

# LEAP4 SME

ENERGY AUDIT POLICIES  
TO DRIVE ENERGY  
EFFICIENCY

## Supporting SMEs through better policy implementation

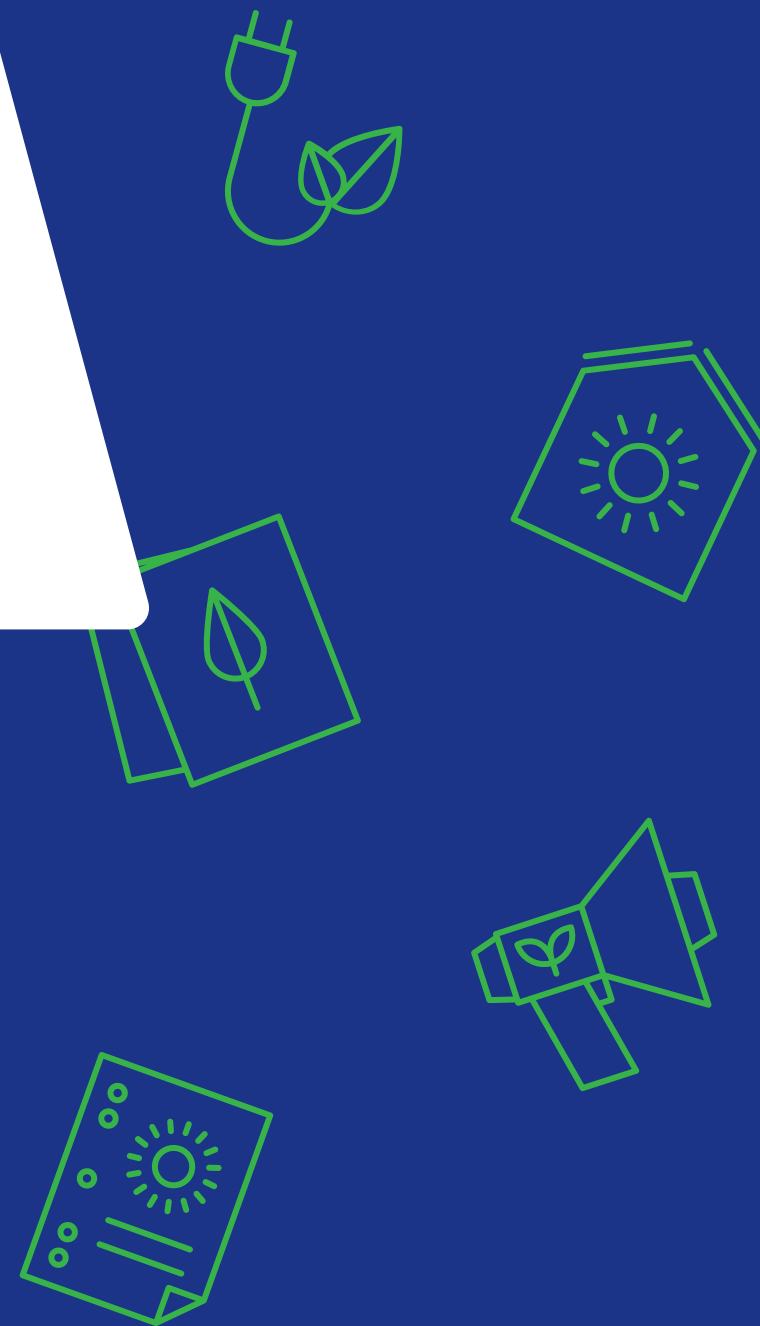
Enrico Biele, LEAP4SME Project Coordinator

The Role of SMEs in the European Energy Efficiency Policy Landscape

PHS 7C050 Room, European Parliament, 4 July 2023



This project has received funding from the EU  
H2020 research and innovation programme  
under grant agreement No 893924.



# LEAP4SME

## Energy Audit policies to drive Energy Efficiency

### Main goals and Consortium

- **Mapping and understanding** the complex context of national and local support to SMEs
- **Contributing**, through LEAP4SME research, analysis, and stakeholders involvement, to help the Institutions finding solutions to fill the gap of data
- **Knowledge sharing** (successes, barriers and failures) on national policies

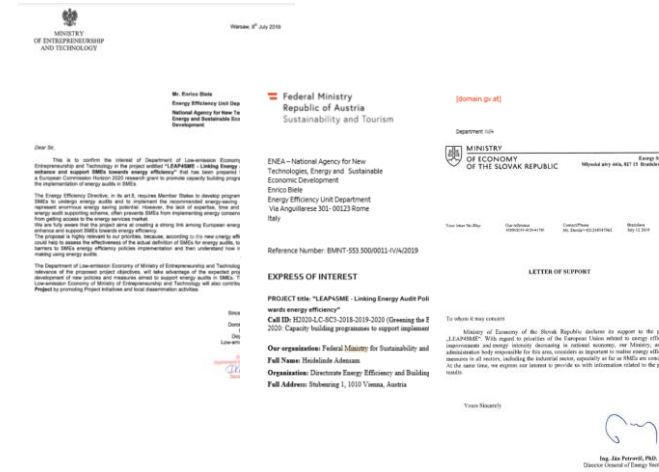


**Proposing effective and realistic solutions** to policy makers and policy implementers in terms of data, policy schemes, cross-cutting policy solutions embracing both **energy and non-energy benefits**, policy recommendations



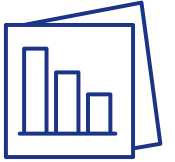
### LEAP4SME is supported by:

- 2 International associations of national Energy Agencies (EnR and Medener)
- 9 Ministries
- 4 Further National Agencies
- 18 National SMEs associations, Chambers of Commerce, Regional and local Authorities

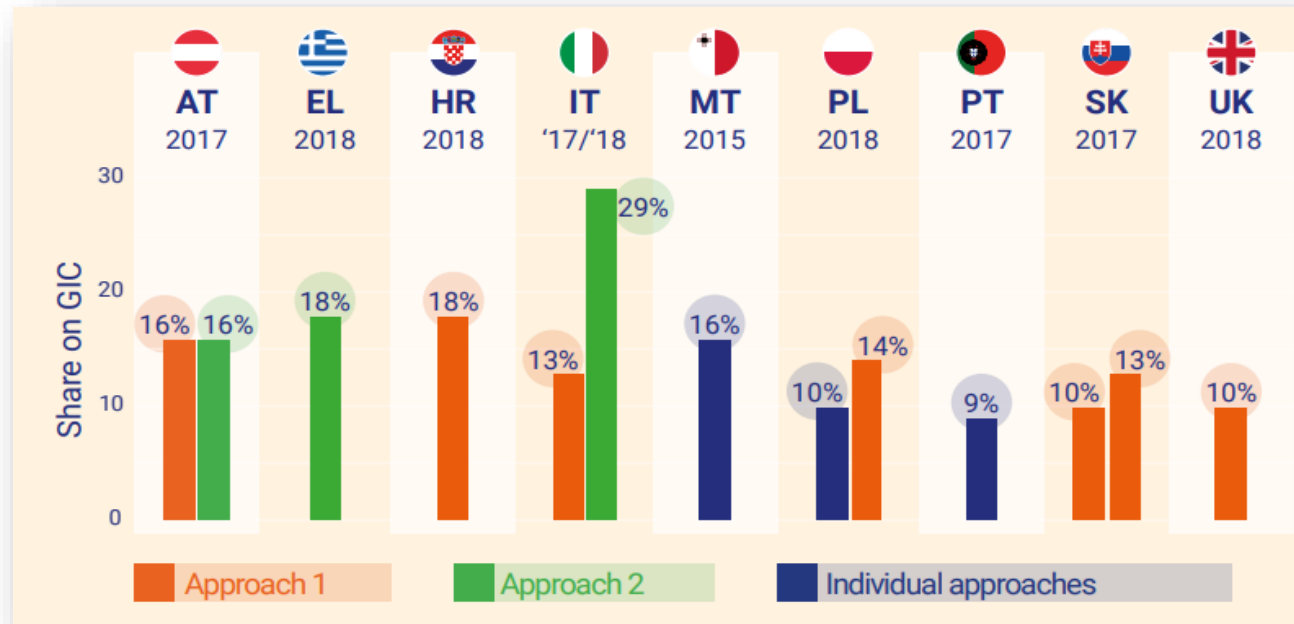


[www.leap4sme.eu](http://www.leap4sme.eu)

# First steps: setting the scene, filling the data-knowledge gap



- Good availability of economic-related data, number of enterprises & employees + interesting results from EC/SAFE and EIB surveys
- Lack of energy-related data on SMEs: insufficient data situation for properly planning energy efficiency policies
- Need for KPIs to implement policies and support the policy process development



- Share on gross inland consumption (GIC): 9 - 18% except for Italy
- Different scenarios calculated for Italy resulting in greater range
- Hypothesis, methodologies and assumptions explained in the report
- Refined methodology applied to Austria and Italy → Submitted for peer-review

Source: LEAP4SME report "Mapping SMEs in Europe: Data collection, analysis and methodologies for estimating energy consumptions at Country levels". Author: AEA



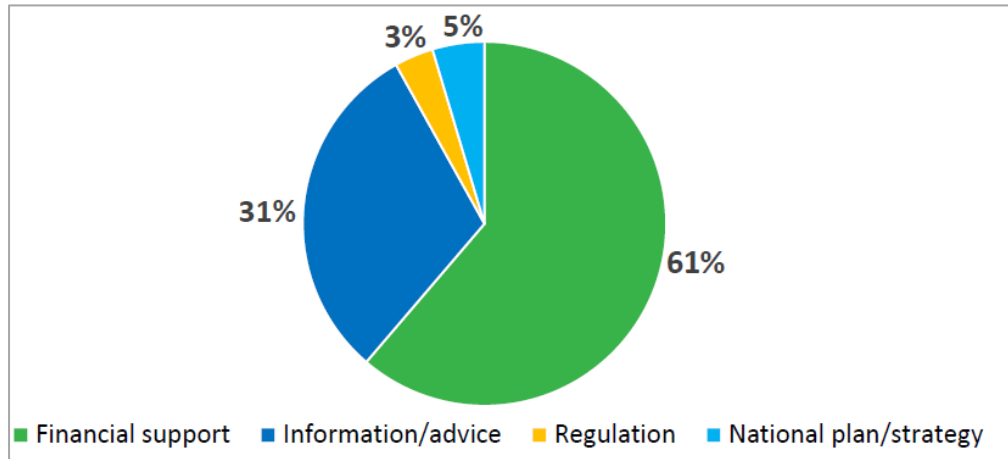
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# First steps: evaluating Energy Efficiency Policies in SMEs



Analysis of 173 policies, programmes, projects covering the nine targeted Countries



Among the first outcomes and preliminary recommendations:

- Further evaluate a combined approach with a mix of different instruments
- Assess the effectiveness of focused obligations for SMEs to conduct energy audits
- Sector specific policy instruments & assessment of tailor-made approaches at the intersection of firms size and specific aspects of energy/climate investment

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



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Source: LEAP4SME, reports “Existing support measures for energy audits and energy efficiency in SMEs” and “Energy audits market overview and main barriers to SMEs”. Author: Energy Saving Trust



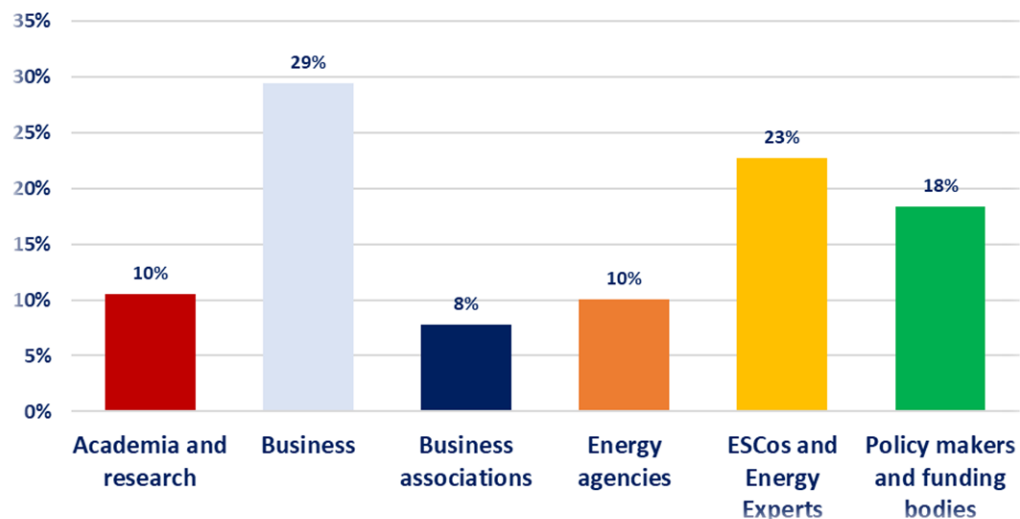
# Gathering knowledge, providing information: National Observatories

More than 750 participants in 9 countries

Meetings organized from May 2022 to June 2023 by the 9 Energy Agencies



National Observatories:  
Type of participants in the 9 LEAP4SME countries



From Policy Makers and Funding Bodies	From SMEs and Business Associations
One Stop Shop	One Stop Shop
Indicators	Indicators
Financial Constraints	<b>Financial Constraints</b>
<b>Tailoring</b>	Tailoring
<b>Policy Framework</b>	Policy Framework
<b>Awareness</b>	<b>Awareness</b>
<b>Skills</b>	Skills
<b>Monitoring</b>	Monitoring
<b>Simplification</b>	Simplification
<b>Decision Making</b>	<b>Decision Making</b>
<b>Resource Audit</b>	Resource Audit
<b>Audit Quality</b>	Audit Quality



## ... plus 5 Sessions of International Observatories

Example: EnR-LEAP4SME-CEPS, Observatory on the assessment of a new SME definition, 2021



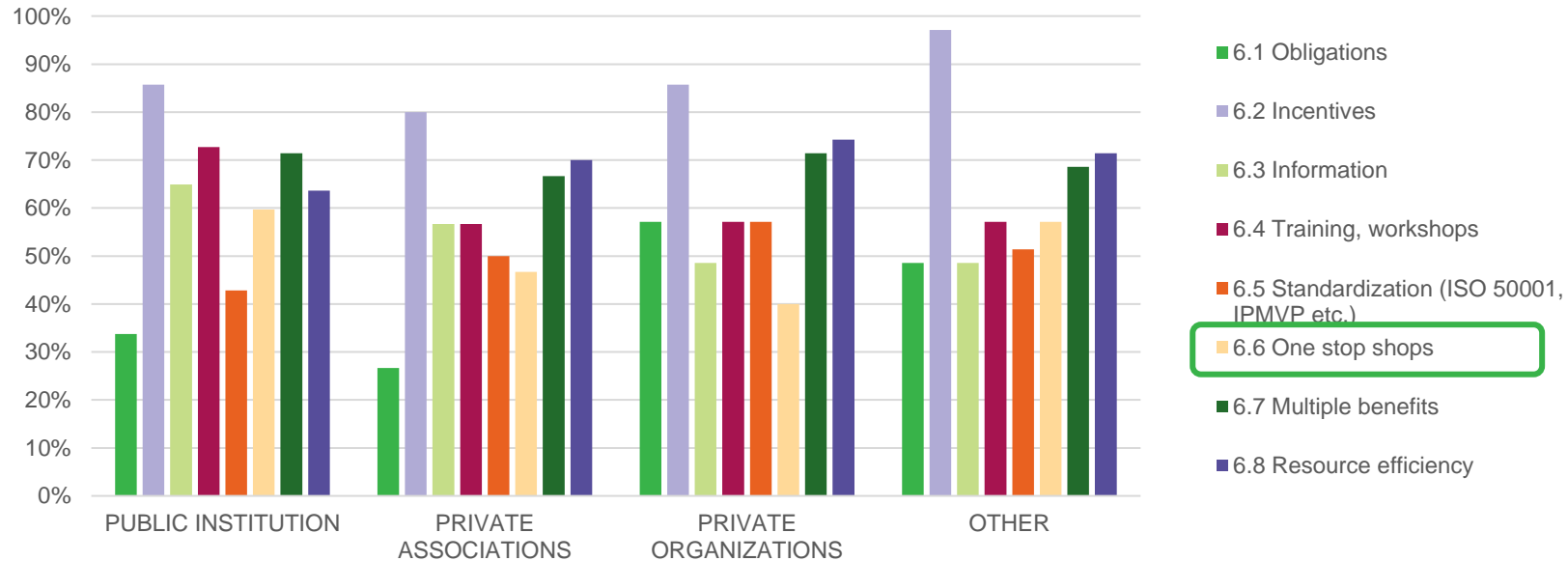
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# Assessing policy options

## Survey for organisations (177 answers)

Example: “To increase the implementation of the recommended measures for SMEs do you think it is better to concentrate the efforts on”:  
*ONLY EXTREMELY HIGH RELEVANCE/HIGH RELEVANCE*

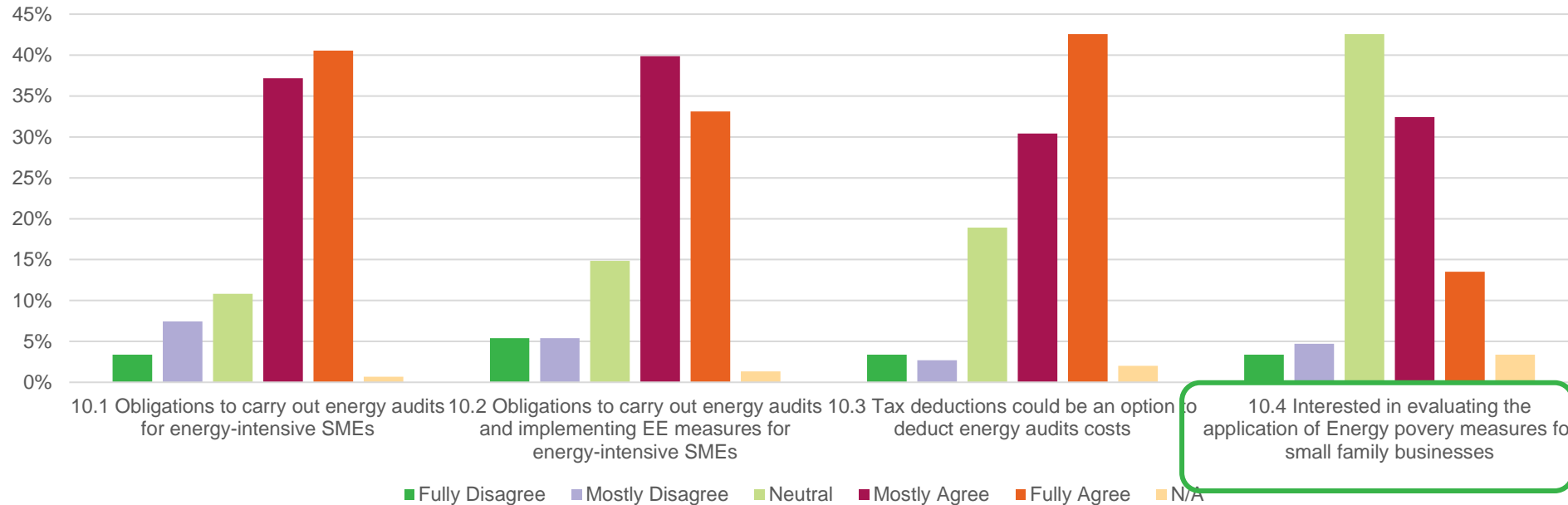


- 2a. *For the purpose of this Article, Member States shall in cooperation with relevant authorities, and, where appropriate, private stakeholders establish **dedicated one-stop shops or similar mechanism** for the provision of technical, administrative and financial advice for energy efficiency. Those facilities shall:*
- (a) *advise with streamlined **information on technical and financial possibilities and solutions to households, SMEs, microenterprises** public bodies;*

Source: LEAP4SME Survey results and EED Recast Consilium Interinstitutional File: 2021/0203(COD), 24/3/23

# Assessing innovative policy options & solutions

## Survey for organisations (177 answers)



*(ii a) publicly-supported energy consumption assessments and targeted advisory services and support for household consumers, in particular vulnerable customers, people affected by energy poverty and, where applicable, people living in social housing;*

[Impact of Energy Monitoring and Management Systems on the Implementation and Planning of Energy Performance Improved Actions: An Empirical Analysis Based on Energy Audits in Italy \(leap4sme.eu\)](#)

# Assessing perceptions, comparing data & behavioural issues 1/2

## Survey for organisations (177 answers) + survey for SMEs (116 answers)

Analysing the multiple benefits of energy efficiency in energy audits could be an effective approach to engage non-energy intensive SMEs, which are often unaware and uninterested. The challenge is to understand the relationship between EPIAs' characteristics and their adoption/implementation.

### Perception mapping

Different perceptions of importance of multiple benefits from Organisations (174) and SMEs (116) in the ongoing project survey

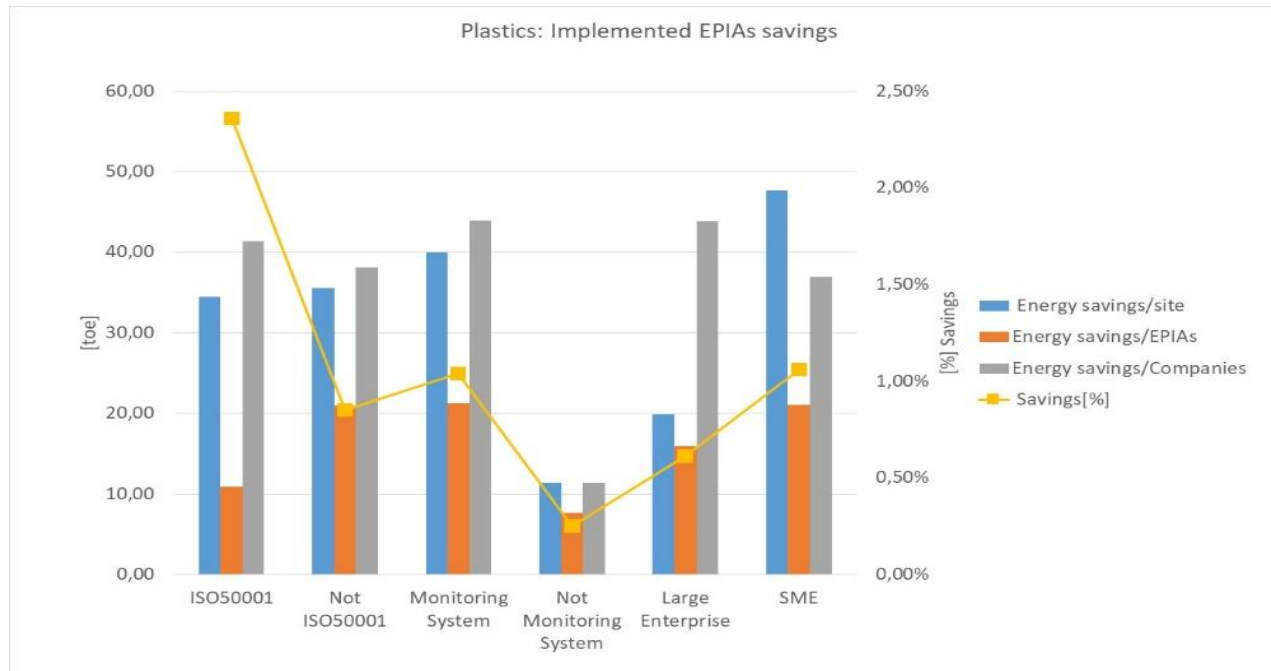
#	Organisations	SMEs
1	Energy costs 94%	Energy costs 86%
2	<b>Process overall efficiency 79%</b>	Greenhouse gas emissions 81%
3	Greenhouse gas emissions 78%	<b>Company's image 73%</b>
4	Renewable energy sources 71%	Renewable energy sources 70%
5	O&M costs 70%	O&M costs 64%
6	<b>Company's image 69%</b>	<b>Air quality 63%</b>
7	Innovative solutions 63%	<b>Process overall efficiency 56%</b>
8	Technological competitiveness 62%	Innovative solutions 54%
9	<b>Air quality 59%</b>	Technological competitiveness 53%
10	Raw materials consumption 48%	Raw materials consumption 53%
11	Product quality 36%	Water quality 45%
12	Water quality 34%	Product quality 28%





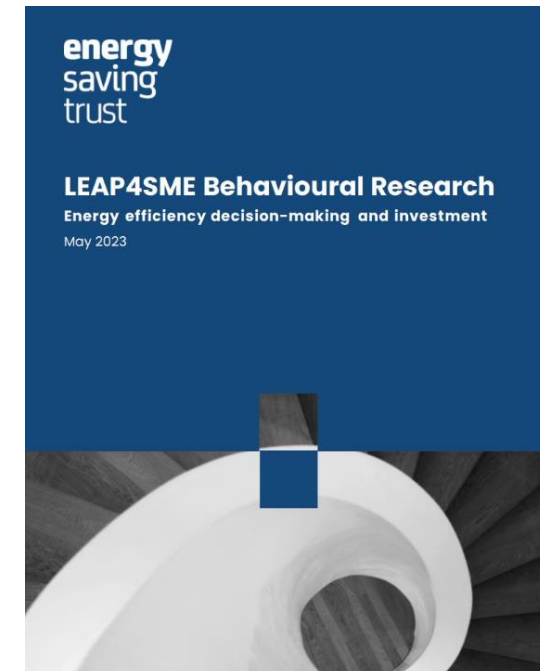
# Assessing perceptions, comparing data & behavioural issues 2/2

## Focus on the Plastics sector in Italy



- Having a monitoring system positively affects energy saving per site, EPIAs and company
- The use of Energy management systems is linked to an increase in savings (in % of total consumption)
- Higher savings in energy intensive SMEs

## LEAP4SME Behavioural research



EST is currently finalising a REA and a set of high-level interviews on the influence of decision making in SMEs and behavioural-related issues



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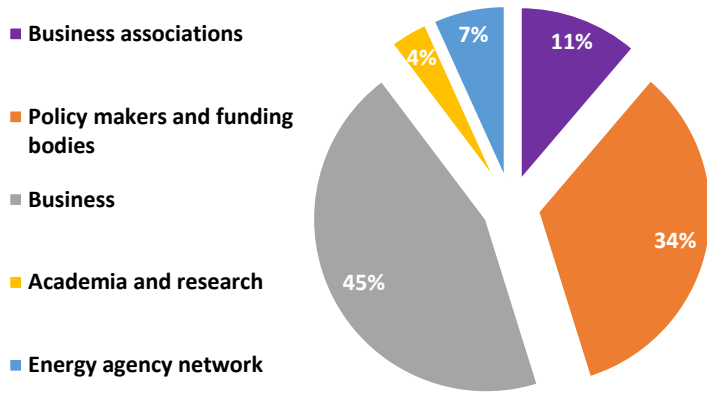
Source: LEAP4SME peer review paper <https://www.mdpi.com/1996-1073/14/16/4723> and REA report

# Broad assessment per Country → Example for Portugal, 9 Countries covered

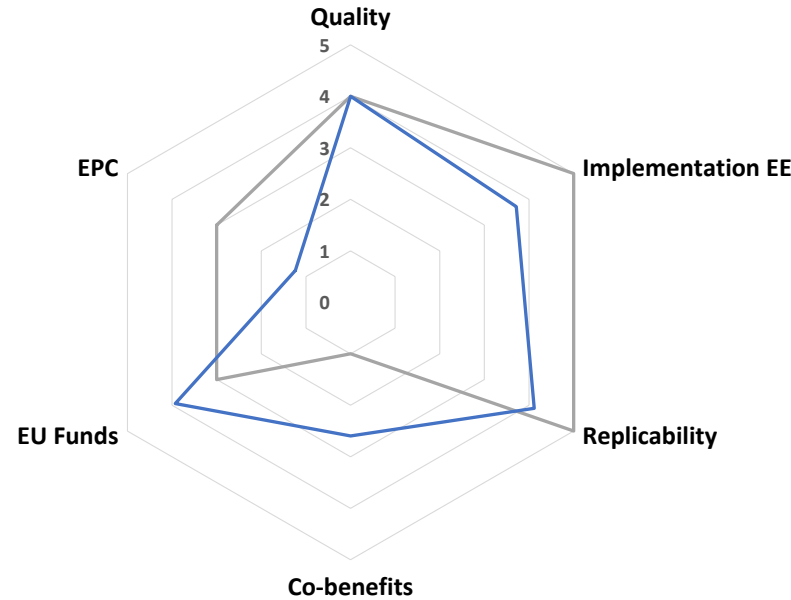
## National observatories + policy assessment + surveys



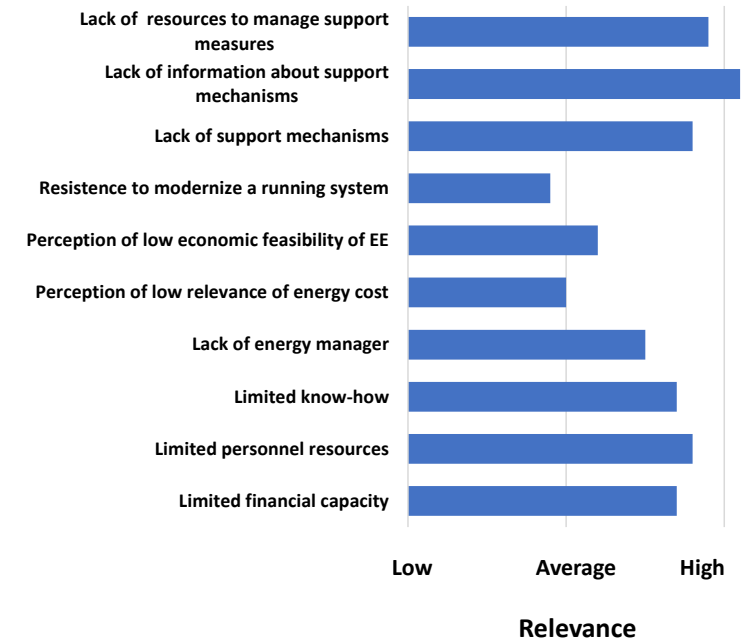
Type of participants



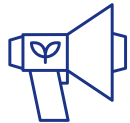
Best practices evaluation



Energy Audits barriers most relevant for SMEs



June 2022 – February 2023



3 online events and interviews with key stakeholders

51 participants

— SGCIE - Sistema de Gestão dos consumos intensivos de energia

— Mean

Source: elaboration on LEAP4SME Survey submitted to organisations, from national agencies and business associations, to ministries, NGOs and industrial associations



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# LEAP4SME policy uptake beyond the Consortium Agencies

Invitalia, Italian National Agency for Inward Investment and Economic Development

TTJA, Consumer Protection and Technical Regulatory Authority of Estonia

Measure: PON RIC 2021-27. Managing Agency: INVITALIA S.p.A. Support provided by LEAP4SME.

contribution to  
increase Energy

We hereby confir  
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Kind regards.

**LEAP4SME** ENERGY AUDIT POLICIES TO DRIVE ENERGY EFFICIENCY

**Risultati indagini (focus Italia)**

Collaborazione con INVITALIA

Risposte Associazioni, esperti, istituzioni: slides 2-6  
Risposte Imprese PMI: slides 7-11

24/10/2022

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

**ENERGIA-AUDIT**

Energiatõhusama ettevõtlike praktiline juhend

## MIS ON ENERGIAAUDIT?

Energiaaudit on süstemaatiline tegevusplaan, mille abil saadakse adekvaatseid teadmisi hoone või hoonete rühma, tööstusprotsessi ja/või tööstusrajatise ja eraõiguslike või avalik-õiguslike teenuste kohta, millega määratakse kulutõhuga energiasäästu võimalused ja säästu suurus ning mille tulemuste põhjal koostatakse aruanne.

Energiaauditi tegemine aitab vähendada energia tarbimist, mis toob omakorda kaasa väiksemad energiaarved. Samuti aitab see vähendada süsinikujalajälge ja parandab üldist energiatõhusust, otsides pidevalt uusi võimalusi energia säästmiseks.

Energiaauditid võivad kaasa tuua märkimisväärsed hüvesid:

**rahaline kasu**, mis aitab vähendada organisatsiooni tegevuskulusid ja suurendada kasumit (seda tuleb hinnata võrreldes energiatõhususe meetmete kasutusele võtmise kuludega). Samuti muudab see ettevõtte keskkonnasäästlikumaks, suurendades seeläbi ettevõtte konkurentsivõimet turul;

**käitamisega seotud kasu**, mis aitab hallata tööstusobjekti või -hoonet ning parandab selle kasutajate mugavust, ohutust ja tootlikkust või selle üldist käitamist;

**keskkonnavalne kasu** CO<sub>2</sub> või muude kasvuhoonegaaside heitkoguste vähendamise kaudu. Laiemas plaanis võib see viia riikliku energianõudluse vähenemiseni ja loodusvarade säästmiseni.



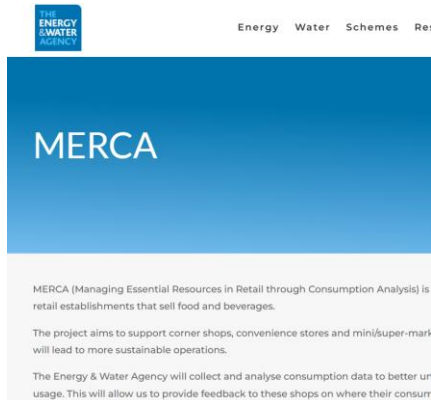
<https://ttja.ee/ariklient/ehitised-ehitamine/suurettevotete-energiaauditid>



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# LEAP4SME policy uptake within the Consortium Agencies: two examples

Through LEAP4SME assessments, the Agency has identified some energy consuming NACE categories to as priorities to launch, in February 2022, the national pilot project MERCA (Managing Essential Resources in Retail through Consumption Analysis) focusing on small and medium retail establishments that sell food and beverages.



CRES is using LEAP4SME results in order to provide support to the Ministry of Environment and Energy and/or the Regional authorities of the country which request support in the policy implementation directly related to the Energy Efficiency Directive transposition, as well as for providing support to them for policy planning and reporting.

 Grèce (Niveau national)

 Law no. 4843/2021.

*Law no. 4843/2021 concerning: incorporation of Directive (EU) 2018/2002 of the European Parliament and of the Council on the amendment of Directive 2012/27/EU on energy efficiency, adaptation to Regulation 2018/1999/EU of the European Parliament and of the Council on the governance of the Energy Union and to the Climate Action and Commission Delegated Regulation 2019/826/EU and related regulations on energy efficiency in the building sector, as well as the strengthening of Renewable Energy Sources and competition in the electricity market, and other urgent provisions.*

The purpose of this Law, consisting of 90 articles, is to strengthen energy efficiency and energy saving, through: intervention programs on buildings, the even greater penetration of Renewable Energy Sources (RES) and the consequent strengthening of competition in the electricity market. The Law provides for the regulation of energy efficiency issues, for removing barriers to the energy market, eliminating market failures that hinder efficiency in energy supply and use, and setting indicative national energy efficiency and contribution targets for 2030, by implementing EU Directive 2018/2002 of the European Parliament and of the Council and by adapting to Regulation 2018/1999/EU of the European Parliament and of the Council and its delegated provisions. The Law defines the following relevant terms: energy; primary and final energy consumption; energy saving; improving energy efficiency; energy service; energy management system; European and International Standard; Public enforcement authority; retail energy business; final consumer; energy service provider; energy audit; SME (small and medium-sized enterprises); efficient heating and cooling; competitive process.



<https://energywateragency.gov.mt/merca/>

Also, both Countries are going to use some relevant project results in SME-related policy planning and future EED Recast implementation



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# Thanks for your attention

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