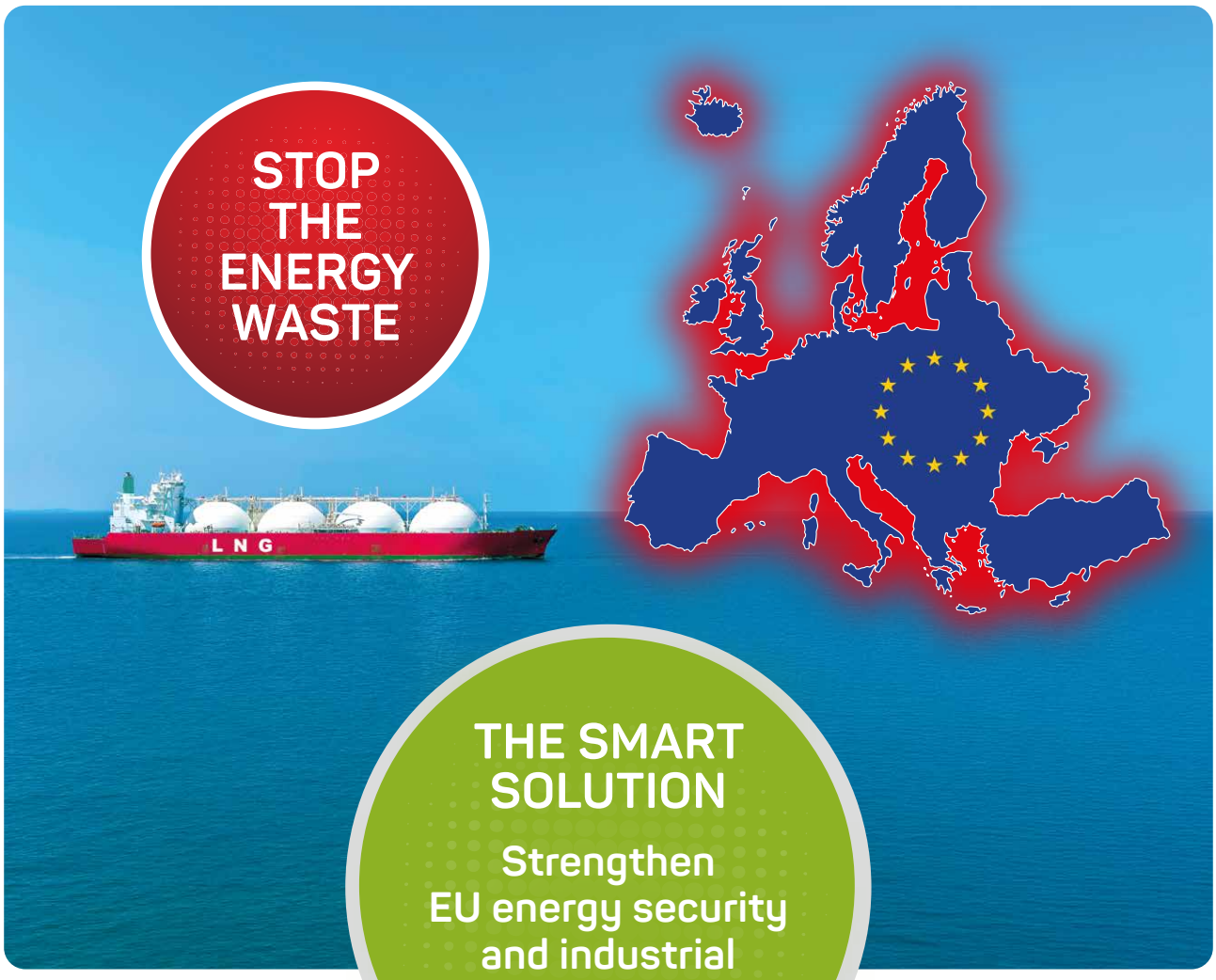
# INDUSTRIAL INSULATION: STOP WASTING ENERGY REDUCE IMPORTS IMMEDIATELY

EVERY YEAR EUROPE IMPORTS 120 TWh OF LNG FROM QATAR
SHIPPED THOUSANDS OF KILOMETRES
PAID FOR AND LOST IN EUROPEAN INDUSTRY.



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# EUROPE IS IMPORTING ENERGY IT IS IMMEDIATELY LOSING AGAIN

**Europe is currently facing a dual challenge:**
- ✓ Securing affordable energy
- ✓ Reducing dependency on imports

At the same time, **large amounts of energy are wasted daily in EU industry** through uninsulated or poorly insulated equipment such as valves, flanges, pipes, and tanks.

→ This is **not a technology gap.**
→ This is an **implementation gap.**

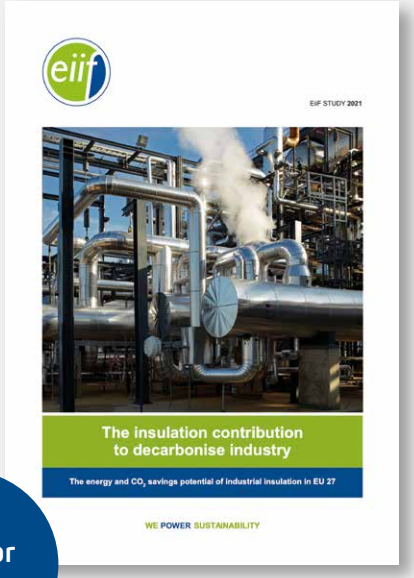
**A targeted EU action programme can deliver measurable gas savings before the next winter.**

**IMMEDIATE ENERGY SAVINGS IN EU INDUSTRY THROUGH INSULATION**

**Key Facts:**

- ✓ **160 TWh/year** wasted every year in EU industry
- ✓ **120 TWh/year** can be captured – starting immediately and financed through savings to 2040
- → **3.500 TIPCHECKs confirm:** no technology gap, only implementation

TIPCHECK

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# FROM WASTE TO IMMEDIATE SAVINGS

## 120 TWh + 27 MT $CO_2$ / EUROPE'S INSULATION ENERGY AND EMISSIONS SAVINGS POTENTIAL

- ✓ Delivered by insulating uninsulated components and repairing damaged insulation systems to EN 17956 class C
- → This can be addressed immediately during full production and without redesigning processes

## WHY THIS OPPORTUNITY IS HIDDEN

- ✓ Insulation is often designed for process or safety, not energy efficiency
- ✓ Many systems are aging or damaged
- ✓ Companies are not aware of the savings potential and give no priority to insulation projects

## INSULATION SAVINGS EQUIVALENT TO 7,5 MILLION HOUSEHOLDS

- ✓ This quick-to-unlock savings potential equals the annual energy consumption of more than 7,5 million households

# STOP THE ENERGY WASTE
# 4 PILLAR INSULATION EU EFFICIENCY PLAN
# 5 TWh IMMEDIATELY
# 120 TWh ANNUALLY BY 2040

## → PILLAR 1 – ETS HIGH POTENTIAL

**57 TWh ANNUAL SAVINGS BY 2040**

The EU ETS listed companies represent the largest and fastest opportunity to reduce industrial energy waste.

### IMMEDIATE ACTION

Launch a targeted programme across 10.000 ETS-listed production sites:

- Incentivise insulation scans (e.g. TIPCHECK)
- Identify uninsulated and poorly insulated equipment
- Ensure that at least 10% of identified equipment is insulated immediately

→ IMPACT: **~5 TWh annual savings in the short term**

### SCALING TO 2040

- Establish regular insulation scan cycles
- Implement all measures with a payback period ≤ 3 years

→ IMPACT: **Up to 57 TWh annual savings by 2040**

**Immediate action in the ETS sector delivers fast results and creates the foundation for large-scale savings.**

## → PILLAR 2 – SME HIGH POTENTIAL

### 23 TWh ANNUAL SAVINGS BY 2040

SMEs represent a large, untapped efficiency potential, particularly due to uninsulated equipment.

**ACTION**

Introduce a simple and scalable insulation scan programme (e.g. TIPCHECK) for:

- >100.000 SME facilities
- Identification of uninsulated equipment

Encourage implementation of:

- All measures with payback ≤ 3 years

→ IMPACT: **Up to 23 TWh annual savings by 2040**

**Simple insulation measures in SMEs can deliver significant savings quickly.**

## → PILLAR 3 – NON-RESIDENTIAL SECTOR

### 7 TWh ANNUAL SAVINGS BY 2040

The non-residential sector offers a relevant but often overlooked opportunity to reduce energy losses.

**ACTION**

Develop and deploy a tailored insulation scan programme:

- Covering >500.000 buildings/units
- Focused on identifying uninsulated HVAC equipment

Encourage landlords to:

- Implement measures with payback ≤ 4 years

→ IMPACT: **Up to 7 TWh annual savings by 2040**

**Targeted programmes in non-residential buildings unlock additional efficiency potential beyond industry.**

## → PILLAR 4 – INSULATION UPGRADES (ETS & SMEs)

### 33 TWh ANNUAL SAVINGS BY 2040

Beyond quick wins, upgrading existing insulation systems is essential for long-term performance.

**ACTION**

Encourage ETS companies and SMEs to:

- Upgrade existing insulation systems to EN 17956 Class C performance.

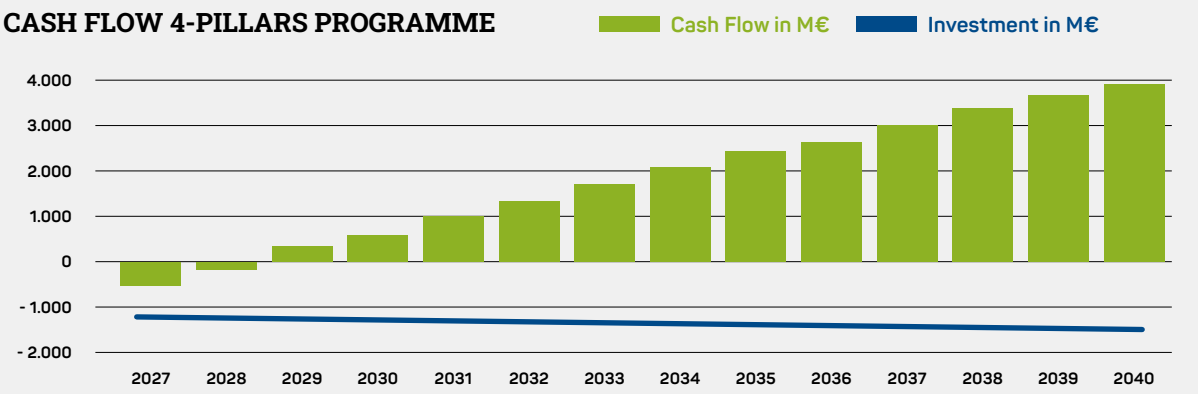
**FRAMEWORK CONDITIONS**

- Longer payback periods (up to 7 years)
- Projects with payback periods of more than 5 years could be supported by targeted subsidy programmes

→ IMPACT: **Up to 33 TWh annual savings by 2040**

**Structural upgrades deliver deeper savings and complete the transition to energy efficient insulation systems.**

# OUTLOOK DELIVERING 120 TWh ANNUALLY BY 2040




If implemented immediately, these four pillars provide a clear and practical pathway to:

- Achieve 120 TWh annual energy savings by 2040
- Eliminate the need for LNG imports from Qatar
- Strengthen EU energy security and industrial competitiveness

## ECONOMIC IMPACT

The proposed measures are highly profitable for European industry:

- €5.400 million net positive cash flow
- 27 Mt $CO_2$-eq. emissions reduction annually

## CASH FLOW PERFORMANCE

- ETS High Potential (57 TWh): €3,5 return per €1 invested
- SME High Potential (23 TWh): ~2-year payback, €1,6 return per €1
- Non-Residential (7 TWh): ~4-year payback
- Upgrades ETS & SMEs (33 TWh): ~7-year payback

**IMPORTANT NOTE: $CO_2$ emission certificate costs and related savings are not included. Taking these effects into account would likely improve payback periods and overall profitability.**

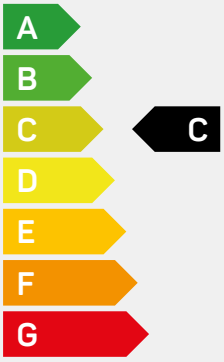
# STOP THE WASTE OF TOMORROW BY SETTING THE STANDARD TODAY

## MAKE ENERGY EFFICIENCY CLASS C THE MIMIMUM ENERGY PERFORMANCE STANDARD FOR INDUSTRY

For all new installations (from the planning and design phase) it should become mandatory by 2030 (the latest) that all industrial equipment and piping should be insulated to at least EN 17956 Class C.

### WHY THIS MATTERS

- → Prevents new energy waste at the source
- → Provides a clear, harmonised performance benchmark
- → Ensures technology-neutral and future-proof solutions
- → Complements existing frameworks (EED, ISO 50001, energy audits) without adding complex bureaucracy and based on the European Norm EN 17956




**EFFICIENCY MUST BE BUILT IN FROM THE START**

# EUROPE'S INSULATION INDUSTRY IS READY NOW


**Insulation contractors (market leaders in Europe and EiiF members) confirm that an additional 10–20% capacity is available and can be immediately deployed to insulate uninsulated equipment.**

# ACT NOW. START SAVING ENERGY INSTEAD OF IMPORTING AND WASTING IT.

**THE FASTEST, CLEANEST AND CHEAPEST ENERGY FOR EUROPE IS THE ENERGY WE STOP WASTING.**

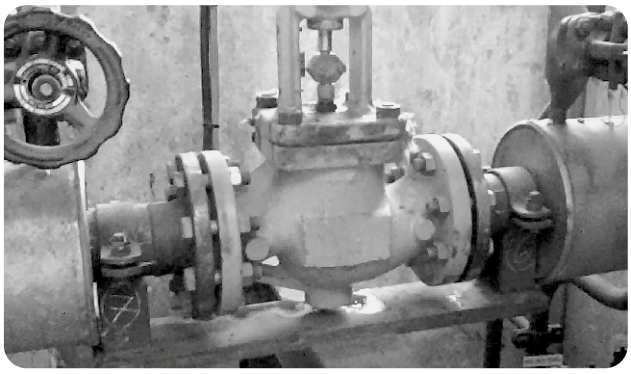
## ENERGY EFFICIENCY STARTS WITH TECHNICAL INSULATION: WHY IT WORKS

- ✓ Easy to identify – using standardised TIPCHECK thermal energy audits
- ✓ No new tech – well proven energy efficiency technology
- ✓ No bureaucracy – minimum performance based on product neutral standard EN 17956
- ✓ Immediate impact – many installations and insulation upgrades are possible during production
- ✓ Increases competitiveness
- ✓ Delivers energy security
- ✓ Helps to decarbonise industry
- ✓ In line with EU legislation like the EED and IED

# TECHNICAL INSULATION ENERGY SAVINGS: CASE STUDY "ETS" (PILLAR 1)

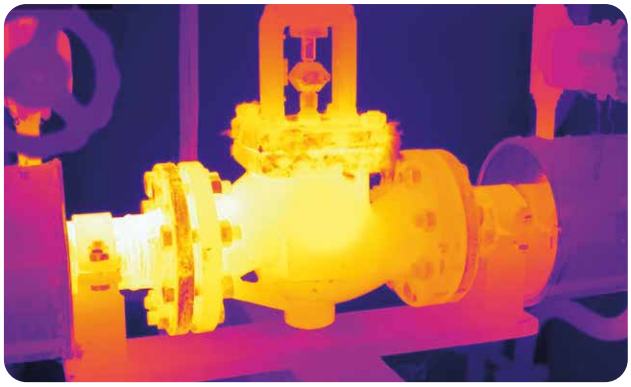
## ONE UNINSULATED PROCESS VALVE

- Size: DN 150/6 inch
- Temperature: 150 °C
- Operational time: 8.760 hours
- Annual energy loss: 10.500 kWh



## TYPICALLY UNINSULATED EQUIPMENT

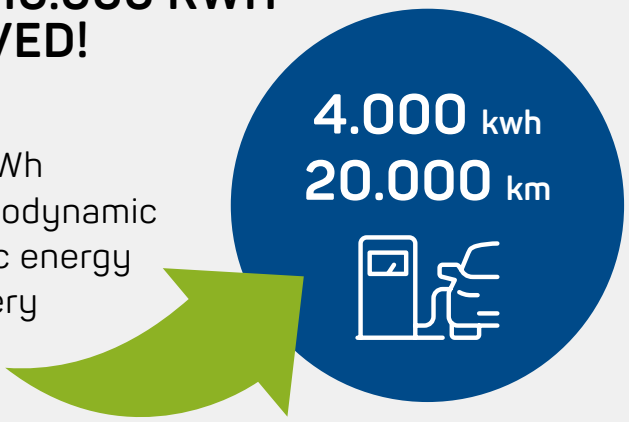
The TIPCHECK experience shows that valves and flanges in industrial plants are typically uninsulated. The energy loss can be detected and illustrated with infrared thermography.



REAL SAVINGS. IMMEDIATE IMPACT.

## BY INSULATING THE VALVE 10.000 KWH CAN BE SAVED!

Transforming the saved 10.000 kWh thermal energy with a 40% thermodynamic efficiency into 4.000 kWh electric energy and using this to charge the battery of an electric car, one could **drive more than 20.000 km.**



# TECHNICAL INSULATION ENERGY SAVINGS: CASE STUDY "SME" (PILLAR 2)

## REAL EXAMPLE – IMMEDIATE IMPACT:

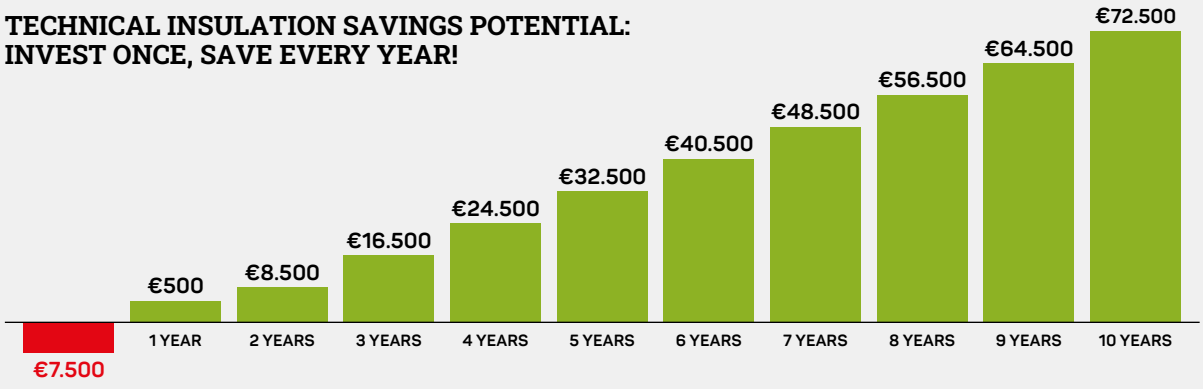
- **30** uninsulated valves
- Investment: **€7.500**
- Savings: **250.000 kWh/year**
- Annual savings: **€8.000**
- Payback: **< 1 year**

**3.500 TIPCHECKs conducted globally since 2010 reveal that nearly every audit identifies uninsulated equipment, offering significant energy savings and $CO_2$ reductions with rapid payback.**

### EXAMPLE: 30 UNINSULATED PROCESS VALVES (DN 80 – DN 200):

### ENERGY EFFICIENCY: THROUGH IMPROVED TECHNICAL INSULATION

### TECHNICAL INSULATION SAVINGS POTENTIAL: INVEST ONCE, SAVE EVERY YEAR!



# YOU DON'T KNOW WHAT YOU DON'T KNOW UNTIL YOU KNOW


Discover in under 90 seconds
how certified TIPCHECK Experts help industry
uncover their insulation savings potential.

# ABOUT EiiF

The European Industrial Insulation Foundation (EiiF) is an international foundation headquartered in Switzerland. As a neutral and non-profit institution, EiiF promotes insulation as a top-of-mind method for enhancing sustainability and profitability.

Since its foundation, EiiF has established itself as a resource for industries that need to reduce $CO_2$ equivalent emissions and save energy. Its programme raises awareness of the multiple benefits of industrial insulation.

EiiF was established in 2009 by 12 Founding Partners. Nowadays, it comprises more than 80 leading industrial insulation companies from global players to small and medium sized companies.

# GET IN TOUCH

Learn more about the EiiF Foundation and how to co-operate or participate:
www.eiif.org

**EiiF Deed of Foundation:**
Read here about the purpose and the primary task of the Foundation:
www.eiif.org/deed-of-foundation

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**TIPCHECK**
**Technical Insulation Performance Check:**
EiiF's energy auditing programme to evaluate the performance of industrial insulation systems:
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