



# The role of energy audits in establishing or improving effective policies for SMEs

*Claudia Toro, ENEA*

**INTERREGIONAL COOPERATION FOR ENERGY  
TRANSITION IN SMEs**

*Florence, 20th April 2023*



This project has received funding from the EU H2020 research and innovation programme under grant agreement No 893924. The content of this report reflects the views of the authors and do not reflect the views of the Agency or the European Commission.



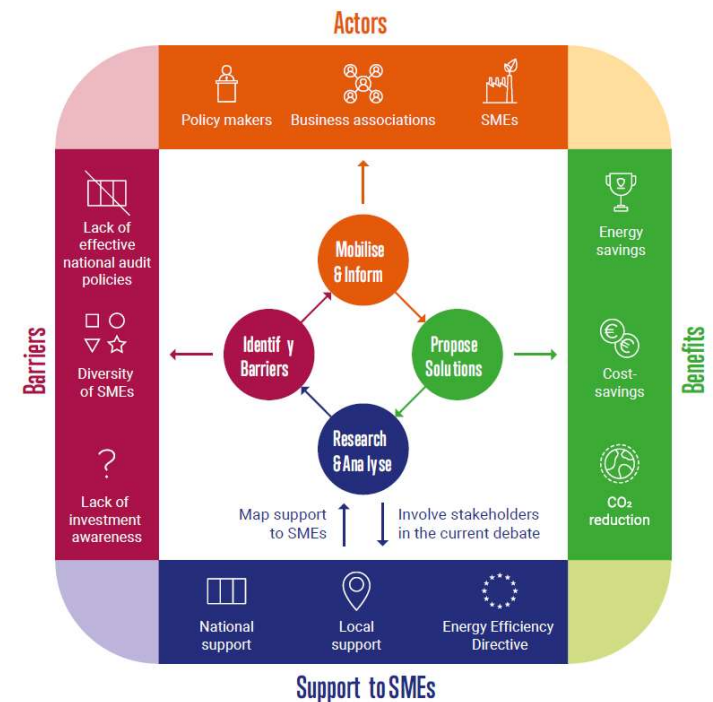
Italian National Agency for New Technologies,  
Energy and Sustainable Economic Development



# LEAP4SME

## MAIN GOALS

- **Mapping and understanding** the complex context of national and local support to SMEs
- **Proposing effective and realistic solutions** to policy makers and implementers in terms of policy schemes, cross-cutting policy solutions embracing both energy and non-energy benefits, policy recommendations
- **Contributing**, through LEAP4SME research, analysis, and stakeholders' involvement, to help the Institutions finding solutions to fill the gap of data when it comes to match Energy & SMEs
- **Knowledge sharing** (successes, barriers and failures) on national policies



This project has received funding from the EU H2020 research and innovation programme under grant agreement No 893924. The content of this report reflects the views of the authors and do not reflect the views of the Agency or the European Commission.



[www.leap4sme.eu](http://www.leap4sme.eu)

# Introduction

Small and medium-sized enterprises (SMEs) are the backbone of the European economy

Italy (2019)

3,708,610 SMEs

- ✓ More than 99% of all enterprises are SMEs (95% Micro enterprises)
- ✓ SMEs generate 70% of overall value added in the Italian 'non-financial business economy', exceeding the EU average of 56.4%
- ✓ The share of employment generated by SMEs is even larger, at 78.1%, compared to the EU average of 66.6%.

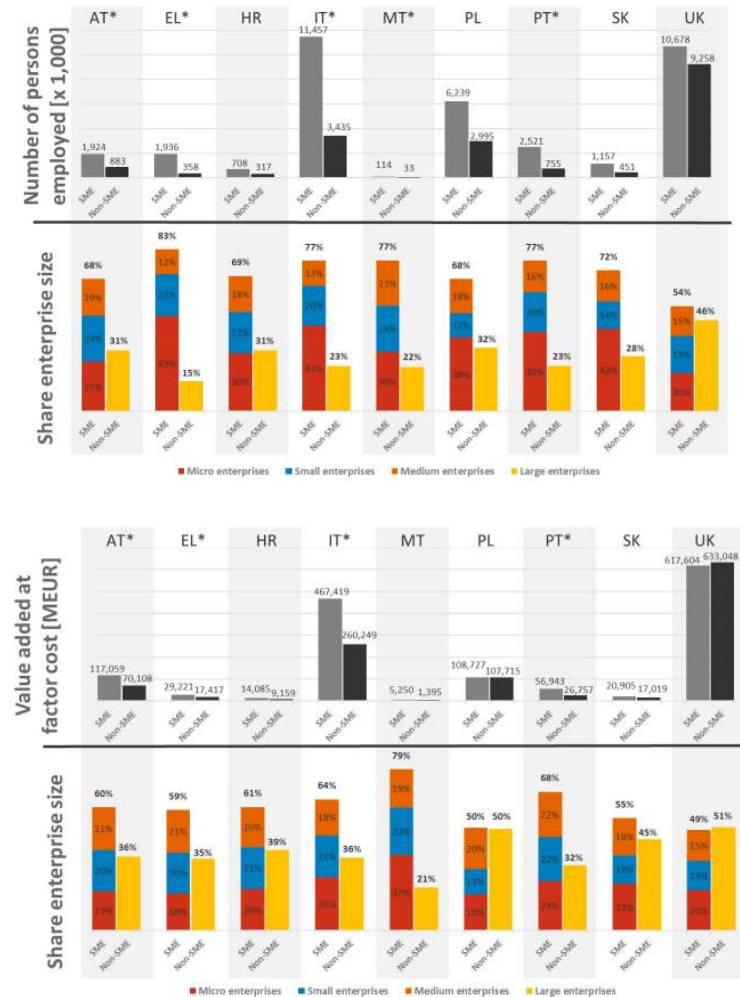
Source: D2.1 Mapping SMEs in Europe: Data collection, analysis and methodologies for estimating energy consumptions at Country levels, AEA [Deliverables | LEAP4SME](#)



This project has received funding from the EU H2020 research and innovation programme under grant agreement No 893924. The content of this report reflects the views of the authors and do not reflect the views of the Agency or the European Commission.



Italian National Agency for New Technologies, Energy and Sustainable Economic Development

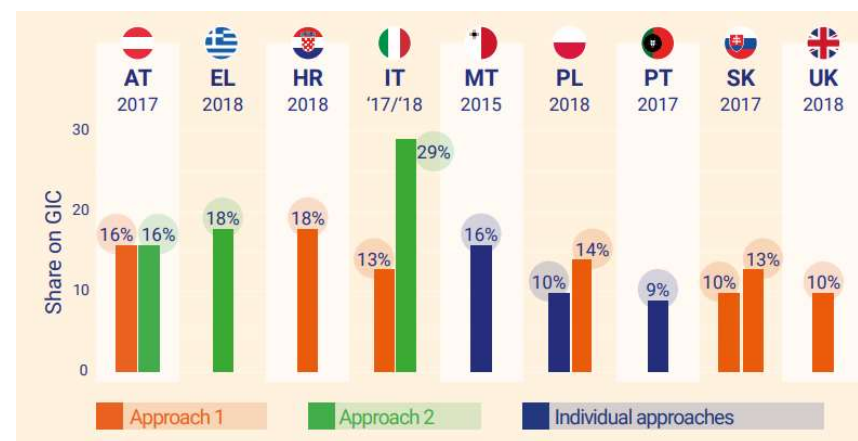


# SMEs: energy consumption and energy efficiency

The research revealed that no energy-related data for SMEs were published at European level.

- ✓ At a national level, the quality of existing energy-related data for SMEs was generally insufficient to provide a sound scientific-based support to the policy making cycle.

Sources analysed: IEA, Eurostat, EIB, OECD, EC studies and initiatives, national energy plans, interviews with experts in the partner National Agencies, 63 EU funded projects on energy efficiency/SMEs/enterprises, peer reviewed publications and main conferences on energy efficiency in Europe.



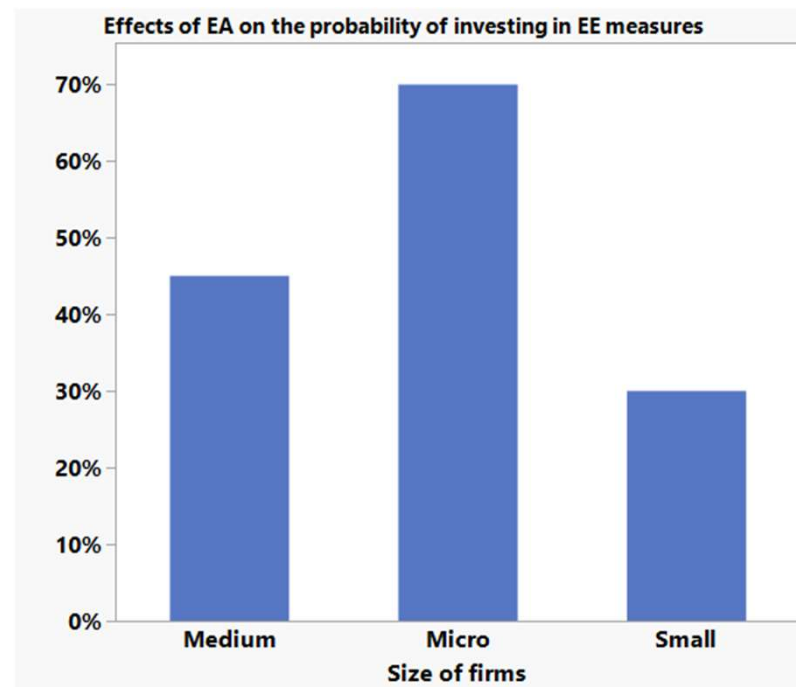
Hypothesis, methodologies and assumptions explained in the LEAP4SME report “Mapping SMEs in Europe: Data collection, analysis and methodologies for estimating energy consumptions at Country level”

# Relevance of Energy Audit in SMEs

**Energy audit play a crucial role in enterprises' decision making on energy efficiency investments**

The probability to invest in EPIAs are 1,5 times higher for companies having an energy audit (*European Investment Bank, 2019*) relative to those not having one.

**The energy audit is an effective tool to overcome the information barriers relative to energy efficiency and to enhance the adoption of EPIAs in SMEs.**

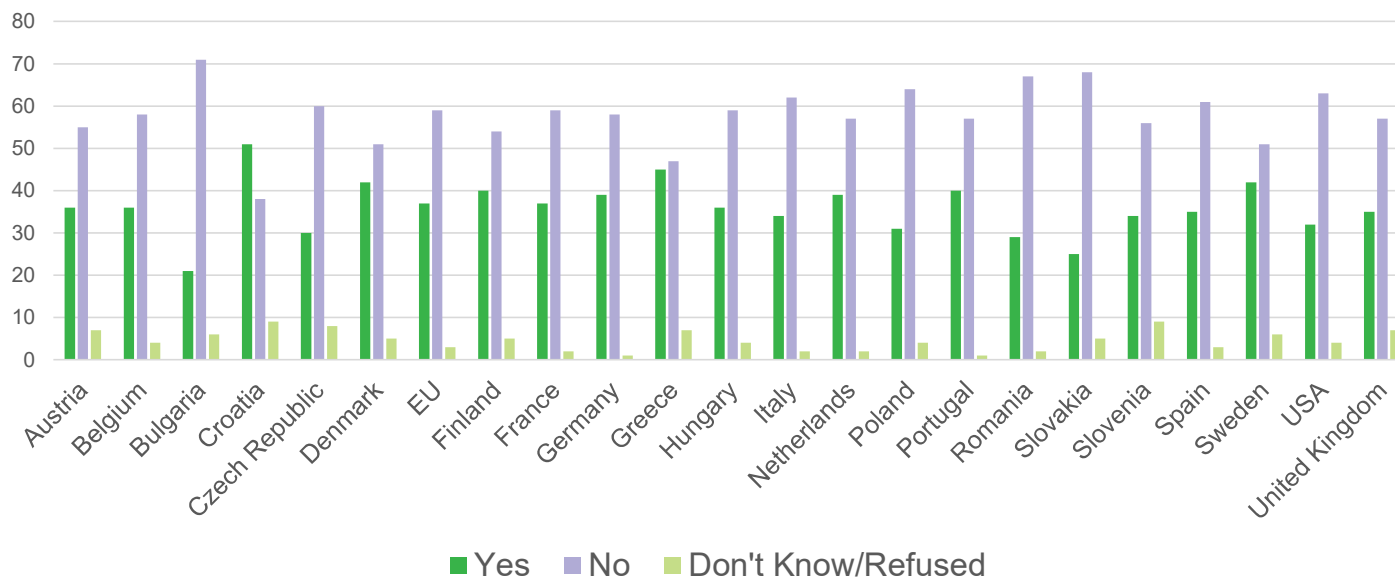


ENEA elaboration from European Investment Bank, 2019

# Energy Audit in SMEs – the European scenario

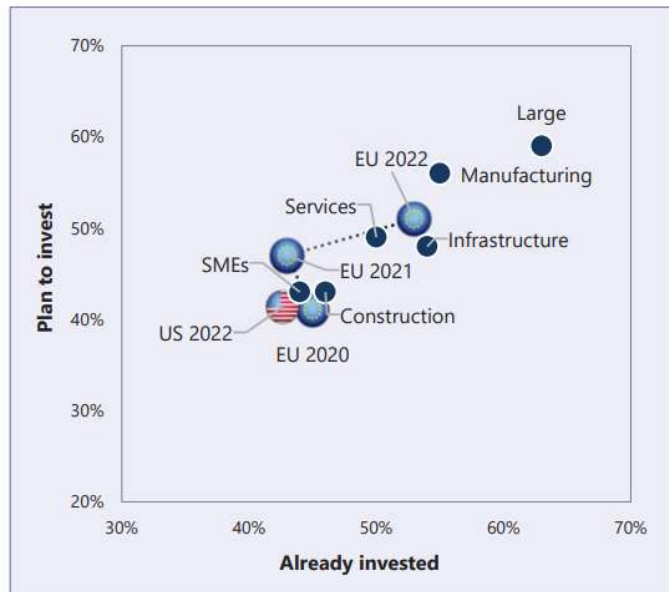
Source: EIB investment survey, European Investment Bank, 2020

**Q: Can I check, in the past three years has your company had an energy audit?**

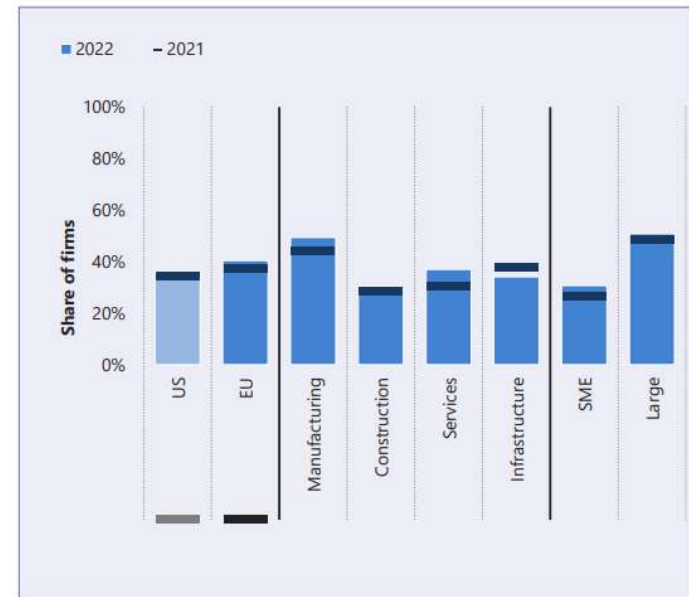


# Investments in EE – the European scenario

## INVESTMENT PLANS TO TACKLE CLIMATE CHANGE IMPACT



## SHARE OF FIRMS INVESTING IN MEASURES TO IMPROVE ENERGY EFFICIENCY



Source: EIB Investment survey 2022



# EAs market overview and barriers to SMEs

The analysis of the market for energy audits and EE at European level, together with interviews and literature review, allowed to identify a number of barriers and their different impact according to firm size and sector.

## Economic

- Cost of EAs
- ROI of EPIAs
- Access to financing

## Bureaucratic

- Single solutions for all sectors
- Administrative barriers
- Temporal uncertainty of mechanisms
- Technical language

## Organisational

- Lack of information
- Lack of understanding of EAs
- Obligations associated with EAs
- Lack of skills/infrastructure
- Decision-making barriers
- Low confidence in the audit process

## Others

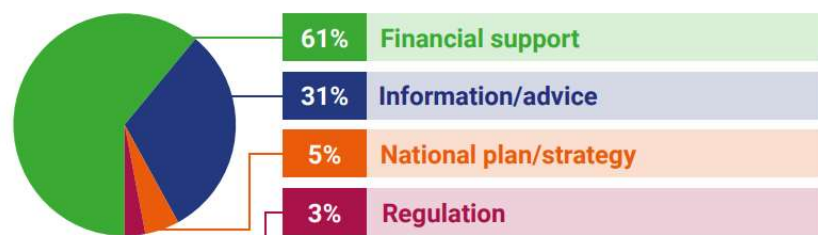
- Ownership of buildings
- Possible confusion of the terms diagnosis (energy) and audit (financial)
- Compromised corporate image
- Uncertainties COVID-19 related

Barriers	Size of SME		
	Micro	Small	Medium
Access to finance	Challenging – providing guarantee for accessing credit e.g., microloans	Moderately challenging	Not challenging – more likely to have financial reserves. Internal departments that manage business finances
Energy consumption data	Moderately challenging – usually simple energy consumption data / locally accessed	Moderately challenging – may not receive metered consumption	Challenging – more complex organisational consumption
Lack of resource (finance, time, expertise)	Challenging	Challenging	Moderately challenging
Energy efficiency opportunities	Challenging	Challenging	Moderately challenging

Source: D2.3 Energy audits market overview and main barriers to SMEs, EST Deliverables | LEAP4SME



# Support measures for EAs and EE in SMEs

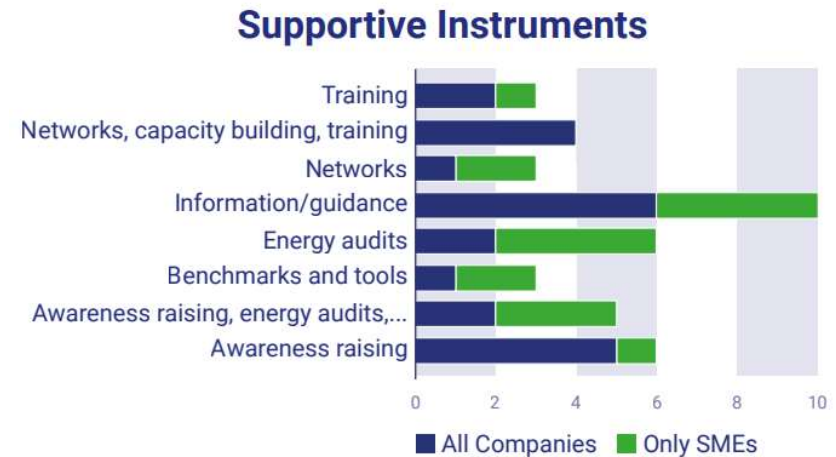
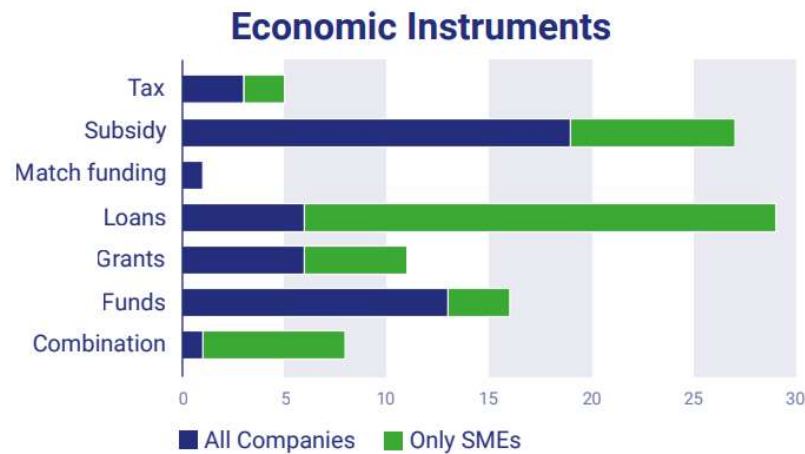


Source: LEAP4SME, 2021, "Report Existing support measures for energy audits and energy efficiency in SMEs"  
[Deliverables | LEAP4SME](#)

**173 policies, programmes and projects** were identified through a literature review conducted by the LEAP4SME partners.

- ✓ **Financial support** – where the primary aim of the policy is to provide financial support to SMEs via grants, loans, subsidies, tax relief or a combination of measures.
- ✓ **Information/advice** – including support through awareness raising, guidance, providing energy audits, amongst other forms of information and advice.
- ✓ **Regulation** – policies such as supplier obligations and standards.
- ✓ **National plan/strategy** – national plans and strategies for energy efficiency, renewable energy or low carbon technologies, or environmental protection which could affect SMEs.

# Support measures for EAs and EE in SMEs



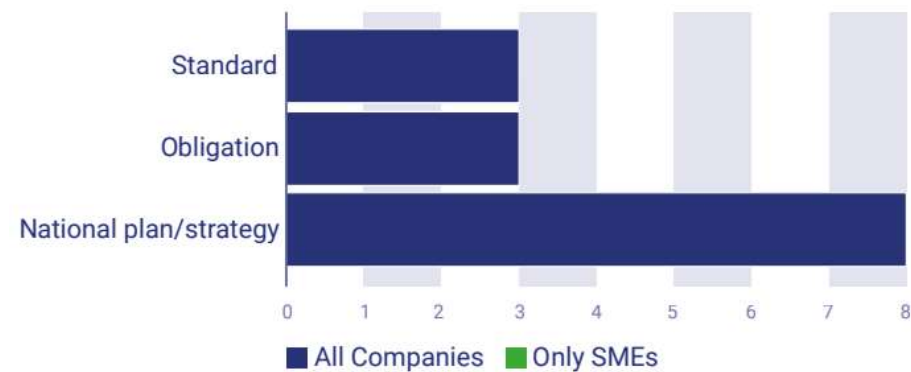
Half of 96 economic instruments are targeted at SME energy audits and/or energy efficiency:

- ▶ Support growth and competitiveness in SMEs (mainly loans)
- ▶ Direct support to energy efficiency in multiple target groups inc. SMEs (subsidies and combination)

- ▶ 40 Information/advice policy instruments were identified.
- ▶ High number of combinations of different types of support in 'one-stop-shop' type policies.
- ▶ High relevance of stand-alone energy audits policies for SMEs.

# Support measures for EAs and EE in SMEs

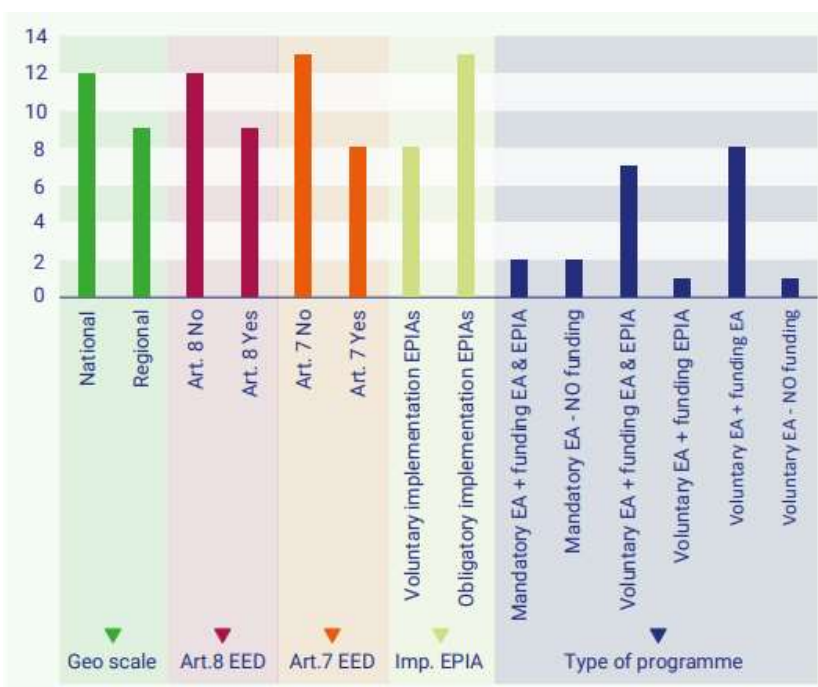
## Prescriptive Instruments



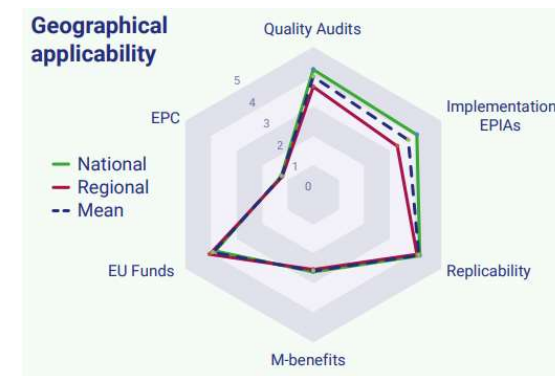
- ▶ No regulations or national plans/strategies identified which were directed solely at SMEs
- ▶ SMEs engagement based on voluntary programmes, instead of binding measures

# Support measures for EAs and EE in SMEs: analysis of good practices

21 policies and programmes analysed in 9 European countries



- ✓ Quality energy audits are higher in EED policies than in the voluntary programmes
- ✓ High quality audits are linked to obligatory implementation of EPIAs
- ✓ Stand-alone audit programmes seem not to have restrictive quality standards



LEAP4SME (2022) , D3.3  
Compilation of good practices

# International observatory

## Aim

To discuss on the state of the art of the National and European policies for **SMEs**, their barriers and enabling factors to unlock the enterprises' energy efficiency potential; to look for **links among SMEs and large enterprises policies**; to discuss on the topics of **Energy Management Systems and Energy Audit policies/techniques for SMEs in view of the new EED requirements**.

## Participants

Representatives of **15 National Energy Agencies** (Industry and SME areas), European Commission (DG-ENER, CINEA and JRC), UNIDO (United Nations Industrial Development Organization), MEDENER (Mediterranean Association of National Agencies for Energy Management), Green Industry Platform, Polytechnic University of Milan, Chamber of Commerce of Malta, and European Energy Network

## Approach

**Discussion with keynote** speeches and presentations to address the topics.



# International observatory

<https://leap4sme.eu/event/international-observatory/>

**INTERNATIONAL OBSERVATORY MEETING  
ON ENERGY EFFICIENCY POLICIES FOR  
ENTERPRISES AND SMES**

15 & 16 September  
Liaison Office of the European Parliament  
Via 4 Novembre, 146  
Rome



This project has received funding from the EU H2020 research and innovation programme under grant agreement No 893924. The content of this report reflects the views of the authors and do not reflect the views of the Agency or the European Commission.

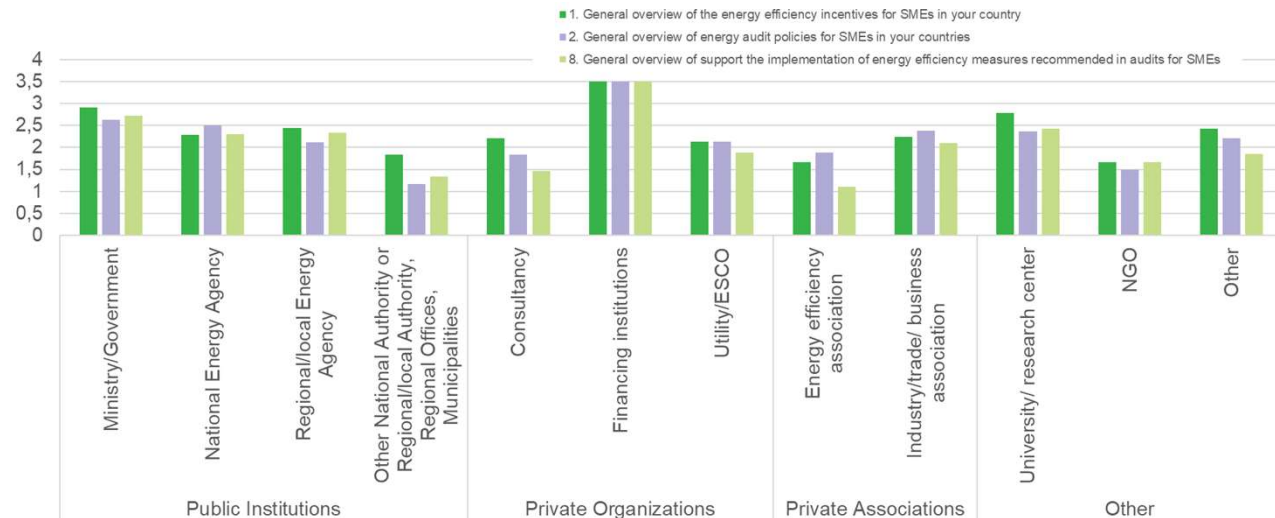


# Survey/semi structured interviews (170 opinions collected to organizations)

- Both energy efficiency incentives and energy audit policies for SMEs **are insufficiently adequate**
- Energy efficiency incentives and (particularly) energy audit policies for SMEs appear to be more negatively assessed **by private than public** organizations
- It would be useful to objectively categorize SMEs according to **size, sector and consumption**
- The opinion about policies for energy audits seems sensibly more negative at **regional/local** level than at national level



[Deliverables | LEAP4SME](#)



# Assessment of EAs & EE policies in SMEs

- EE **policies** are generally economic, supportive (training, etc.) and prescriptive (regulation, etc.)
- The encouragement of EE in SMEs is mainly based on **voluntary** agreements, to limit the economic and administrative burden.
- Due to the intrinsic **heterogeneity** of the SME sector, designing EE policies for SMEs remains a difficult task.

The most successful approaches include:

**National and  
International  
Observatories**

**Survey/semi  
structured  
interviews**



- ✓ Promoting the **development of good quality energy audits and** work on the availability of **benchmarking information at SMEs level**, to inform the decision-making process at company level
- ✓ Balancing the **economic** and **supportive** policies and **simplify** the policy schemes
- ✓ Implementing **EE networks** as cost-effective actions for industrial SMEs
- ✓ **Targeting** interventions through strategic segmentation ( in term of size and activity of the target companies)
- ✓ Support actions and synergies among **Chambers of commerce, associations, financial institutions** to engage the SMEs

# Operational Implementation of the Art.11 of the new Energy Efficiency Directive: some remarks

- Despite of the efforts in energy characterization and policy development, **addressing SME sector is very challenging and a lack of quantitatively data is observed**
- **Strategic segmentation** of enterprises in terms of energy consumption and activities (and not only in economic aspects) is necessary to an effective implementation of EED
- **Information and coordination activities** are necessary at **international, national, and local levels** in order to involve the SMEs and complement the economic policies

# Thank you for your attention!

[claudia.toro@enea.it](mailto:claudia.toro@enea.it)

[www.enea.it](http://www.enea.it)

[www.energiaenergetica.enea.it](http://www.energiaenergetica.enea.it)

<https://leap4sme.eu/about/>



This project has received funding from the EU H2020 research and innovation programme under grant agreement No 893924. The content of this report reflects the views of the authors and do not reflect the views of the Agency or the European Commission.