



# 15<sup>TH</sup> | SE EUROPE ENERGY DIALOGUE

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## Towards to EU Energy Transition: **Why Energy Efficiency is important in Industry?**

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## 1. Define Energy Efficiency

«Energy efficiency improvements refer to a **reduction in the energy used for a given service or level of activity**»

*World Energy Council*

«Energy efficiency encompasses all changes that result in decreasing the **amount of energy used to produce one unit of economic activity**. Energy efficiency is associated with economic efficiency and includes technological, behavioral and economic changes»

*World Energy Council*

«Energy efficiency is **the use of technology that requires less energy to perform the same function**»

*Energy Information Administration*

«Energy efficiency is the process of **substituting energy by capital**, usually to generate profit after a certain amount of time»

*M. Pehnt, Energieeffizienz*

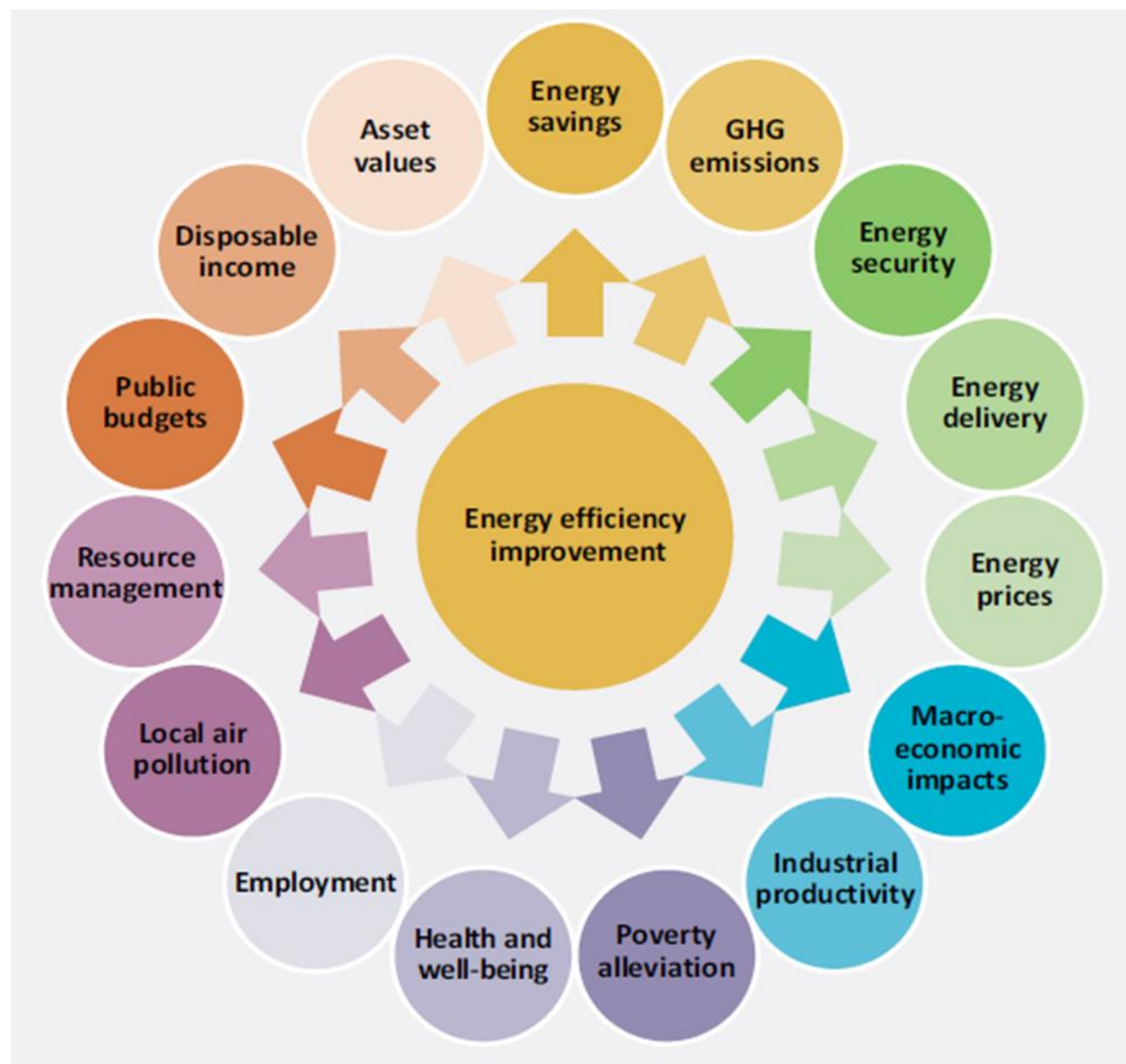
«Energy efficiency means the ratio of output of performance, service, goods or energy, to input of energy»

*EC Directive 27/2012/EC*

«**Energy efficiency is the fuel of the future**»

*Unknown*

# 1. Advantages of implementing Energy Efficient Measures

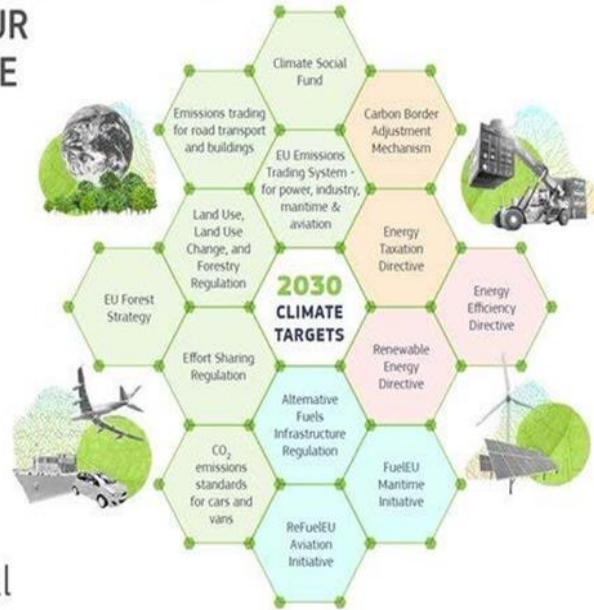


Source: IEA 2014

## 2. European Energy Policy

### EUROPEAN GREEN DEAL

REACHING OUR  
2030 CLIMATE  
TARGETS



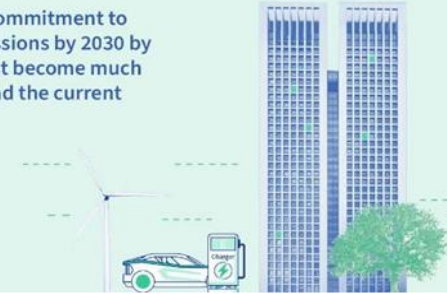
#EUGreenDeal



### Revision of the energy efficiency directive explained

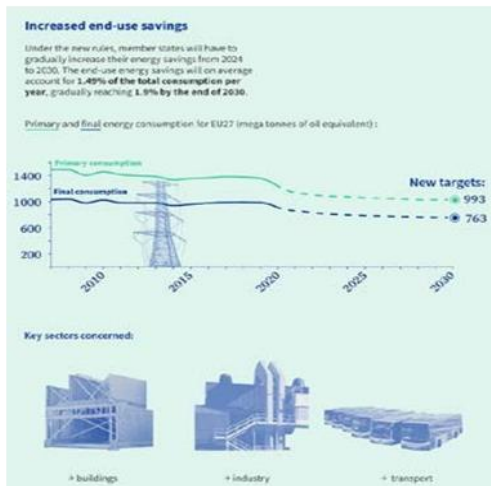
So far, the EU energy efficiency directive has contributed to energy savings of almost one third compared to the 2007 consumption projections for 2030.

However, in light of its commitment to cut greenhouse gas emissions by 2030 by at least 55%, the EU must become much more energy-efficient and the current rules need revision.



*“Saving energy is a key step to saving the planet. In recent months, Europeans have shown that they are ready and able to face this challenge, and our industry has proven that it can optimise its energy use and production processes. We now need energy efficiency to become an even more systemic part of our society, and this revised directive helps us to do that.”*

*Frans Timmermans, Executive Vice-President for the European Green Deal - 10/03/2023*

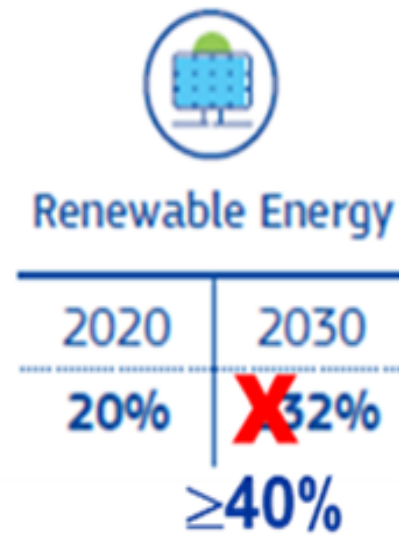
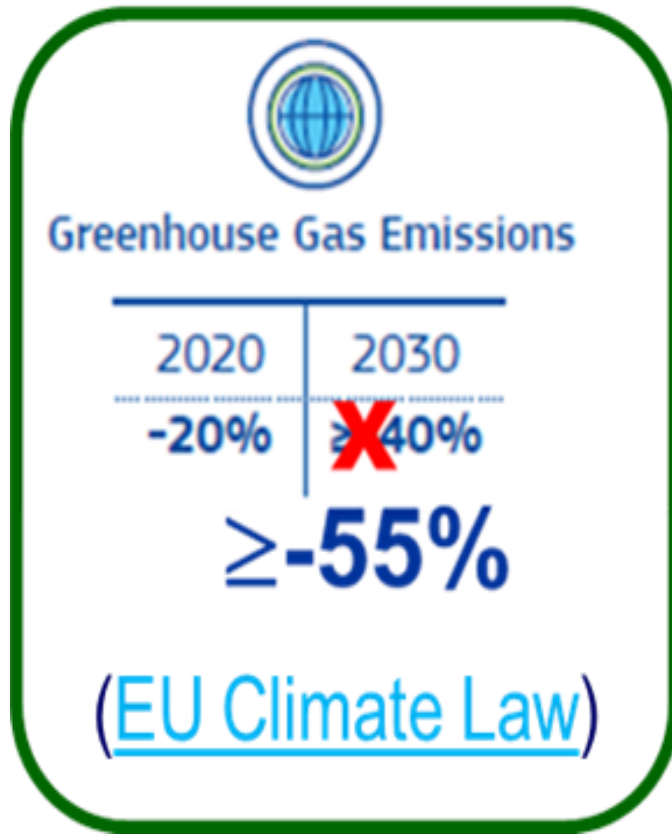


**EU NET-ZERO INDUSTRY ACT:  
MAKING EUROPE THE HOME  
OF CLEAN TECH**

#NetZeroEU #NetZeroIndustry



## EU's commitment to global climate action under the Paris Agreement



Adapt to meet commitment  
'Fit for 55%' package

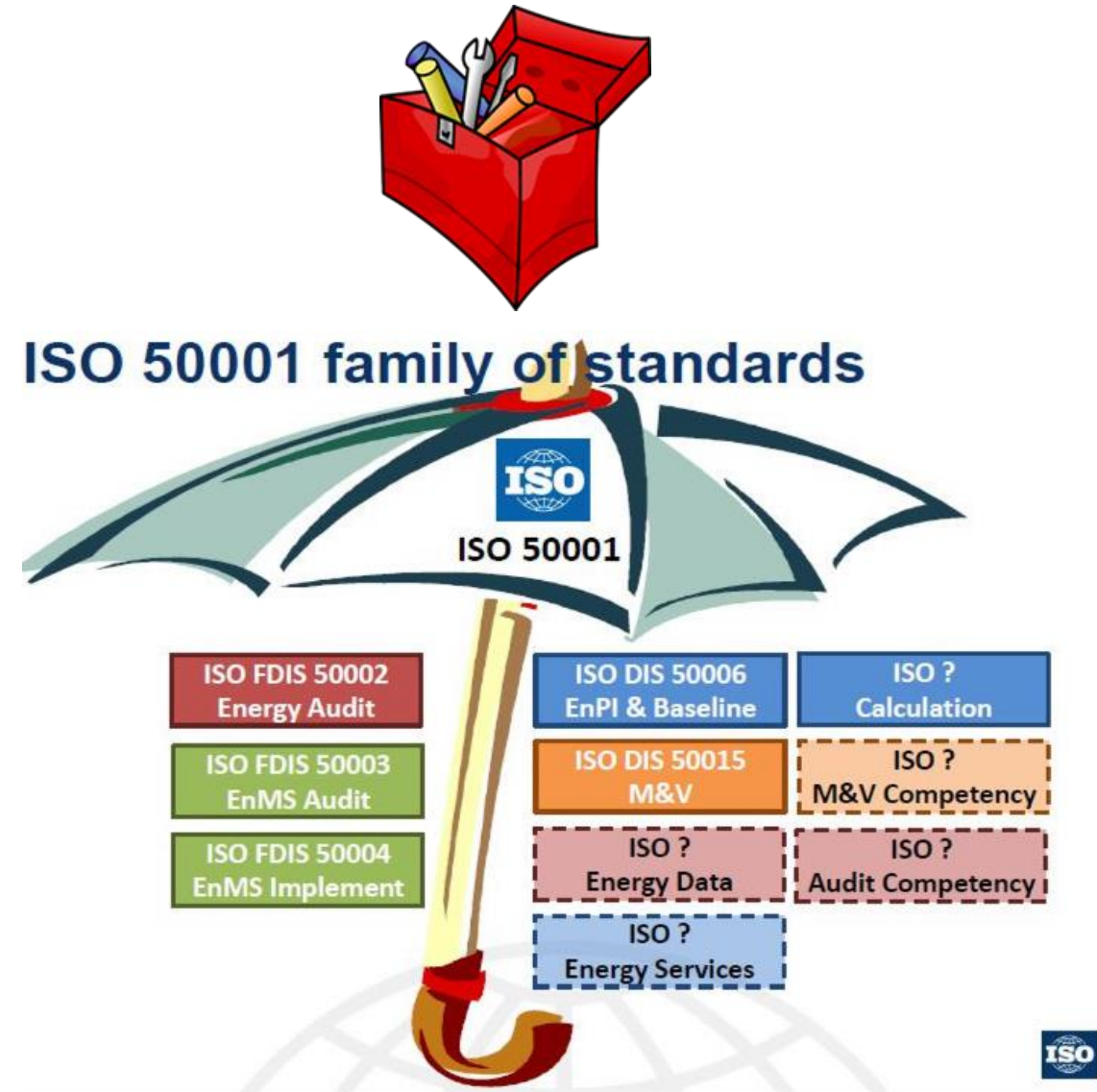
The first Directive for Energy Efficiency, No 2012/27/EU, known as EED, was approved in 2012 and it was recasted twice: in 2018 and in 2023 «**setting rules and responsibilities for the achievement of the ambitious targets of Energy Efficiency**».

Both Directives 2012/27 and 2018/2002 used the same framework for mandatory **Energy Audits** to all responsible companies and industries, as follows: those that the enrolled employees are >250 and the annual turnover >50 mil.€ or the total annual balance sheet >43 mil.€.

The last recast, occurred in October 2023, as **EED 2023/1791/EU**, introduces «**Energy Efficiency First**», as a fundamental principle of the European Energy Policy providing legal status for the first time. Important: the new EED is giving emphasis to “**Energy Poverty**”. To optimize Energy Efficiency in the industrial sector, Directive 2023/1791/EU - Article 11 - extends the scope of energy audit obligations to include all those companies, regardless of their size, that consume energy above a certain threshold . In detail, businesses that have: **Average annual energy consumption >85 TJ (23,611 MWh/yr)** during the previous three years are required to implement an Energy Management system (ISO 50001), **Average annual energy consumption >10 TJ (2,778 MWh/yr)**, during the previous three years, and **do not** implement an Energy Management system, are subject to an **Energy Audit**.

\* <https://eur-lex.europa.eu/legal-content/EL/TXT/HTML/?uri=CELEX:32023L1791>

ISO 50001:2018 is referring to all industries and companies aiming to reduce their energy consumption and improve their energy efficiency. Emphasis is placed on "heavy" industries, which are part of the Greenhouse Gas Trading System, based on EU Regulations 2066 and 2067 of 2018, but also on any other business that applies GHG processes.



## 4- Industry: The important role of the Energy Efficiency

- Energy Efficiency in Industry plays a key role in improving Energy Security, environmental sustainability and economic performance. It has an important role in strategies to reduce Climate Change.
- Industries in the European Union (EU) account for 9% of global industrial energy demand (13.3 EJ in 2020). To comply with agreed policies, European industry will need, over the next 30 years, to reduce energy consumption to 11.7 EJ in order to meet the climate targets of 9.6 EJ (IEA, 2021).
- The Energy consumption of Greek industry decreased by 42%, from 2000 to 2021, mainly due to Energy Savings (-1.83Mtoe), resulting from the implementation of measures to improve energy efficiency as well as reduced activity (-1.62Mtoe ) and structural changes (0.44Mtoe).

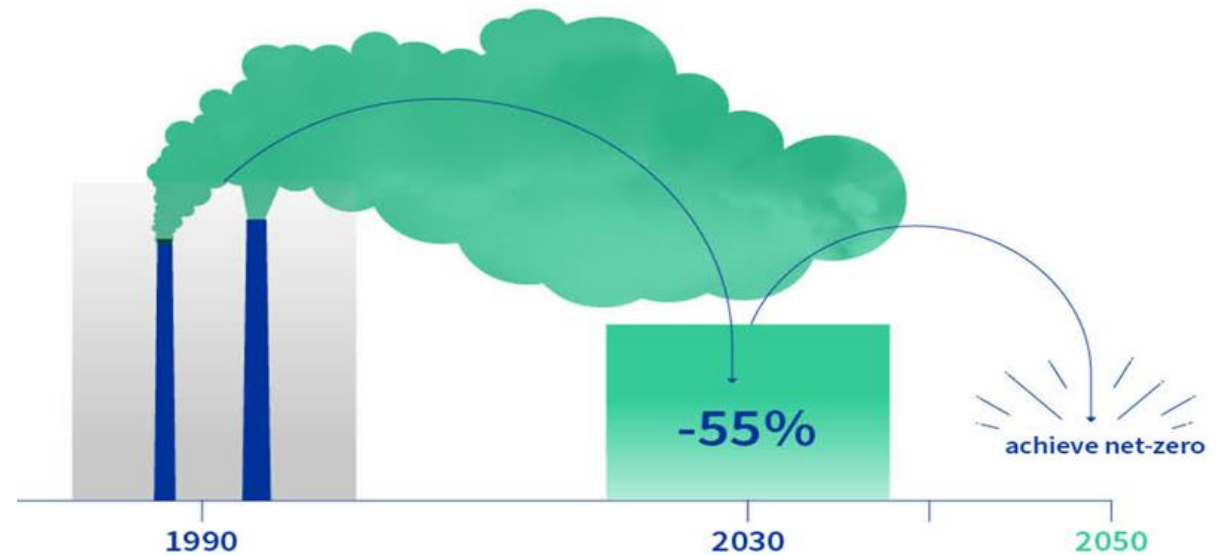
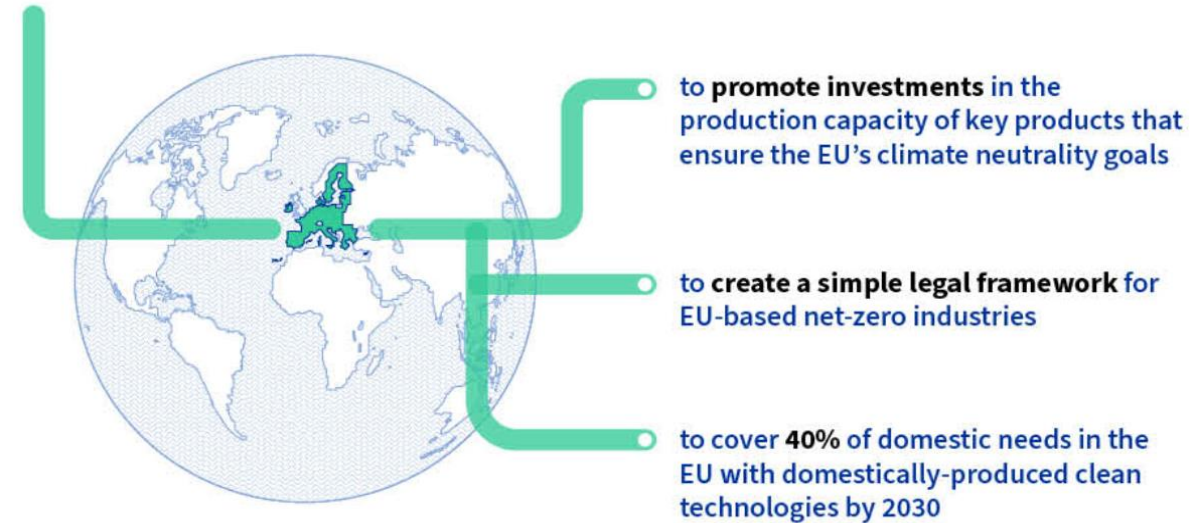


## 5- Net-Zero Industry Act

The EU is scaling up policies to produce clean technologies in the EU.

On 6 February 2024, the European Council and the European Parliament reached an Agreement on a **Net-Zero Industry Act**, based on the EU's 2030 Energy and Climate goals and the transition to Climate Neutrality, to 2050. This agreement 1) strengthens the competitiveness of European industry, 2) creates quality jobs and 3) supports the EU's efforts to become energy independent.

### Objectives of the net-zero industry act:



### **Why is Energy Audit important to Industry? What does it offer?**

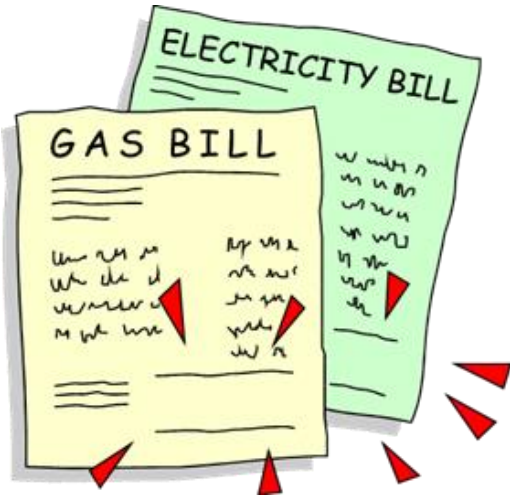
- Complete knowledge – scientifically proven – of the existing energy situation of the industry
- Solid Proposals to reduce energy consumption and therefore greenhouse gas emissions
- Better quality of final industrial product.

### **Which industries are obliged to undergo an Energy Audit?**

- According to Article 8 of Directive 2012/27, the obliged industries are those with the criteria referred previously (250 employees/50mEuro) and obliged to perform an audit every 4 years.
- Those industries implementing ISO 50001 procedures, the obligation is annual.

**If you don't measure Energy, you don't control it!**

Thank you for your attention



Please don't forget:

**Energy Efficiency First!**

**If you don't measure Energy  
You don't control it!**

