

The logo for ENEA, featuring the word "ENEA" in a bold, white, sans-serif font. The letters are set against a dark blue background that includes a stylized sunburst or energy source on the left side, with light rays emanating from it.

ITALIAN NATIONAL AGENCY  
FOR NEW TECHNOLOGIES, ENERGY AND  
SUSTAINABLE ECONOMIC DEVELOPMENT

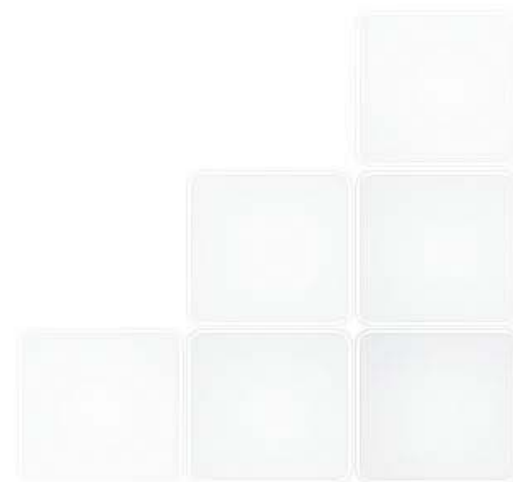
# The Italian energy efficiency market

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Monitoring & Support to EE Policies

**ENERGY EFFICIENCY MARKET AND CLIMATE CHANGE  
MITIGATION**

**Rome, October 29<sup>th</sup>, 2015**

- EU 2020 targets for Italy
- Main energy efficiency policies
  - White Certificates
  - Tax Deductions
  - Thermal Account
- Achieved results
- Energy efficiency market at a glance
- Conclusions



# Italy - 2020 targets (Mtoe/y)

Sector	Measures to be implemented in 2011-2020					Expected savings at 2020	
	Energy Efficiency Directive - Article 7			Other measures			
	Obligation Scheme	Alternative measures					
	White Certificates Scheme	Tax Deductions Scheme	Heating & Cooling Support Scheme	Standards	Transport	Final Energy	Primary Energy
Residential	0.15	1.38	0.54	1.60		3.67	5.14
Services	0.10		0.93	0.20		1.23	1.72
Public	0.04		0.43	0.10		0.57	0.80
Private	0.06		0.50	0.10		0.66	0.92
Industry	5.10					5.10	7.14
Transport	0.10			3.43	1.97	5.50	6.05
<b>Total</b>	<b>5.45</b>	<b>1.38</b>	<b>1.47</b>	<b>5.23</b>	<b>1.97</b>	<b>15.50</b>	<b>20.05</b>

Source: NEEAP 2014



# White Certificates

Technical assessment of more than 14 000 projects was completed in 2013

Almost 40 000 GWh/year of energy savings at 2013 (preliminary assessment)

Projects	Total 2005-2009 (toe/y)	Year 2010 (toe/y)	Year 2011 (toe/y)	Year 2012 (toe/y)	Year 2013 (toe/y)	Total 2005-2013 (toe/y)	Total 2005-2013 (GWh/y)
Standard	2.046.252	89.957	79.937	87.811	266.952	2.570.909	18.097
Ex-post calculation	270.650	384.779	396.442	924.108	303.180	2.279.159	21.433
<b>Total</b>	<b>2.316.902</b>	<b>474.736</b>	<b>476.379</b>	<b>1.011.919</b>	<b>570.132</b>	<b>4.850.068</b>	<b>39.530</b>

Source: elaboration by ENEA on GSE and AEEG data

# Tax Deductions

## Number of projects

Project	2007	2008	2009	2010	2011	2012	2013	Total
Overall renovation	3.180	5.700	5.600	1.917	1.450	3.579	3.566	24.992
Insulation of opaque envelope and replacement of windows	39.220	112.600	127.800	226.720	170.400	135.283	244.421	1.056.444
Replacement of electric boilers with solar panels	20.140	37.100	35.300	47.106	29.350	33.801	26.851	229.648
Efficient heating systems	27.560	57.700	68.000	129.883	79.500	72.571	81.123	516.337
Multiple selection	15.900	34.700	-	-	-	-	-	50.600
<b>Total</b>	<b>106.000</b>	<b>247.800</b>	<b>236.700</b>	<b>405.626</b>	<b>280.700</b>	<b>245.234</b>	<b>355.961</b>	<b>1.522.060</b>

## Energy savings (GWh/year)

Project	2007	2008	2009	2010	2011	2012	2013	Total
Overall renovation	68	163	121	46	35	30	64	527
Insulation of opaque envelope and replacement of windows	186	495	495	771	600	545	802	3.894
Replacement of electric boilers with solar panels	93	288	245	254	160	133	134	1.307
Efficient heating systems	268	614	626	961	640	552	658	4.319
Multiple selection	173	401						574
<b>Total</b>	<b>788</b>	<b>1.961</b>	<b>1.487</b>	<b>2.032</b>	<b>1.435</b>	<b>1.260</b>	<b>1.658</b>	<b>10.621</b>

Source: ENEA

# Thermal Account



Incentives for renewable heating and cooling small scale plants (1 MW) and for energy renovation of public buildings .

- About 10.000 applications between July 2013- December 2014
- 26 M€ of investments
- Need to simplify and to strength the scheme

## Beneficiaries

The incentive scheme is addressed to two types of beneficiaries:

- Public administrations
- Private parties i.e. individuals, buildings held in co-ownership and businesses or farms

Beneficiaries may implement the actions via an ESCo, by means of a third-party financing contract, an energy service contract or an energy performance contract.

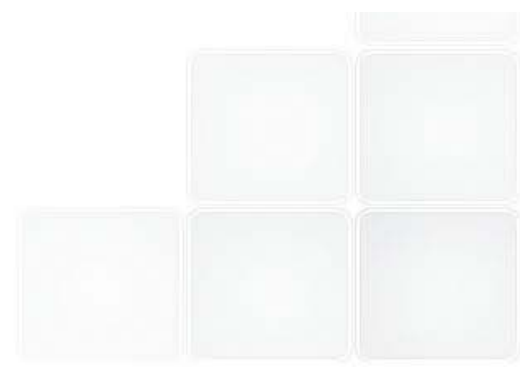


# Achieved energy savings

## Savings (Mtoe/year) (2011-2013):

	Legislative Decree 192/05	White Certificates	55/65% tax deductions	Measures in transport sector	Other measures	Energy savings		Achieved target (%)
						Achieved at 2013*	Expected at 2020	
Residential	0.75	0.29	0.33		0.01	1.31	3.67	35.7%
Services	0.02	0.04	0.01			0.07	1.23	5.6%
Industry	0.06	1.28	0.02			1.36	5.10	26.6%
Transport				0.45	0.02	0.47	5.50	8.6%
<b>Total</b>	<b>0.83</b>	<b>1.61</b>	<b>0.35</b>	<b>0.45</b>	<b>0.03</b>	<b>3.21</b>	<b>15.50</b>	<b>20.7%</b>

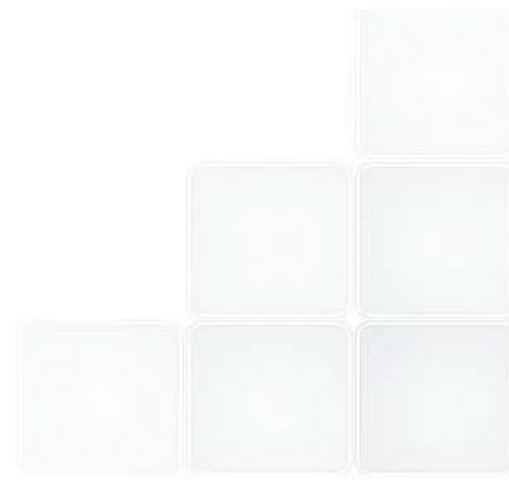
Source: ENEA elaboration



# Cost-effectiveness

		Investment (M€)	Lifetime (year)	Annual investment (M€/year)	Achieved savings (GWh/year)	Cost effectiveness (€/kWh)
<b>White Certificates</b>		n.d.	10	n.d	39.530	<b>0,017</b>
<b>Tax Deductions 55/65%</b>	Overall upgrading	785	20	39	527	0,074
	Thermal insulation	11.800	20	590	3.894	0,152
	Heating system	6.417	12	535	4.319	0,124
	<b>Weighted average</b>					<b>0,124</b>

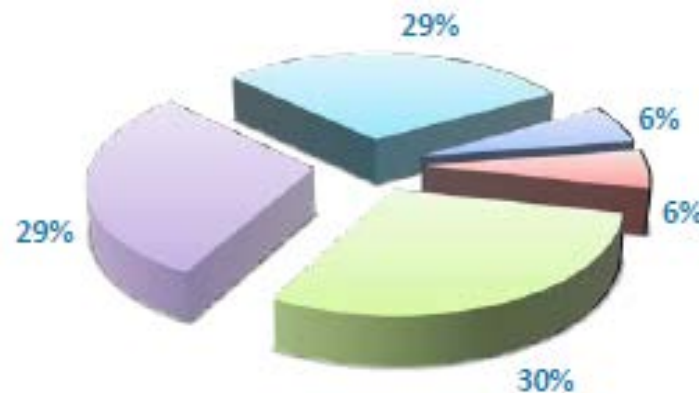
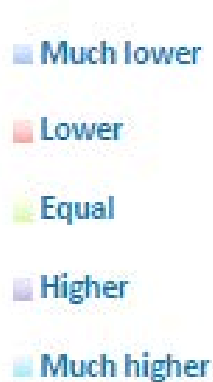
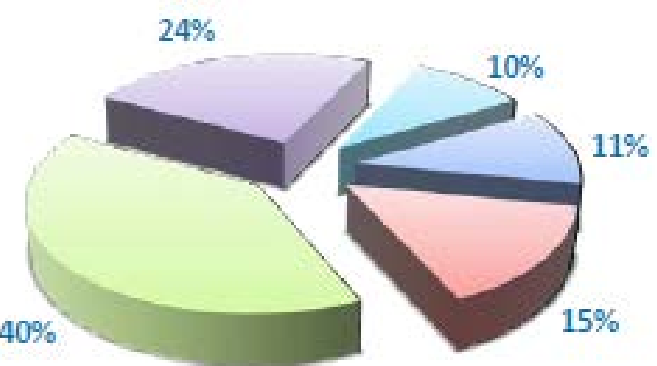
Source: ENEA elaboration



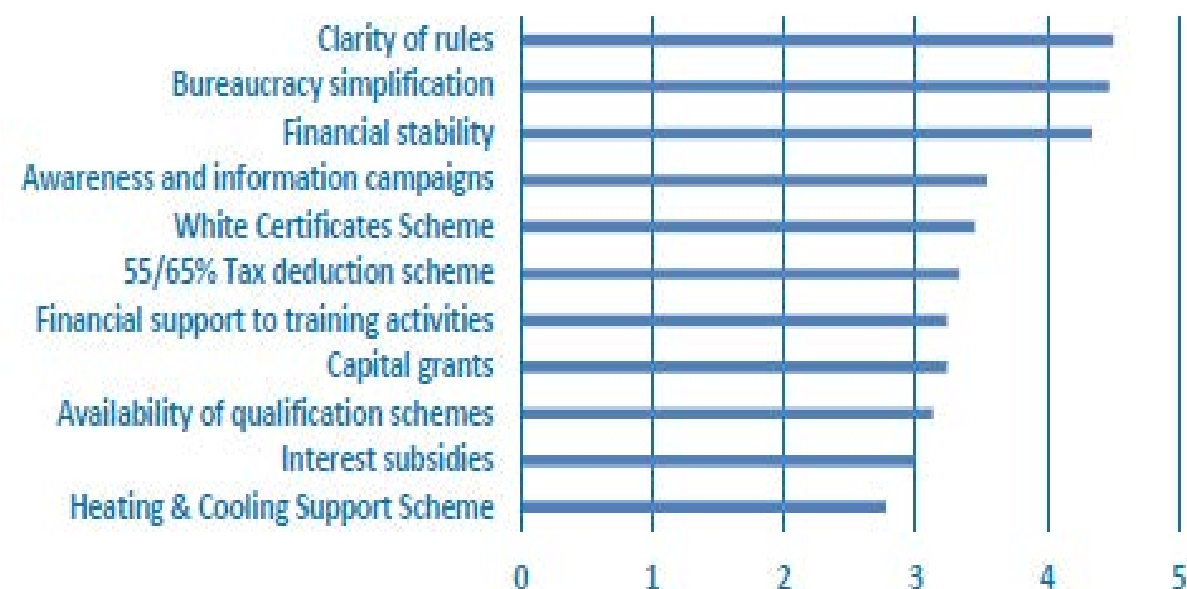


# Italian EE market survey

Investement expectations for the next 3 years (relative to the last 3 years)  
 Whole sample (161 representative companies )      ESCo sub-sample

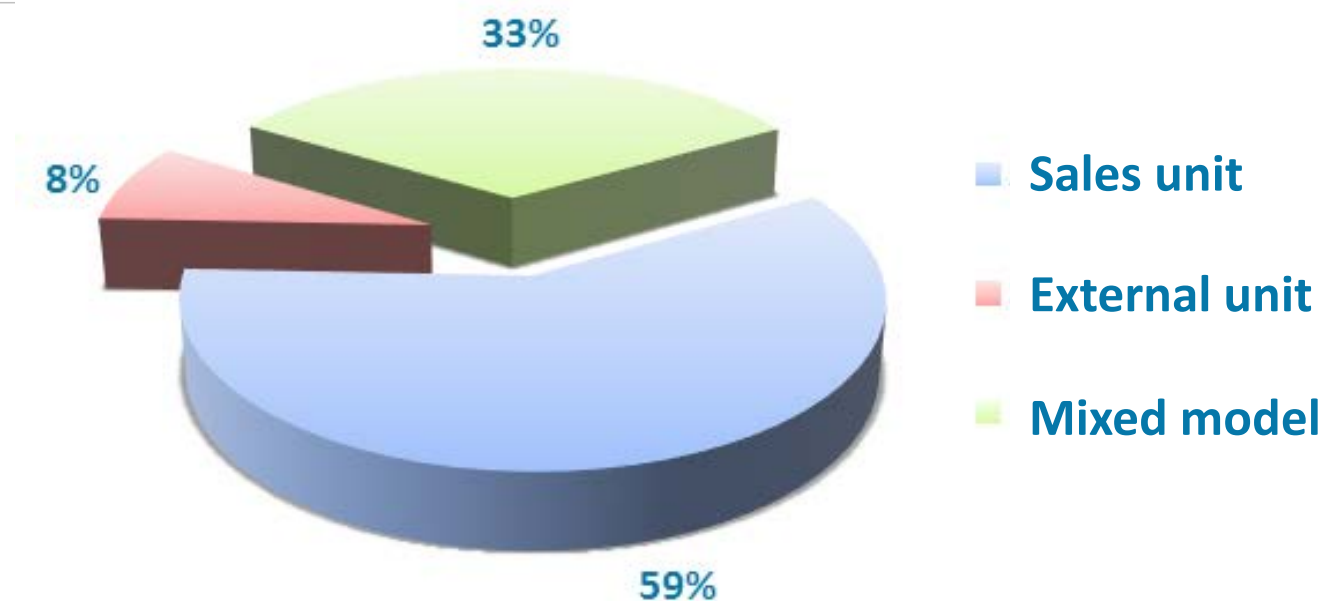
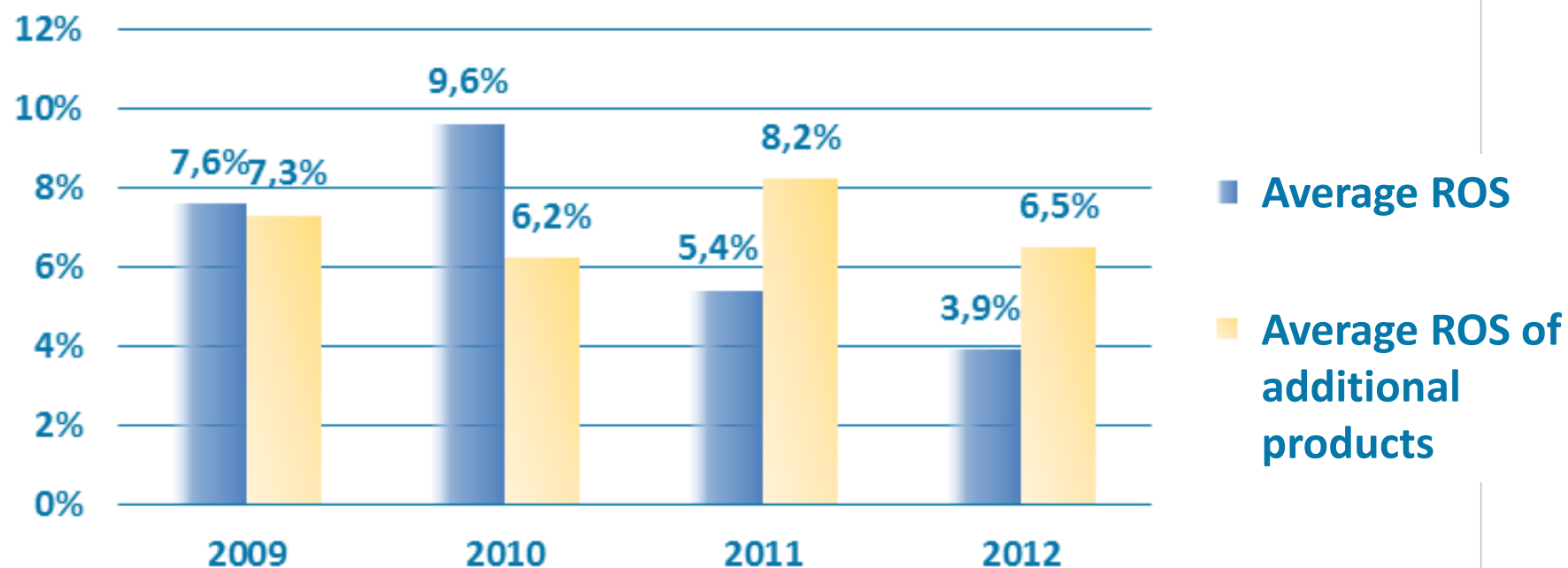


## Barriers:



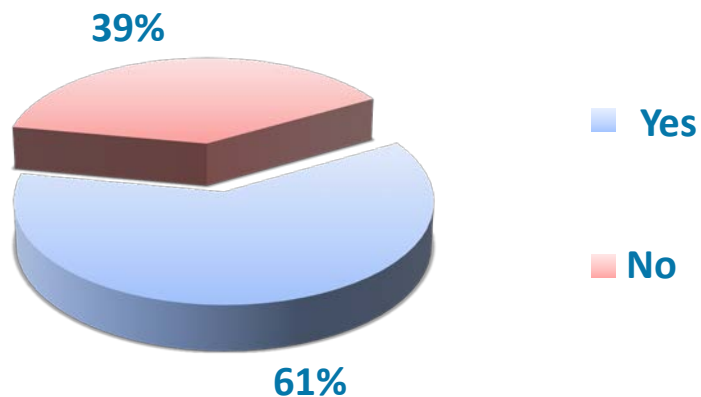
Source: ENEA

# Survey on utilities

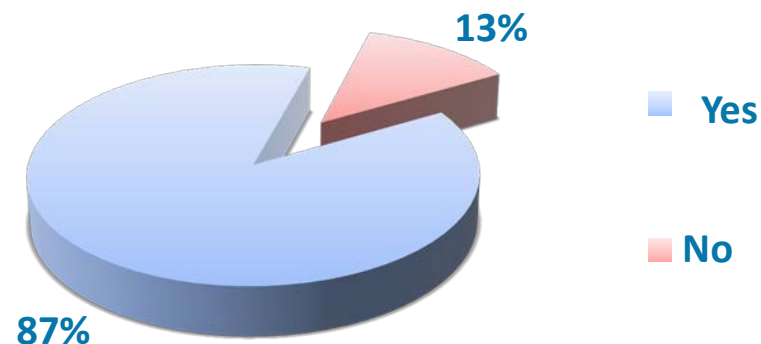


# Survey on SMEs: expectations

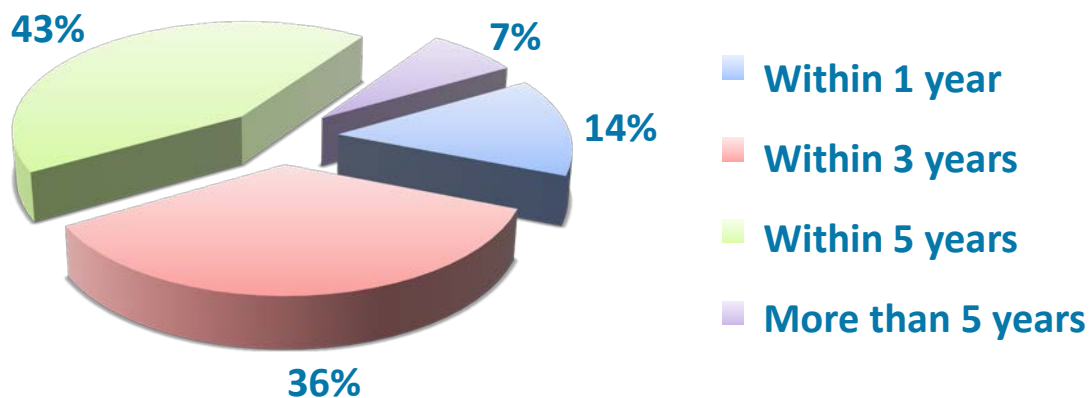
## Importance of EU policies



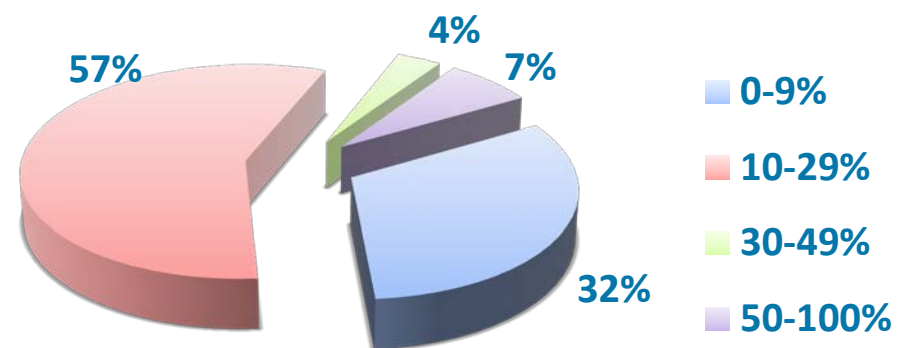
## EE interventions in the next future



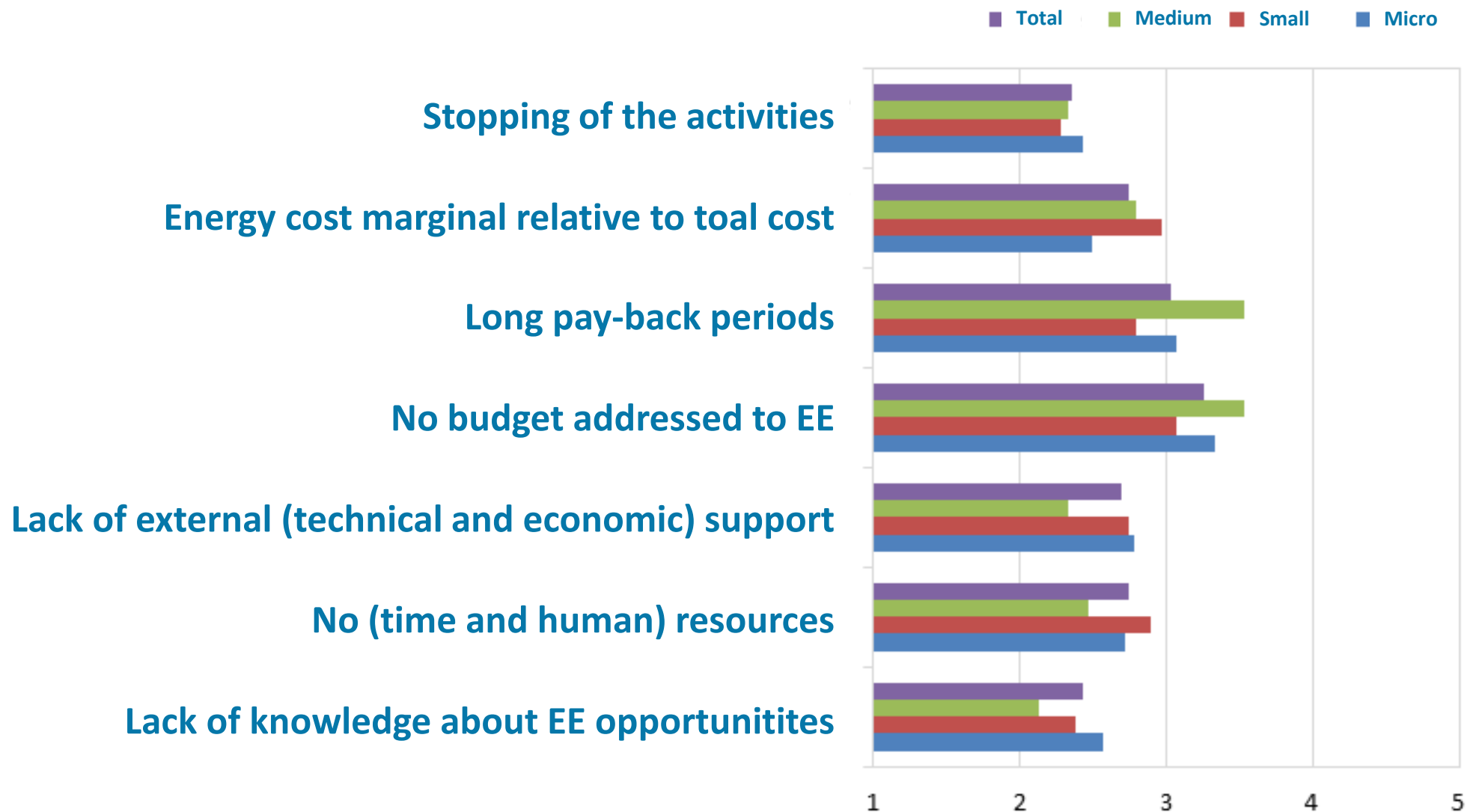
## EE interventions in the next future



## Expected savings

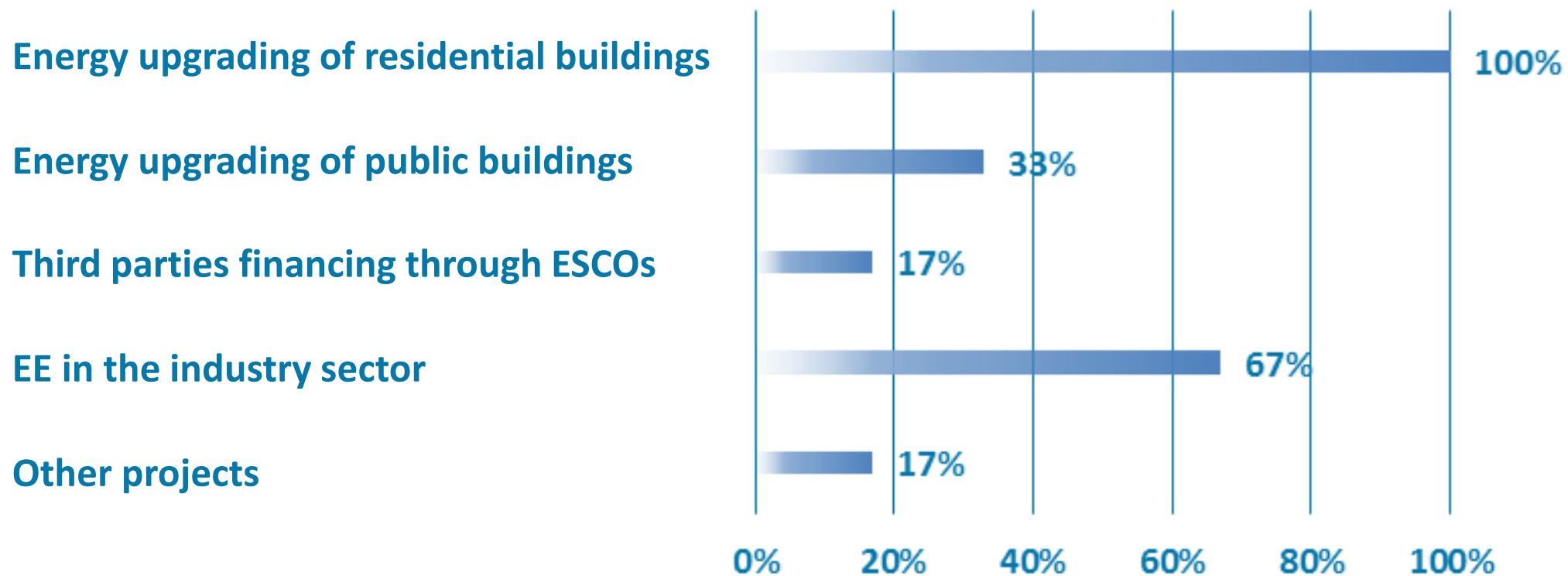


# Survey on SMEs: barriers



# Financial EE products

## Share of banks providing financial EE products (by sector)

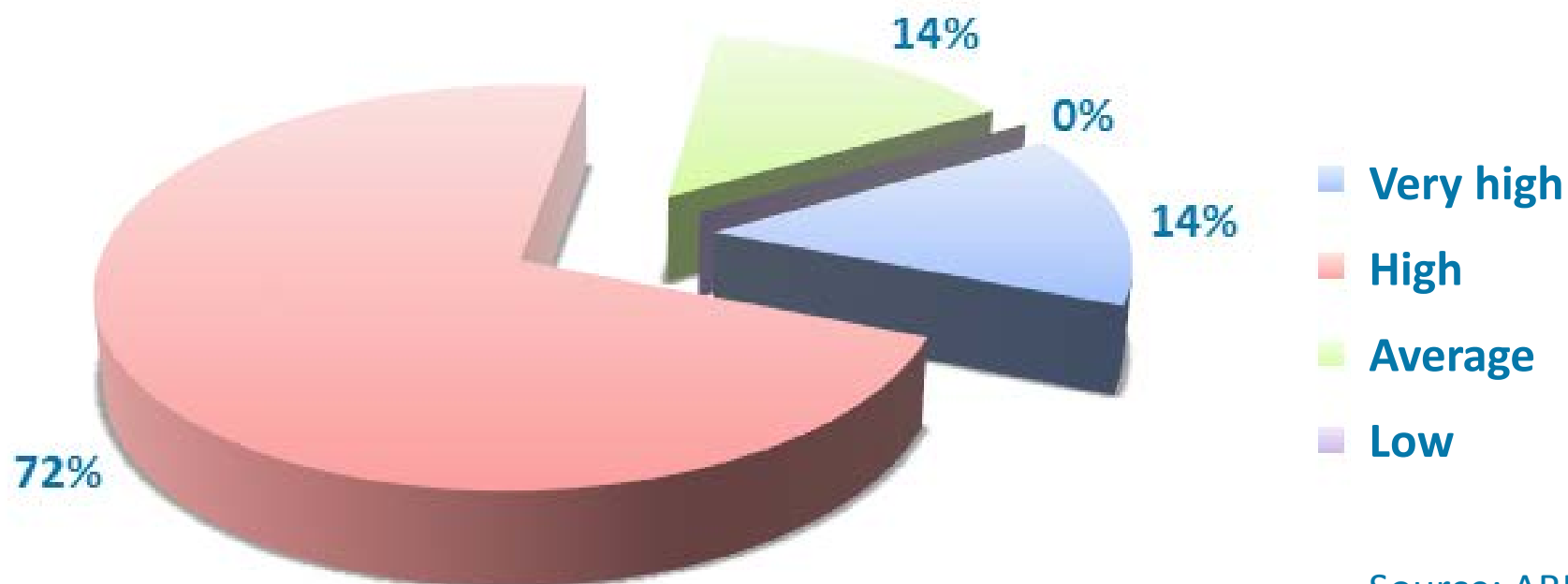


— Source: ABI Lab



# Barriers of banks

## Perception of the level of instability of the normative framework



Source: ABI Lab

High or very high for the 86% of the sample

# 2015 ENEA Report



RAPPORTO ANNUALE  
EFFICIENZA ENERGETICA

2015  
RAEE

2015  
RAEE

According to the Legislative Decree 115/2008, the ENEA Technical Unit for Energy Efficiency must write the annual report, in order to monitor and coordinate the available EE tools:

- Introduction (in English)
- National energy figures
- Sectoral technologies
- Achieved energy savings
- The Italian EE market
- The available financial tools
- The agro-food sector
- Regional figures



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<http://www.enea.it/it/pubblicazioni/edizioni-enea/2015/rapporto-annuale-efficienza-energetica-2015>

# Involved stakeholders

## International

- IEA
- UE
- IPEEC

## Industry Associations

- Confindustria
- FILLEA CGIL
- Coldiretti
- Legacoop
- Federalimentare
- FERPI
- TTS Italia
- EPOMM
- Euromobility

## National institutions

- MiSE
- MiPAF
- GSE
- CTI
- Legambiente
- FIRE



## Big companies

- GfK
- Ernst&Young
- Bartucci
- Avvenia
- Tholos
- Consul System
- GNV
- Opower

## Academic teams

- PoliMI
- Tuscia

## Local Institutions

- Regione Puglia
- Regione Piemonte
- Regione Lombardia
- Friuli Innovazione
- Sindaco di Catania

## Research Institutes

- ABI Lab
- AGICI
- I-COM
- FORMEZ
- ISIS
- Energy & Strategy Group
- ECBA

# Conclusions



- The availability of disaggregated data and information on both the outcomes of different EE measures and the EE market are key elements for their monitoring and, if necessary, the timely update of measures themselves.
- To this aim, given our experience of ENEA EE Annual Report, higher the number of the involved stakeholders in this monitoring process, higher the quantity of gathered data and information... and better their quality!
- Thanks to the cooperation of all the involved stakeholders, better understanding about the choice of technologies, barriers faced, and (financial) tools and behaviours adopted and/or changed to cope with them.
- Final result: a continuous work in progress addressed to both stakeholders and policymakers



# Thank you!



CHI SIAMO PUBBLICAZIONI VIDEO STRUMENTI MAPPA DEL SITO ACCESSIBILITÀ CONTATTI AREA RISERVATA

A A A



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