

## ***FINAL CONFERENCE***

*Collaboration Schemes between national and territorial  
administrations for the implementation of the EPBD*

*SEE/D/0170/2.4/X-TRACE*

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## Presentation Contents

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## Directive 2010/31/EU:





- (28) Since local and regional authorities are critical for the successful implementation of this Directive, they should be consulted and involved, as and when appropriate in accordance with applicable national legislation,
- on planning issues,
  - the development of programmes to provide information training and awareness-raising, and
  - on the implementation of the Directive at national or regional level.

- TRACE 3.1 Action: know-how resources to facilitate the exchange of experiences,
- Sub-activity 3.1.3




### Introduction - Scope:

- to facilitate the exchange of experiences among the project consortium partners
- Identification, collection and analysis of existing good practices.
- Identification of collaboration schemes which would increase the role of territorial administrations and would improve the EEB.
- Production of material for Act. 3.4: Exchange of information activities (eg. workshops and seminars)

## Methodology:

-  Definition of the Scope and boundaries of the survey
-  Tool determination (detailed and subject specific Questionnaire by KDZ with explanatory notes and examples)
-  Target group determination (1 per country filled by experts)
-  Questionnaire distribution to the TRACE partners (KDZ)

## Methodology:

-  1 filled Questionnaire per TRACE country sent by the partners to KDZ (9 Questionnaires in total)
-  Questionnaires analysis and synthesis (CRES)
-  Report Compilation (CRES)

## Questionnaire structure (template):

1. Main Responsible Body for the EPBD implementation (Directive 2010/31/EU)
2. Other involvement bodies, institutions, etc. in the implementation process (eg. legislation, elaboration of guidelines, execution)
3. Cooperation schemes between the different public administration levels, institutions and other partners (eg. training, adaptation and harmonization of construction laws)
4. Current level of implementation of the EPBD (Directives 2002/91/EC & 2010/31/EU) and responsibilities (per article)
5. Additional tools or incentives for the promotion of the EPBD implementation (eg. financial measures, trainings)

**Survey about the level of implementation and collaboration schemes concerning the DIRECTIVE 2010/31/EU in the member states of the European Union**

Country (TRACE Project Partner/s):.....

**1 Who is primarily responsible for the implementation of Directive 2010/31/EU on the energy performance of buildings in your state?**

(Please fill in the name of the institution.)

**2 Which governmental institutions and other partners are involved in the process of the implementation of Directive 2010/31/EU and what's their role?**

(Please describe the involved institutions by filling in the following table)

functional area (national, regional or local)	name of institution (specify entity, governmental or private)	role within the process (management & coordination, strategy & planning, elaboration of guidelines, legislation, execution, consultation & training, monitoring & reporting, control & evaluation, other role)	responsible for ...	new and adapted laws and orders, guidelines (year of legislation)	comments
e.g. national	Ministry of Justice	legislation	transferring these parts of the EU-Directive into national laws, which are the responsibility of the general government.	Energy Performance Certification Act - (EAVG 2012)	
e.g. national	OIB (Austrian Institute of Construction Engineering), governmental - founded by the nine Austrian federal states	elaboration of guidelines	harmonizing the regional construction laws by elaborating detailed engineering provisions, which are the basis for implementing the EU-Directives into regional legislation, coordination between the regional governments.	"OIB-guideline 6 – saving of energy and thermal insulation" (2011); "OIB-manual energy performance of buildings" (technical annex, 2011); "OIB-document for the definition of a nearly zero-energy building and establishing interim targets in a "National Plan" referred to Article 9 (3) 2010/31/EU" (2012); etc.	The regional governments are responsible for making these guidelines legally binding. The OIB guidelines may be used as references for the regional laws.
e.g. regional	Nine governments of the federal states of Austria (Vienna, Burgenland, etc.), governmental	legislation	adopting the regional construction and energy laws as well as the residential building subsidy laws (Wohnbauförderungsgesetze)	e.g. construction engineering regulation energy of Salzburg 2011; construction engineering regulation of Vienna, Upper Austria and Carinthia 2012; building code of Lower Austria 2013 and Carinthia 2012; Air conditioning act of Vienna (WFLG 2012) etc.	Because of the Austrian federal system more than 20 different regional laws have had to be considered and/or adopted.
e.g. local	Austrian Communities	execution	As building authority the communities have to verify the compliance of the energy efficiency indicators in the course of construction	-	-

**3 Cooperation schemes between the different public administration levels, institutions and other partners:**

7.1 Are there specific cooperations between national, regional and local authorities and external partners which are working on implementing the Directives 2002/91/EC and 2010/31/EU?. Please describe these cooperations by filling in the following table.

name of cooperation and cooperating partners (Name of institutions, functional area, governmental or private)	issue	main tasks and activities	leading partner	form of cooperation (degree of institutionalization: working group, contracts, specific institutionalized organization, commissioning of third parties etc.)	specific outputs (agreements or other documents, studies, websites, databases etc.)
e.g. ARGE EBA (Working Group on Energy consultant training), national - governmental: founded by the Energy Agencies of the federal states.	training	elaboration of standardized trainings for energy consultants, coordination with the "klima:aktiv"-program, examination board.	-	specific institutionalized organization (private association)	standardized training program for energy consultants (of communities)
e.g. ARGE of the nine Austrian federal states (energy officers), national - governmental - in coordination with the OIB	adaption of regional construction laws	promotion of the implementation of the directives concerning the energy efficiency of buildings by adapting the regional construction and energy laws; coordination and discussion	Regional government of Styria - department energy and housing construction	working group	preparations for the "National Plan" and the "Calculation of the cost optimum"
e.g. OIB (Austrian Institute of Construction Engineering), national - governmental - organisation founded by the nine Austrian federal states	adaption and harmonization of construction laws	harmonizing the regional construction laws by elaborating detailed engineering provisions, which are the basis for implementing the EU-Directives into regional legislation, coordination between the regional governments.	-	specific institutionalized organization (private association)	OIB-guidelines; <a href="http://www.oib.or.at/">http://www.oib.or.at/</a>



**7.2 What are or were the main organisational barriers while implementing the Directive?**

(examples: due to the federal system in Austria the implementation of the European Building Directive is a quite complex and time-consuming process of coordination. The main part is competence of the different federal states (regions); the adoption of the methodology for calculating the energy performance of buildings, the setting of minimum energy performance requirements as well as the obligation, the contents and the procedure for issuing the energy certification. That's why many laws have to be adopted (there are still many difference in the requirements defined in the regional laws e.g. for the energy efficiency certification) and a lot of different players are involved.)

**7.3 How do national or regional authorities support communities in executing the new laws and orders?**

(examples: in Austria the regional governments have established energy agencies which provides informations and consulting as well as different specific services and subsidies for communities: for example in Lower Austria they offer a training subsidy (Bildungsscheck) for energy officers of communities, specific trainings for energy consultants and energy officers. They also give financial support for events in the fields of energy and renovation and have published a guideline for energy efficient community buildings.)

**7.4 Do you have any suggestions for improving the collaboration/cooperation schemes?**

**4 What is the current level of implementation of the Energy Performance Directives 2002/91/EC and 2010/31/EU and which partners are collaborating in order to implement the specific objectives?**

Art.	objectives	put into legislation						level of implementation (estimation based on professional experience)	primarily responsible institution for the implementation	partners collaborating on this objective (governmental and private)	specific measures, concepts, studies, ...	
		national			regional							
		YES - fully	YES - partly	NO	YES - fully	YES - partly	NO	0: not implemented to 10: fully implemented	missing aspects or details which are not implemented yet			
<b>EXAMPLES</b> e.g.	Obligatory Issue (and handing over) of energy performance certificate in case of construction, sale or renting out to a new tenant and for public buildings including the obligation to state the energy performance indicator in the (sales or renting) advertisements in commercial media	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10	none (the central government is the only responsible for this topic)	Ministry of Economy, Family and Youth and Ministry of Justice	Communities (governmental) as building authority in case of construction	Energy Performance Certification Act - (EAVG 2012)
3	Predefinition of a methodology for calculating the integrated energy performance of buildings and building units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
5	Calculation of cost-optimal levels of minimum energy performance requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
4, 6, 7	Application of minimum requirements to the energy performance of new buildings and new building units as well as of existing buildings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
4, 8	Application of minimum requirements to the energy performance of technical building systems in case of installation, replacement or upgrading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
8	Encouragement of the introduction of intelligent metering systems in new or existing buildings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
9	National plan for increasing the number of nearly zero-energy buildings including strategies and measures in order to stimulate the transformation of buildings that are refurbished to nearly zero-energy buildings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
9	Ensuring that all new buildings are nearly zero-energy buildings by 31.12.2020 and all public buildings by 31.12.2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
10	Consideration of appropriate financing and other instruments to improve energy efficiency - list of measures and instruments including those of financial nature which promote the objectives of the Directive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
11, 17	Establishing a certification scheme for the energy performance of residential buildings including the ensuring that the energy performance certificate is issued by independent experts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
11	Encouragement of public authorities to take into account the leading role by implementing the recommendations included in the energy performance certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

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Art.	objectives	put into legislation			level of implementation (estimation based on professional experience)			primarily responsible institution for the implementation	partners collaborating on this objective (governmental and private)	specific measures, concepts, studies, ...
		national	regional		0: not implemented to 10: fully implemented	missing aspects or details which are not implemented yet				
		YES - fully	YES - partly	NO	YES - fully	YES - partly	NO			
12	Obligatory Issue (and handing over) of energy performance certificate in case of construction, sale or renting out to a new tenant and for public buildings including the obligation to state the energy performance indicator in the (sales or renting) advertisements in commercial media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
13	Obligatory display of energy performance certificates in public buildings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
14-16, 17	Regular inspection of heating and air-conditioned systems in buildings including the obligatory handing over of inspection reports and the ensuring that the inspection is made by independent experts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
14, 15	Alternatively to regular inspection of heating systems and air-conditioning systems: Ensuring that provision of advice to users concerning the replacement of boilers, other modifications to the system and alternative solutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
18	Establishment of independent control systems for energy performance certificates and inspection reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
20	Measures to inform the owners or tenants of buildings including ensuring the availability of guidance and training for those responsible for implementing the Directive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
21	Consultation of stakeholders involved, including local and regional authorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
27	Lay down the rules on penalties applicable to infringements and ensuring that they are implemented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

**5 Which additional tools or incentive schemes are used in order to promote the objectives of the Directive, increase the energy efficiency of buildings and contribute to fulfill the energy efficiency targets given by the EU?**

Art.	measure	Yes	No	best practices	comments
e.g.	Financial measures to encourage investments and/or activities to increase the energy efficiency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Renovation voucher and economic bonus, Residential building subsidy, etc.	There are several financial instruments on national and regional levels, which have great impact on energy savings in the building sector. Some of the instruments have already been implemented more than ten years ago.
(19, 20)	Financial measures to encourage investments and/or activities to increase the energy efficiency	<input type="checkbox"/>	<input type="checkbox"/>		
(29)	Trainings and other measures in order to improve the competence of installers and builders	<input type="checkbox"/>	<input type="checkbox"/>		
	Other measures	<input type="checkbox"/>	<input type="checkbox"/>		

**Part 1:**

Member of TRACE project	Primary Responsibility for EPBD implementation		
	Ministry	Other Body	Name
Albania	X	X	Ministry of Energy and Industry & The National Agency of Natural Resources
Austria	X		Ministry of Economy, Family and Youth (BMWF)
Bosnia and Herzegovina	X		Federal Ministry of Physical Planning
Bulgaria	X		Ministry of Economy and Energy
Croatia	X		Ministry of Construction and Physical Planning
Greece	X		Ministry of Environment, Energy & Climate Change
Italy	X		Ministry for Economic Development
Romania	X		Ministry of Regional Development and Public Administration (MRDPA)
Slovenia	X		Ministry of infrastructure and spatial planning - Energy Directorate

**Part 2:**

Member of TRACE project	Governmental Institutions and other partners involved in the process		
	National	Regional	Local
Albania	X		X
Austria	X	X	X
Bosnia and Herzegovina	X	X	
Bulgaria	X	X	X
Croatia	X		X
Greece	X		
Italy	X	X	
Romania	X		X
Slovenia	X		X

Part 3.1:

**Specific cooperation between the different administration levels (national, regional and local authorities) and other partners for the implementation of the Directives 2002/91/EC and 2010/31/EU**

Member of TRACE project	YES	NO
Albania	X	
Austria	X	
Bosnia and Herzegovina		X
Bulgaria	X	
Croatia	X	
Greece	X	
Italy	X	
Romania	X	
Slovenia	X	

Part 3.2:

**Main organizational barriers for EPBD implementation**

Albania	<ul style="list-style-type: none"> <li>Albania is facing severe challenges in implementing their National Energy Efficiency Action Plans (NEEAP) and even more the Directive. These challenges relate to the past development, transition process and accession requirements and current economic crisis. Among other requirements, the countries that signed the Energy Community Treaty have also accepted to transpose relevant EU legislation in energy efficiency field and set up energy savings targets on short term (2012) and mid-term (2018). Achieving set up energy efficiency targets requires comprehensive approach including, but not limited to, establishing of appropriate institutional, legal, economic, financial and fiscal framework</li> </ul>
Austria	<ul style="list-style-type: none"> <li>Due to the federal system and the splitted competences in Austria the implementation of the European Building Directive is a quite complex and time-consuming process of coordination. The main part is competence of the different federal states (regions): the adoption of the methodology for calculating the energy performance of buildings, the setting of minimum energy performance requirements as well as the obligation, the contents and the procedure for issuing the energy certification. That's why many laws have to be adopted (there are still many difference in the requirements defined in the regional laws e.g. for the energy efficiency certification) and a lot of different players are involved.)</li> </ul>
Bosnia and Herzegovina	<ul style="list-style-type: none"> <li>There is no sub-ordinate legislation on implementation of the Directive.</li> </ul>
Bulgaria	<ul style="list-style-type: none"> <li>Very centralized type of implementing the related legislation</li> </ul>
Croatia	<ul style="list-style-type: none"> <li>The Methodology for calculating energy performance of buildings is adopted in 2012., but there is still no available software on the market in Croatia that performs calculation up to the primary energy. Calculation up to the primary energy in heating, domestic hot water, ventilation, partial air-conditioning, air-conditioning and lighting systems have to be carried out after 1st of July 2014.</li> </ul>



Part 3.2:

**Main organizational barriers for EPBD implementation**

Greece	<ul style="list-style-type: none"> <li>Greece has a centrally operated national system. Although the EPB Regulation is rather new the main structure for the implementation of the EPBD is now in place. The new law for the adoption of the recast EPBD (Law 4122/2013) introduces the cost optimal concept and the calculation methodology (according to the EU Regulation 244/2012 supplementing the Directive 2010/31), the definition of 'nearly zero energy buildings', as well as the obligation for 'nearly zero energy' for all public buildings after 1/1/2015 and all new buildings constructed after 1/1/2020. <b>Up to date, the required studies for the cost optimal levels of energy efficient measures and for the definition of NZEB for various building uses in all climate zones of the country have not been carried out yet.</b></li> </ul>
Italy	<ul style="list-style-type: none"> <li>Before the Decree-Law n. 63 of 4 June 2013 (appointed to the point "2") there have been <b>repeated delays</b> for the Italian Government in <b>implementing of Directive 2002/91/EC</b> of the first and then of Directive 2010/31/EU, to which Italy has risked referral to the European Court of Justice.</li> </ul>
Romania	<ul style="list-style-type: none"> <li><b>Legal framework is not complete at this moment.</b></li> </ul>
Slovenia	<ul style="list-style-type: none"> <li><b>In most cases, the deadlines for the implementation of the EU Directive 2010/31 cannot be met</b>, because Slovenia did not have the relevant implementing regulations, the most complicate was to create the coordination of the methodology, then we had delay due the procedural reasons at the start of training experts and licenses and authorizations.</li> </ul>

Part 3.3:

How the national or regional authorities support Communities in the implementation of the new laws and orders.

Albania	-
Austria	<ul style="list-style-type: none"> <li>• In Austria the regional governments have established <b>Energy Agencies</b> which provides information's and advice as well as different specific services and subsidies for communities.</li> <li>• Some <b>national programmes</b> like the "Klima:aktiv"-initiative and the "e5-programme for energy efficient local authorities" offer informations, advice and support for private households as well as for communities and companies (e.g online-guidline for energy efficient community buildings).</li> <li>• A wide range of different <b>educational programmes and trainings</b> are offered mostly on the regional level.</li> <li>• <b>Competitions and intensive public relations work</b> is done (lecture series, advertisements, industrial fair presentations, etc.) to provide information on energy efficiency measures to the envisaged target groups.</li> </ul>
Bosnia and Herzegovina	<ul style="list-style-type: none"> <li>• On entity level will be established <b>Fund for environment protection and energy efficiency</b> through which will be implemented <b>different projects in the sector of energy efficiency</b>.</li> </ul>
Bulgaria	<ul style="list-style-type: none"> <li>• Regional Governors don't have own budgets in order to initiate different activities for implementing the Directive. Every activity should be approved and financed by the Council of Ministers. In this sense, <b>they have very limited power to support communities in executing the new laws and orders</b>. Institutions on national level mainly have the financial levers to launch different initiatives and activities like: programmes for financing EE measures in public buildings, information campaigns and trainings. In most of the cases <b>Regional Governors, Mayors, EE Agencies, NGOs</b> can be beneficiaries under these programmes.</li> </ul>



Part 3.3:

**How the national or regional authorities support Communities in the implementation of the new laws and orders.**

Croatia	<ul style="list-style-type: none"> <li>Regarding the promotion of energy certification of buildings and energy efficiency of buildings <b>promotion project has been implemented</b> (by the UNDP, Ministry of Economy and Ministry of Construction and Physical Planning), <b>a number of educative workshops were held</b>, the <b>Energy Efficiency Green Library has been established</b>, the <b>Croatian Association of Energy Certifiers was established in late 2009</b>. Also, through the newest Building act (OG 153/13) the penalties are prescribed in case of failure to comply with the energy certification obligations.</li> </ul>
Greece	<ul style="list-style-type: none"> <li>In Greece, the system is rather centralized and the role of regional or local administration is very limited. <b>The local authorities generally follow national legislation</b>. Under this perspective there are no regular collaboration/cooperation schemes in place. <b>CRES, the Regional Energy Centers and other actors promote the implementation of the Directive and support, one way or another, the local and regional administration.</b></li> </ul>
Italy	<ul style="list-style-type: none"> <li>Only a few local authorities that targeting energy efficiency in buildings have opened offices for the information of citizens on how to obtain the energy certification of buildings.</li> </ul>
Romania	-
Slovenia	<ul style="list-style-type: none"> <li><b>Trough the Energy Agencies and local Energy Consulting offices.</b></li> </ul>

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Part 5:

**Additional tools or incentives for EPBD implementation, increase EE in buildings and fulfill the national energy targets (focus on encourage investments and training if installers and builders)**

Member of TRACE project	YES	NO
Albania	X	
Austria	X	
Bosnia and Herzegovina		X
Bulgaria	X	
Croatia	X	
Greece	X	
Italy	X	
Romania		X
Slovenia	X	

**Part 5:**

**Additional tools or incentives for EPBD implementation, increase EE in buildings and fulfill the national energy targets (focus on encourage investments and training installers and builders)**

Albania	<ul style="list-style-type: none"> <li>• Korça Municipality has introduced a <b>financial incentive</b> for construction companies which introduce energy efficiency measures in the projects they implement.</li> <li>• Training by EEC</li> </ul>
Austria	<ul style="list-style-type: none"> <li>• Financial measures (eg. renovation voucher and economic bonus, Residential building subsidy, federal real estate contracting). Some of the instruments have already been implemented more then ten years ago.</li> <li>• Training</li> </ul>
Bosnia and Herzegovina	<ul style="list-style-type: none"> <li>• No</li> </ul>
Bulgaria	<ul style="list-style-type: none"> <li>• Only national programmes like Energy Renovation of Bulgarian Housing, credit lines for EE measures provided by the banks with relation to funding schemes for EE</li> <li>• Exhibitions for new building materials and techniques related to improving EE. Show-rooms of leading providers of EE materials.</li> </ul>
Croatia	<ul style="list-style-type: none"> <li>• National energy efficiency refurbishment program of public buildings 2014-2015</li> <li>• National energy efficiency refurbishment program of housing sector 2013 – 2020</li> <li>• Certification of authorizes installers of renewable energy - photovoltaic systems</li> <li>• CROSKILLS - Build up skills Croatia improving competences in energy efficiency of construction sector workers</li> </ul>
Greece	<ul style="list-style-type: none"> <li>• a) Subsidies for energy efficiency investments in the residential sector, b) subsidies for energy efficiency investments in Municipal buildings, c) subsidies for energy retrofit of public buildings, etc</li> <li>• National programme 'Building the Future' (providing information to building owners and professionals, data base of energy efficient products available in the market, with technical and energy performance characteristics).</li> </ul>
Italy	<ul style="list-style-type: none"> <li>• Deduction of income tax</li> </ul>
Romania	<ul style="list-style-type: none"> <li>• No</li> </ul>
Slovenia	<ul style="list-style-type: none"> <li>• Residential building subsidies, national subsidies for energy reconstruction of public buildings</li> <li>• Training by local energy Agencies</li> </ul>

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- Energy savings is the biggest, most important and untapped reservoir of energy sources in Greece.
- The 2nd Energy Efficiency Action Plan (N-EEAP 2008-2016) was issued (prepared by CRES) as part of the implementation of Directive 2006/32/EC on energy end-use efficiency and Law 3855/2010, in order to monitor the progress in achieving the national energy savings target by 2016.
- Greece can save through rationalization of energy sources over €200 million every year.
- Buildings and transportation are the most energy-consuming sectors in Greece. During the years 2000-2005, relevant energy consumption increased by approximately 24%, one of the highest increases in Europe.

Final energy consumption by sector 1990-2010

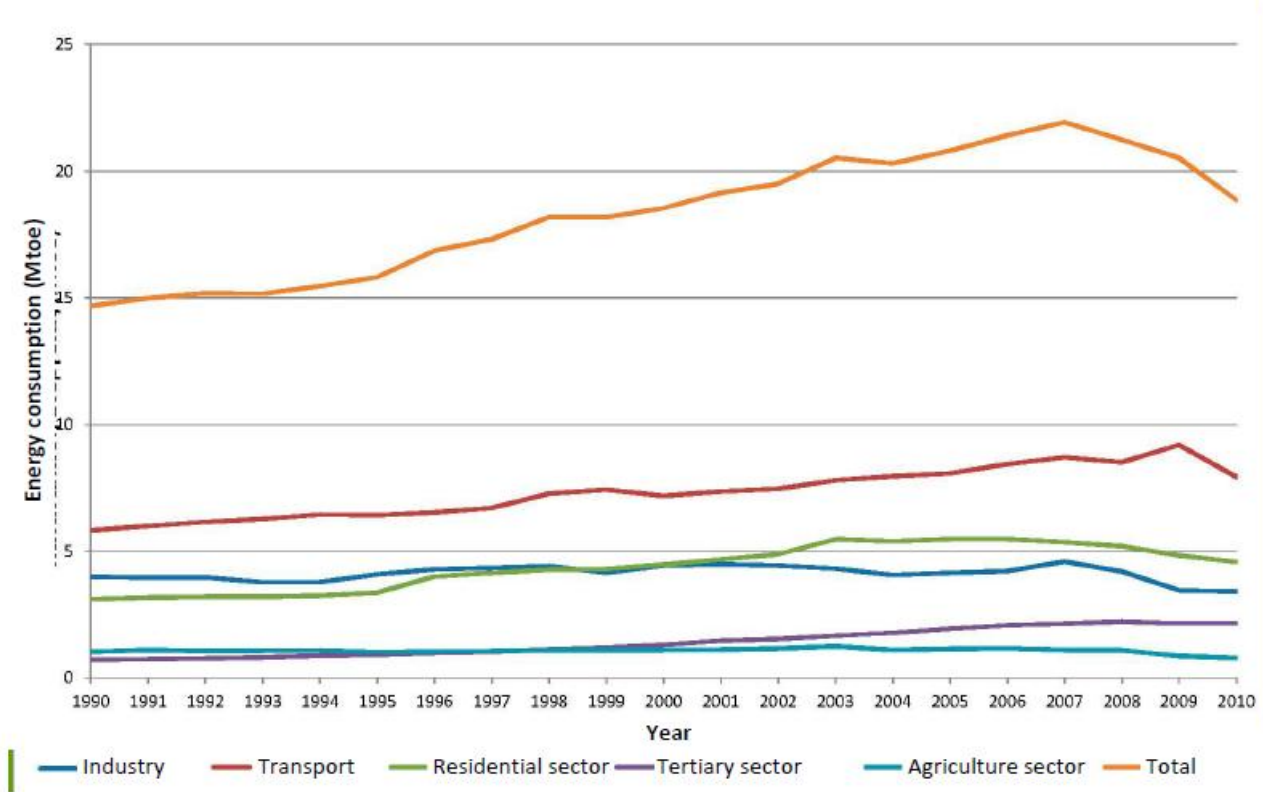
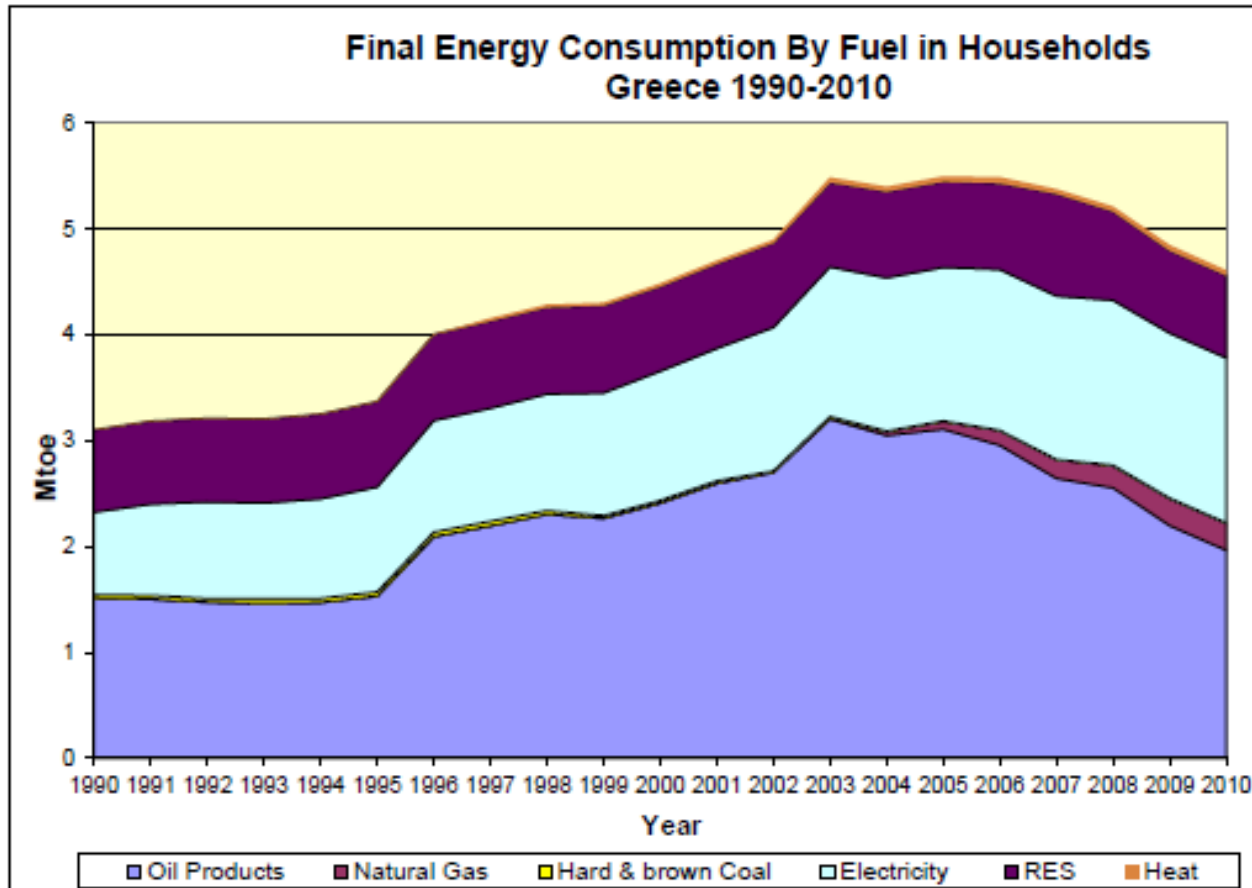


Figure 3: Final energy consumption by final consumption sector 1990-2010

Source: 2nd N-EEAP



- The residential sector is a sector with very high savings potential, representing 24% of total final energy consumption in Greece (2009).
- It is well known that since the majority of buildings was constructed before 1980, they do not meet the requirements of the Regulation on thermal insulation and therefore their energy saving potential is very high.
- By making effective and rational use of energy-saving technologies, both technically and economically, it is possible to improve the energy efficiency of these buildings leading to significant environmental and social benefits.



**Figure 4.7: Final Energy Consumption by Fuel in Households in Greece (1990-2010)**

Source: CRES 2012 (Odyssee-Mure 2010)

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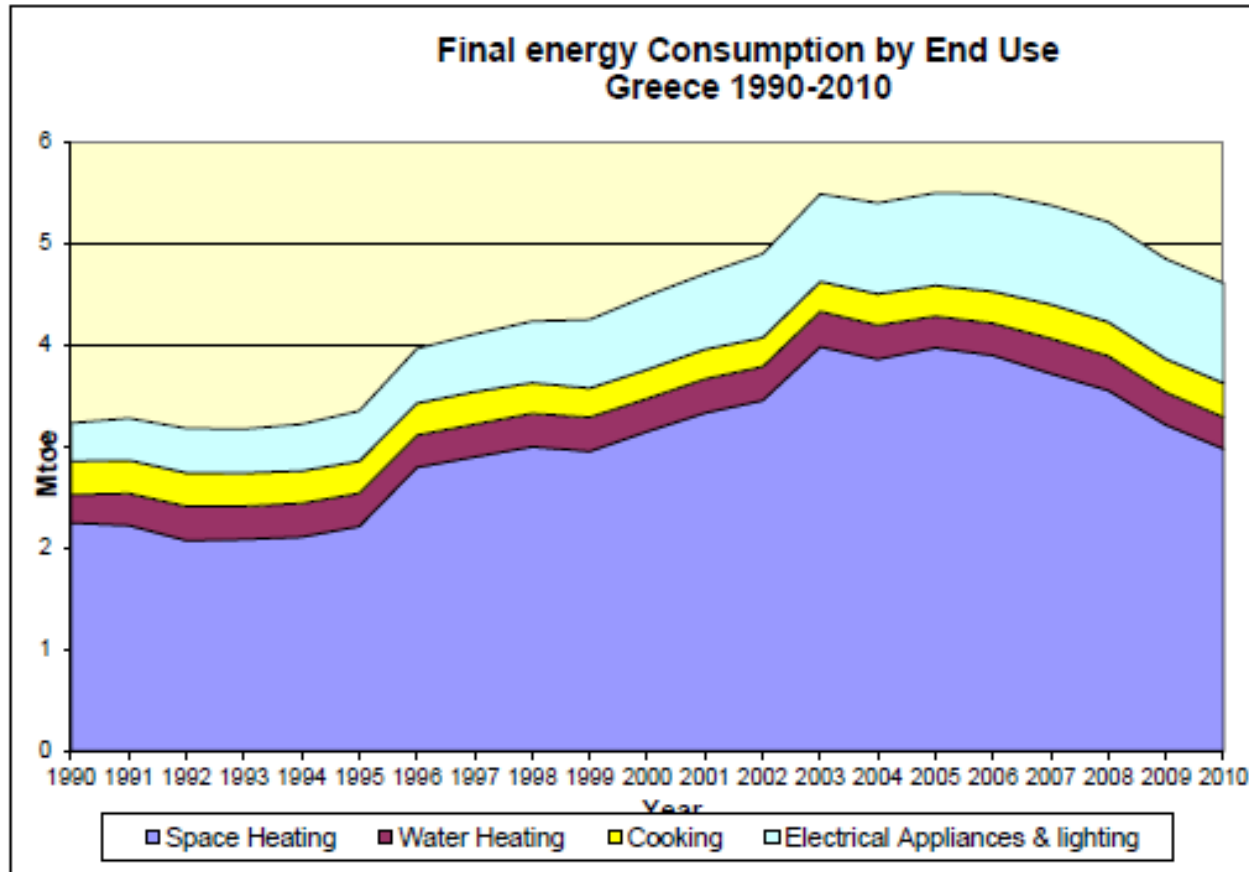


Figure 4.9: Final Energy Consumption by End Use in Households in Greece (1990-2010)

Source: CRES 2012 (Odyssee-Mure 2010)

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## 1<sup>st</sup> & 2<sup>nd</sup> N-EEAP goals and achievements

<b>Sector</b>	<b>End-use energy savings target (TWh), 2010</b>	<b>End-use energy savings target (TWh), 2016</b>
Residential	1.68	5.553
Industrial	0.13	0.68
Tertiary	1.53	5.751
Transport	1.79	6.731
<b>Total</b>	<b>5.12</b>	<b>18.715</b>
<b>Achieved</b>	<b>9.24</b>	<b>target 16.46</b>

- EPDB implementation in Greece by Ministry of Environment, Energy and Climate Change (MEECC)
- Transposition of EPDB in Greece (Law 3661/2008)
- April 2010: «Regulation of Energy Performance in Buildings» (KENAK).
- October 2010: Presidential Decree 100/2010 (Energy Auditors qualifications and training)
- Implementation and quality control of the scheme by a public body entity (Energy Auditors Body, L3818/2010, PD 72/2010)
- Law 4122/2013 (transposition of the Directive 2010/31/EC – cost optimal concept, nZEB)

## GREECE

Programmes of special interest in buildings:

1. "Energy Efficiency at household buildings"
2. "Save Energy I" (ΕΞΟΙΚΟΝΟΜΩ) & II
3. "Demonstration projects for green Urban and Island Communities"
4. "Energy Performance Improvement of Public Buildings through ESCOs"
5. "Pilot Green Urban Neighborhood"
6. "Building the Future" Project

- **"Energy Efficiency at household buildings" programme – Energy upgrading of residential building envelopes - Financial aid for the upgrading of heating system boilers / burner units in existing buildings**
- **Start day:** 2011
- **End day:** 31.12.2017
- **Target Group:** Existing residential buildings constructed before 1979 (all of Greece)
- **Purpose:** The "Energy Efficiency at household buildings" programme aims at providing financial incentives for energy-saving interventions in the residential building sector with a view to reducing energy needs. The programme covers old buildings, which were not built under the Thermal Insulation Regulation (Presidential Decree dated 1.5/4.7.1979, Government Gazette, Issue IV, No 362), are located in areas with a zone price  $\leq$  to 2,100 euros/m<sup>2</sup>, are used as primary or secondary residence and whose owners meet certain income criteria.

- **"Energy Efficiency at household buildings" programme – Energy upgrading of residential building envelopes - Financial aid for the upgrading of heating system boilers / burner units in existing buildings**
- **Funding:** The programme is financed by the European Union (European Regional Development Fund (ERDF)) and by National Resources, through the Regional Operational Programmes (ROP) and the Operational Programme "Competitiveness and Entrepreneurship" (OPCE ) and "Environment and Sustainable Development" (OPESD) under the NSRF 2007-2013.
- **Interventions:**
  - thermal insulation
  - window replacement
  - upgrading of the heating system
  - solar thermal collectors

- **"Energy Efficiency at household buildings" programme – Energy upgrading of residential building envelopes - Financial aid for the upgrading of heating system boilers / burner units in existing buildings**

- **Eligible budget per beneficiary** application  $\leq$  15,000 euros (incl. VAT)

Depending on the annual income (A.1.) of the applicant:

For A.I.  $\leq$  12.000€, the subsidy is 70% , while the remaining 30% can be covered by no interest rate bank loan.

For A.I. 12.000 - 40.000€, the subsidy is 35% , while the remaining 65% can be covered by no interest rate bank loan.

For A.I. 40.000 - 60.000€, the subsidy is 15% , while the remaining 85% can be covered by no interest rate bank loan

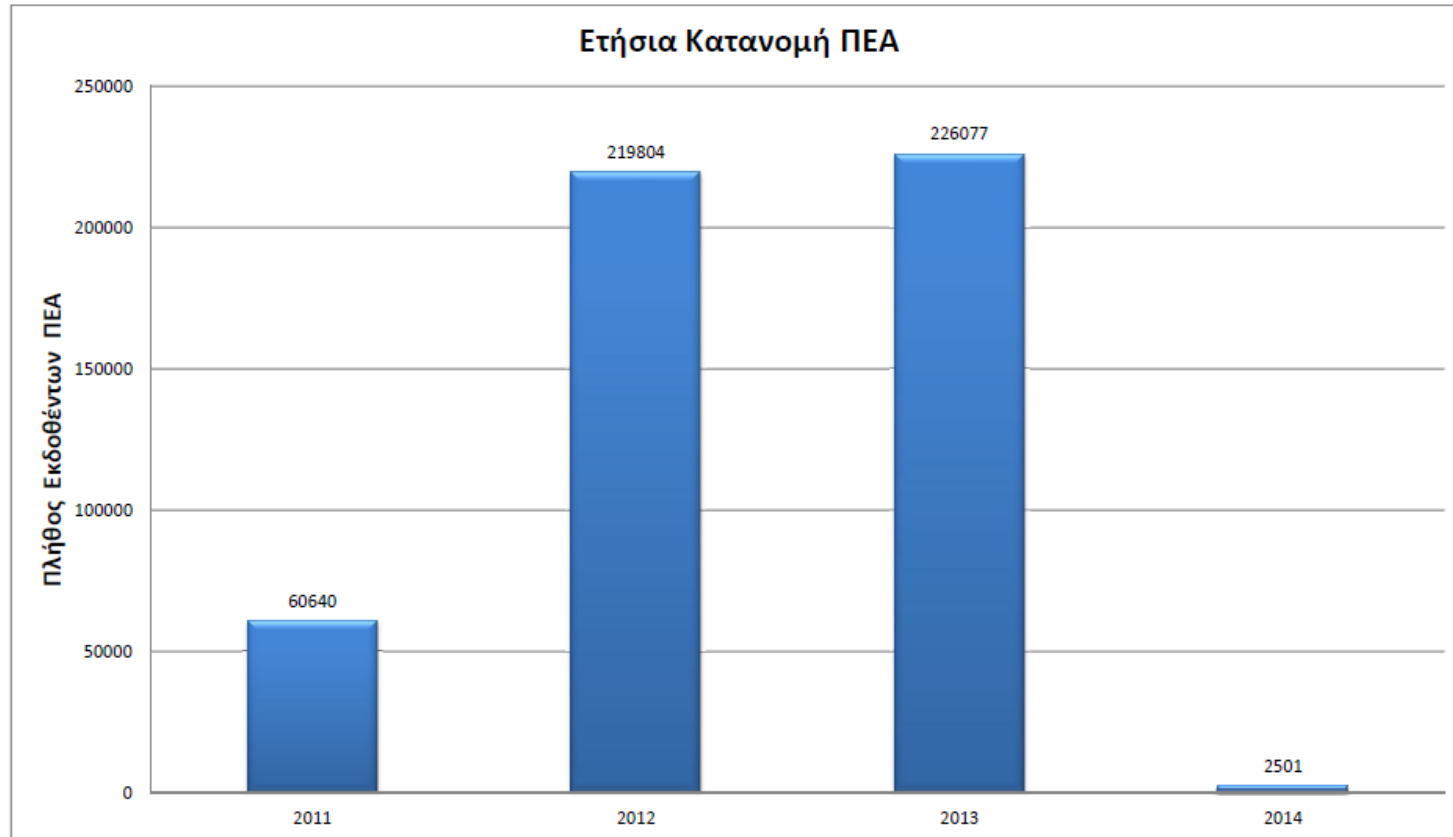
Jointly for our common future

- **"Energy saving Efficiency at household buildings" programme**
  - Energy upgrading of residential building envelopes -
  - Financial aid for the upgrading of heating system boilers / burner units in existing buildings
- **Budget:** 396 million euros
- **Results:** Up to the November 2013 approx. 28,776 beneficiaries (total budget of 319,499,706.7 million €) applications have been submitted of which approx. 15,000 have been approved.
- Energy saving (approximately 1 billion kWh /year);
- Public awareness concerning the rational use of energy and environmental protection;
- Improving living conditions in buildings, cities and urban environment;
- **EPC:** One before the interventions and one after

## "Energy saving Efficiency at household buildings" programme – Collaboration

- Greek Ministry of Environment, Energy and Climate Change
- CRES
- TEE
- Educational Centers
- Auditors
- Banks





Energy Audits in Greece 9.1.11-9.1.14, Source: MEECC



**SOUTH EAST EUROPE**

Transnational Cooperation Programme

**TRACE**

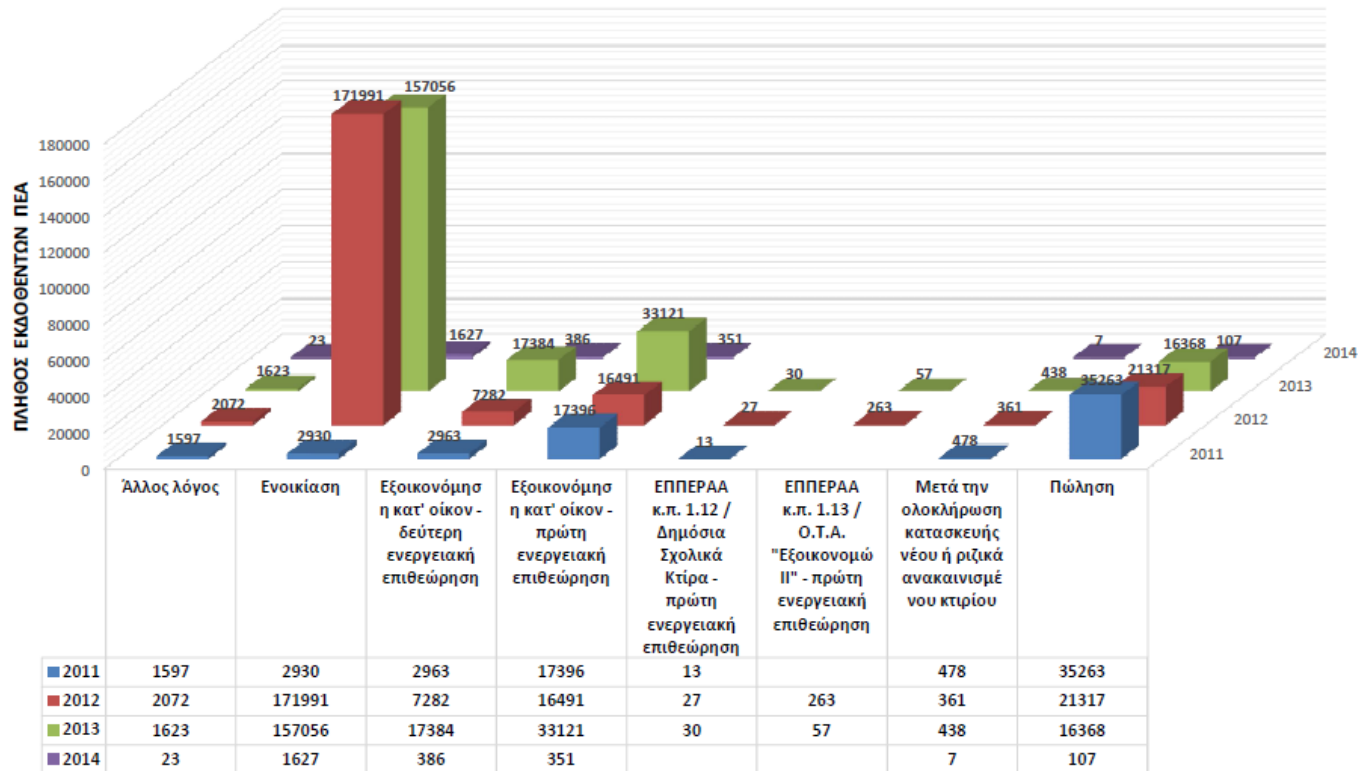


Transnational Cooperation for the Improvement of Buildings Energy Performance and Efficiency



Programme co-funded by the EUROPEAN UNION

**Ετήσια Κατανομή εκδοθέντων ΠΕΑ ανά Λόγο Έκδοσης**



Energy Audits in Greece 9.1.11-9.1.14, Source: MEECC

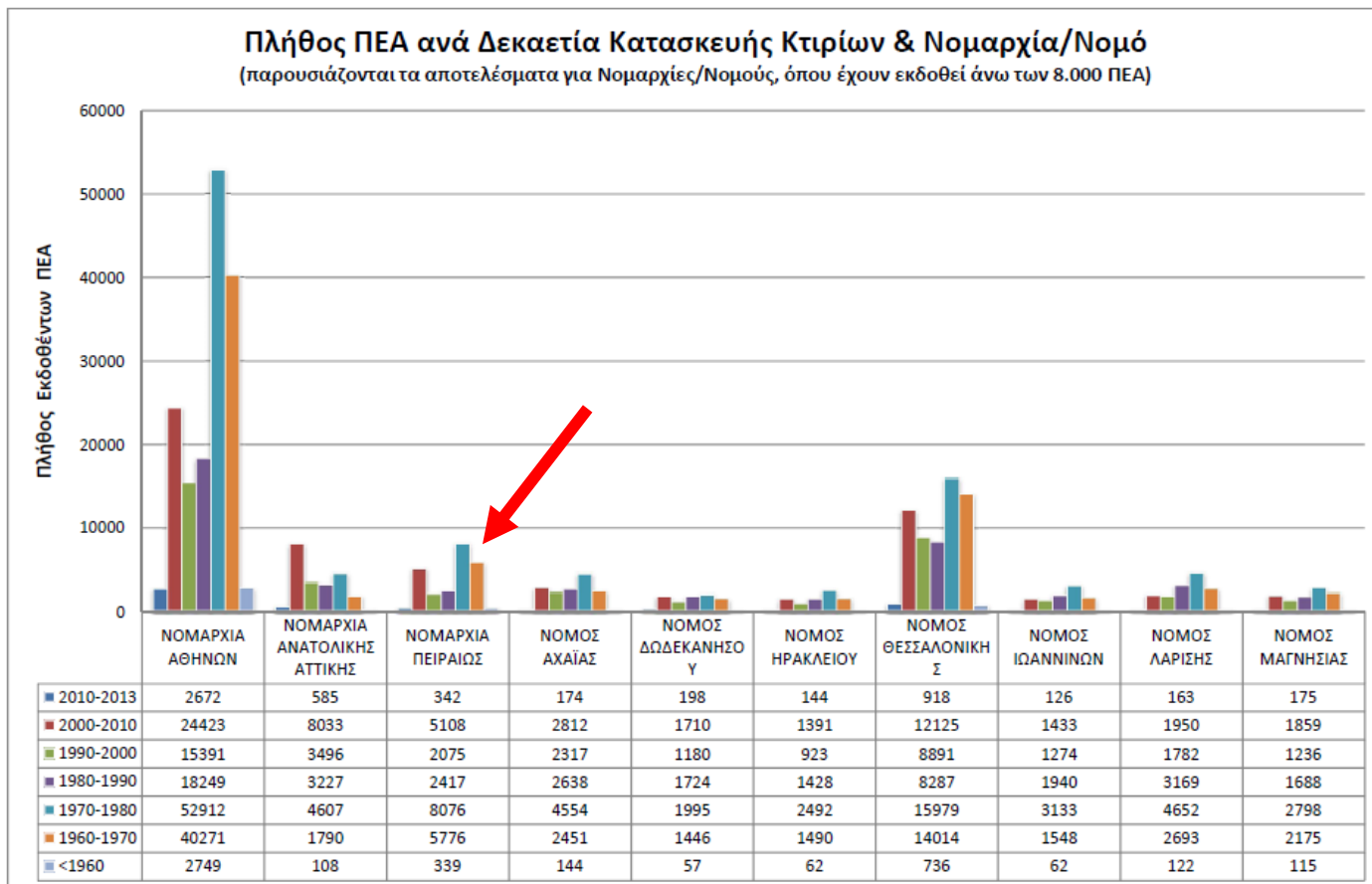
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**ΚΑΠΕ CRES**

CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING

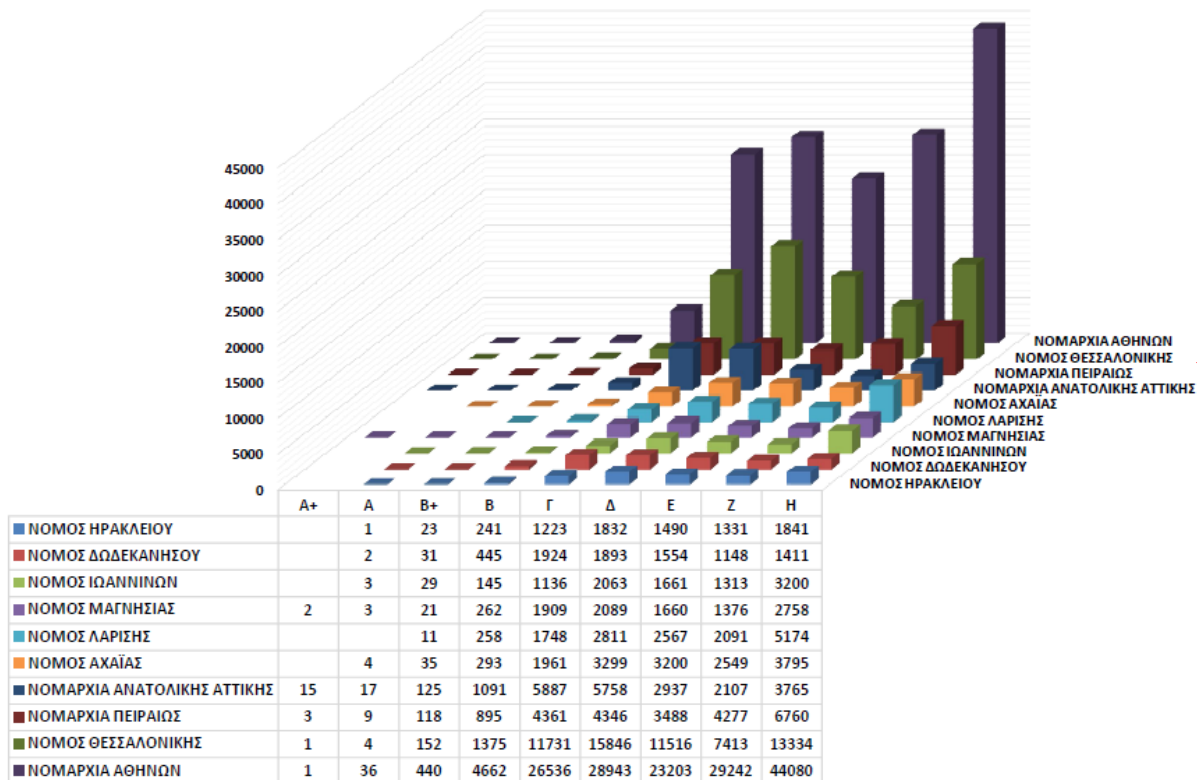
Piraeus 25.09.2014



Energy Audits in Greece 9.1.11-9.1.14, Source: MEECC

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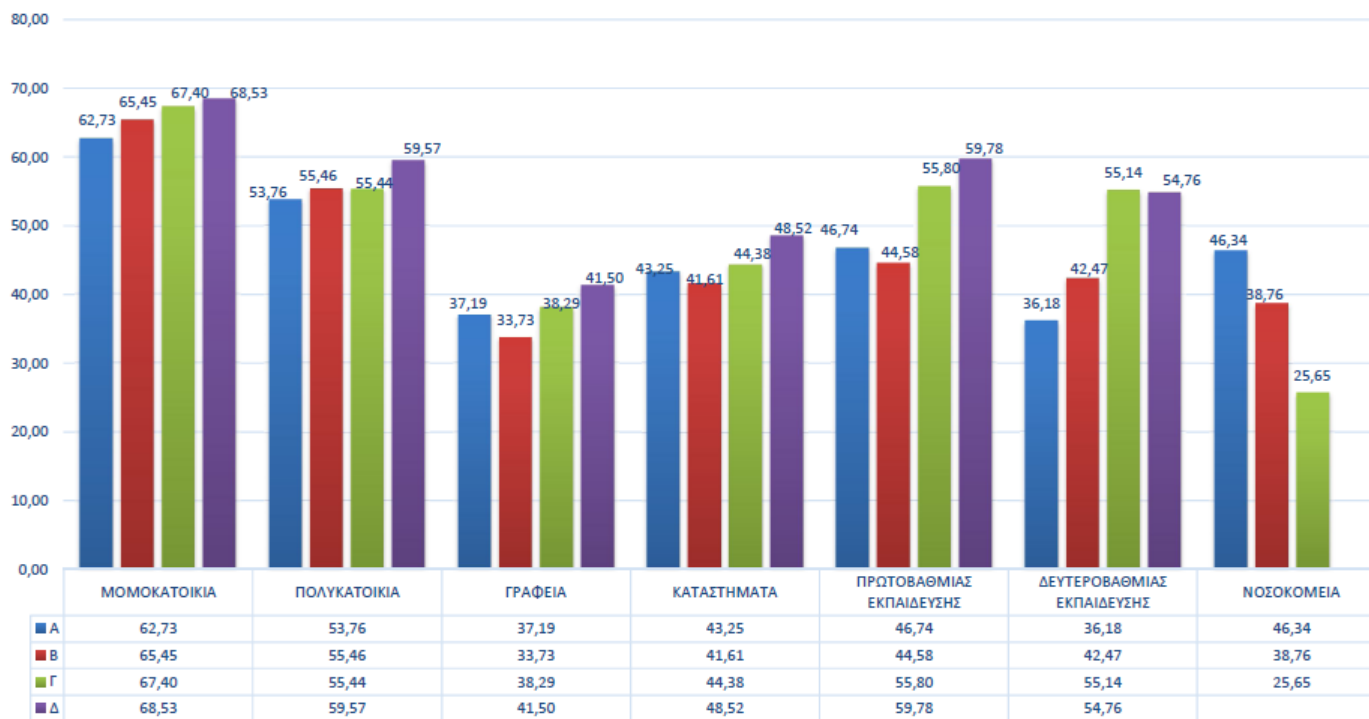
Πλήθος ΠΕΑ ανά Ενεργειακή Κατηγορία και Νομαρχία/Νομό



Energy Audits in Greece 9.1.11-9.1.14, Source: MEECC

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**Ποσοστό Εξοικονόμησης Ενέργειας Κτιρίων ανά κλιματική ζώνη**



Energy Audits in Greece 9.1.11-9.1.14, Source: MEECC

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- **Integrated energy planning by municipalities – “Save Energy I” (ΕΞΟΙΚΟΝΟΜΩ) Programme**
- **Start day:** 2009
- **Target Group:** Municipalities with a population of over 10,000 residents (based on the census of the National Statistical Service of Greece as of 2001), and capitals of prefectures regardless of population criteria (all of Greece)
- **Purpose:** The purpose of the “Save Energy I” (ΕΞΟΙΚΟΝΟΜΩ) Programme is the implementation of actions and proven best practices for reducing energy consumption in the urban environment, with emphasis on the building sector (municipal buildings) and the upgrade of public spaces, on one hand, and in the area of municipal and private transport and energy intensive municipal facilities, on the other, through the implementation of technical interventions and actions to raise awareness and mobilize citizens, the local government, businesses and bodies.

- **Integrated energy planning by municipalities – “Save Energy I” (ΕΞΟΙΚΟΝΟΜΩ) Programme**
- **Description:** Under the “Save Energy I” (ΕΞΟΙΚΟΝΟΜΩ) programme, interested Local Authorities submitted an Integrated Action Plan setting out a detailed documentation of the proposed actions/measures, establishing the medium-term strategy for energy efficiency at the municipal level, and an Implementation Plan which details, as to their natural object and cost, the selected actions of five priority axis. Axis 1 deals with Interventions to existing municipal buildings (eg. Administration, schools, housing blocks).

The overall aim is the improving the energy efficiency of existing municipal buildings, with an overall reduction in consumption by 30%, i.e. 11.14 GWh (958 toe) per year, 7.8 GWh of which is for heat and 3.34 GWh for electricity. The annual CO<sub>2</sub> savings amount to 4.97 kt.

- **Integrated energy planning by municipalities – “Save Energy I” (ΕΞΟΙΚΟΝΟΜΩ) Programme**
- **Budget:** 100 million euros
- **Interventions in buildings:**
  - thermal insulation,
  - replacement of windows
  - solar thermal systems
  - geothermal heat pumps
- The subsidy provided rises up to 70% of the cost for energy efficiency measures. In the first phase of the program a total budget of € 82mio was allocated.
- **Save Energy II (ΕΞΟΙΚΟΝΟΜΩ II, 2012-ongoing)**



## Examples: Collaboration within EU funded projects



TRACE training in Piraeus by CRES staff



Study visit in Loutraki 24.09.14



<http://el.rurener.eu>

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Piraeus 25.09.2014

# For more information

[www.see-trace.eu](http://www.see-trace.eu)

# Thank you for your attention !

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