



Cost Efficient Options and Financing Mechanisms  
for nearly Zero Energy Renovation  
of existing Buildings Stock

## **DELIVERABLE 3.2**

### ***Report on analysis of current conditions for Alimos***

#### **Authors:**

**Nicholas Lambrianidis – Municipality of Alimos,  
Greece; Alberto Soraci, Andreana Casaramona,  
Antonia Sapia, Concetta Di Stefano, Giovanni Di Fiore –  
Innova BIC, Italy**



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<b>Participating Partners:</b>	<ol style="list-style-type: none"> <li>1. ENEA – Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile – Italy</li> <li>2. COMUNE MESSINA - Comune di Messina – Italy</li> <li>3. ERRENTEIRA – Errenteriako udala – Spain</li> <li>4. CMC – camara municipal de coimbra – Portugal</li> <li>5. ALIMOS – Dimos Alimou – Municipality of Alimos – Greece</li> <li>6. ISR – Instituto de sistemas e robotica – Associacao – Portugal</li> <li>7. SINLOC – Sistema Iniziative Locali S.p.A.– Italy</li> <li>8. ETVA VI PE – ETVA VI.PE. S.A. – Greece</li> <li>9. TECNALIA – Fundacion Tecnalia Research &amp; Innovation – Spain</li> <li>10. EUDITI LTD – EuDiti – Energy and Environmental Design – Greece</li> <li>11. INNOVA BIC – INNOVA BIC - Business Innovation Centre SRL – Italy</li> <li>12. AAU SBI – Aalborg University – Denmark</li> <li>13. ASSISTAL – Associazione Nazionale Costruttori di impianti e dei servizi di efficienza energetica ESCo e Facility Management– Italy</li> </ol>								
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This deliverable presents the analysis of the economic, regulatory and policy framework of the municipality of Alimos (WP3, task 3.1)

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## Statement of originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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## CERTUS PROJECT IN BRIEF

Southern European countries undergo a severe economic crisis. This hinders the compliance to the latest Energy Efficiency Directive, demanding strict energy efficiency measures for the public sector. Investments required to renovate public buildings and achieve nearly zero energy consumption have long payback times. So the interest of financing entities and ESCOs is small, especially when banks have limited resources. Many of the municipal buildings in Southern Europe require deep renovations to become nZEB and this should not be regarded as a threat but rather as an opportunity for the energy service and the financing sector.

The objective of the proposed action is to help stakeholders gain confidence in such investments and initiate the growth of this energy service sector.

Municipalities, energy service companies and financing entities in Italy, Greece, Spain and Portugal are involved in this project. The plan is to produce representative deep renovation projects that will act as models for replication. Twelve buildings in four municipalities in each country have been selected. The partners will adapt existing energy service models and procedures and will work out financing schemes suitable for the 12 projects. Consequently, the partners will create materials, such as guides and maxi brochures, suitable to support an intensive communication plan.

The plan includes four workshops with Business to Business (B2B) sessions targeted to municipalities, ESCOs and financing entities. These actions shall be complemented by four training activities targeting municipal employees and the participation in international events targeting all 3 stakeholders. We expect that our action will have a significant impact by triggering investments in renovations to achieve nZEB and the uptake of the ESCO market in Southern European member states.

## EXECUTIVE SUMMARY

The present document is a part of the Work-package 3 on ***Energy Service Models and Optimal Financing Schemes***, in order to get the “Analysis of the economic, regulatory and policy framework of partner municipalities”. It includes two kinds of analysis:

1. analysis of the economic, regulatory, and policy framework of CERTuS’ Municipalities
2. analysis of the cooperation between ESCO’s and Municipalities

The object of this report is to explore the prevailing national and local conditions in view of energy refurbishment of the existing municipal buildings stock in the Municipality of Alimos, partner of the CERTuS project. The analysis has been focused mainly on the following aspects:

- the Municipality energy budget and financial status
- expected energy saving from renovation project
- administrative ability of municipalities to cope with deep renovation project
- regulatory and Policy framework (incentives and disincentives)
- obstacles slowing down the involvement of ESCOs in the energy refurbishment of existing public buildings (with the existing services schemes)
- financial issues relevant to renovation project (e.g. loan durations, interest rates, collaterals, credibility of municipalities, warranties, etc..)
- any other relevant issue (e.g. government warranties to municipalities under the current economic crisis)

To in depth investigate the current state of the art in terms of cooperation between Municipalities and ESCOs, a questionnaire has been created by Innova BIC and filled in by the Municipalities of the project. The aim is to understand the main requirements to the adoption and spreading of new private financial schemes for the energy refurbishment devoted to the existing buildings stock of Southern Mediterranean Municipalities.

This report includes the analysis of the economic, regulatory, and policy framework and the results of the questionnaire on the cooperation between ESCOs and the CERTuS Municipalities.

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# 1. ANALYSIS OF THE ECONOMIC, REGULATORY AND POLICY FRAMEWORK OF THE MUNICIPALITY OF ALIMOS

The objective of this analysis is to explore the starting point of target Municipal activity in terms of energy renovation so far, so as to detect existing barriers to be overcome as well as opportunities to be seized. This analysis aims to point out specific local conditions for each municipality, so as to frame CERTuS intervention as well as to overcome existing national, regional and local barriers to the adoption of financial instruments for the energy refurbishment devoted to the existing municipal buildings stock. To that end, each target municipality is invited to provide relevant information and data regarding the municipal buildings stock, energy consumption, regulatory and policy framework and constraints in which CERTuS actions will take place.

## 1.1. GENERAL DATA OF THE MUNICIPALITY OF ALIMOS

Alimos is a municipality in the southern part of the Athens, Greece. The municipality comprises two settlements, the suburban seaside town of Kalamaki, and the inland community of Trachones. Alimos had 41,720 inhabitants in the 2011 census. Its surface is calculated at 7.5 square kilometres and population density therefore is 5,600 inhabitants per km<sup>2</sup>. Alimos is situated on the Saronic Gulf coast, 12 km south of Athens city centre. The Hellinikon Olympic Complex, built on the grounds of the former Ellinikon International Airport for the 2004 Summer Olympics, lies south of Alimos. The built-up area of Alimos is continuous with those of the neighbouring suburbs Palaio Faliro, Agios Dimitrios, Ilioupoli, Argyroupoli and Elliniko. Alimos has the largest marina in Greece and several beaches. The main roads of Alimos are Poseidonos Avenue along the coast, Kalamakiou Avenue and Alimou Avenue. The nearest subway station is at Alimos metro station, in the eastern part of the municipality. The western, coastal part of the municipality is connected with Athens city centre by the Athens Tram.

FIGURE 1 - GEOGRAPHICAL VIEW

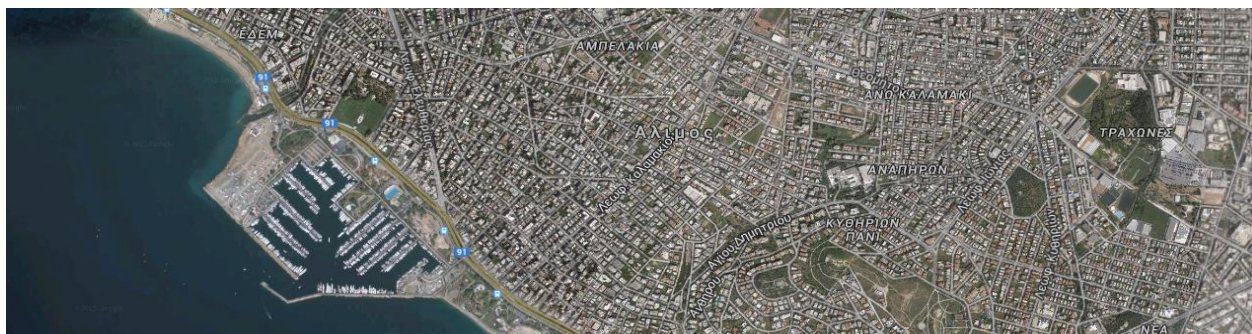


TABLE 1 – GENERAL DATA

<b>Public administration</b>	
Municipality	Alimos
County	Attiki
Region	Central Greece
<b>Territorial facts</b>	
Coordinates	37°55'00'' N 23°43'00'' E
Altitude	10 m a.s.l.
Surface	7.5 km <sup>2</sup>
Inhabitants	41,720
Population density	5,600 hab./km <sup>2</sup>
Neighboring Municipalities	Elliniko-Argiroupoli, Ilioupoli, Agios Dimitrios, Palaio Faliro
<b>Other information</b>	
Postal code	17455 & 17456

Tel. code	210
Time zone	CET + 1
Seismic classification	Zone 1

The weather in Alimos is generally typical of the Mediterranean. Summers (June to August) usually bring long hot periods of sunshine, and very little rainfall. Winter months (December to February) bring about mild temperatures, averaging between 8°C and 10°C during most of the season, and a higher level of precipitation. Alimos weather sometimes brings light falls of snow during winter also. The city of Alimos generally experiences a mild Mediterranean climate that features dry summers and mild wet winters.

FIGURE 2 – AVERAGE HIGH/LOW TEMPERATURE FOR ALIMOS, GREECE

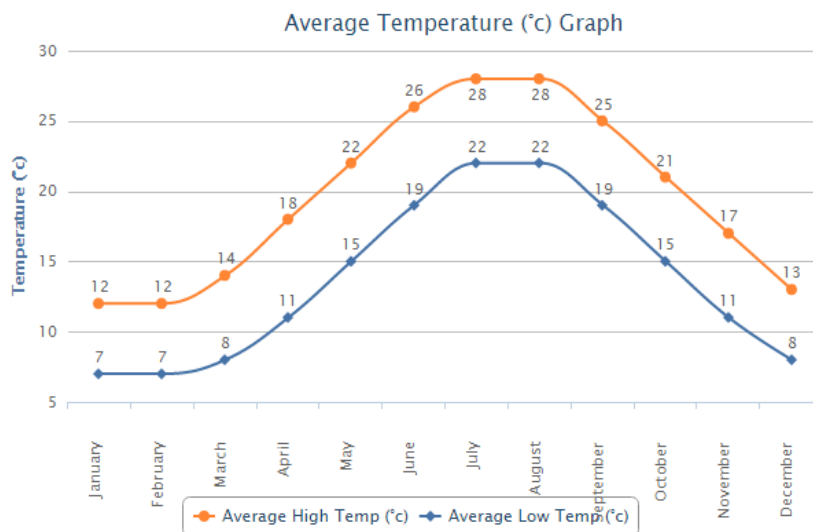
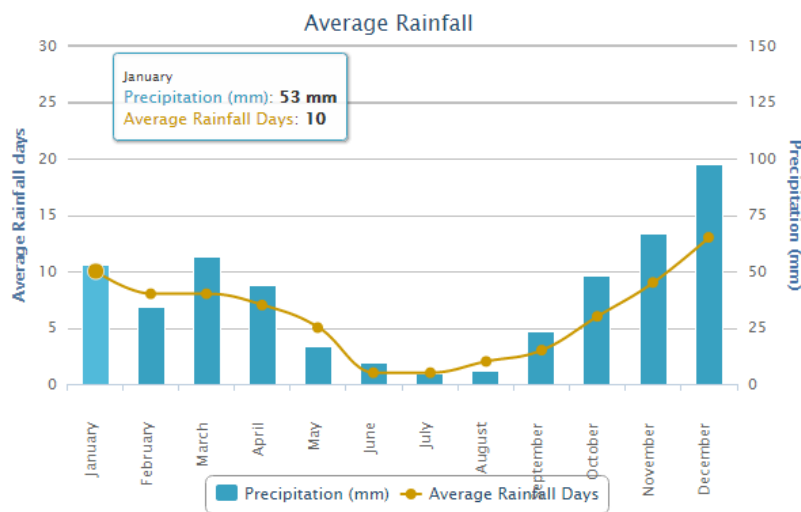


FIGURE 3- AVERAGE RAINFALL IN MM FOR ALIMOS, GREECE



### Building stock

The Municipality uses 47 buildings to house its activities, totalling a surface area of 60,470 m<sup>2</sup>. The main uses are office buildings, educational, cultural, sports centres and welfare buildings. The majority however, are educational buildings, housing schools and kindergartens (Table 2). Most of the buildings are owned by the Municipality, but 23% are rented (Table 3).

The largest part of the building stock is relatively new, less than 30 years old. But, the need for energy efficiency improvement is considerable especially in the educational and sport buildings. It is estimated that about 50% of the buildings need energy retrofiting. The following Tables give information on the buildings.

TABLE 2 – MUNICIPALITY BUILDINGS

BUILDING TYPE	NUMBER OF BUILDINGS	TOTAL SURFACE AREA (m <sup>2</sup> )	AGE
OFFICE BUILDINGS	8	7,300	1960 - 2000
CULTURAL	3	2,500	1980 - 2000
WELFARE / SERVICES	9	5,540	1980 - 2010
SPORT BUILDINGS	4	2,650	1970 - 2001
EDUCATIONAL (KINDERGARTEN & ELEMENTARY TO HIGH SCHOOL)	23	42,480	1950 - 2004
TOTAL	47	60,470	

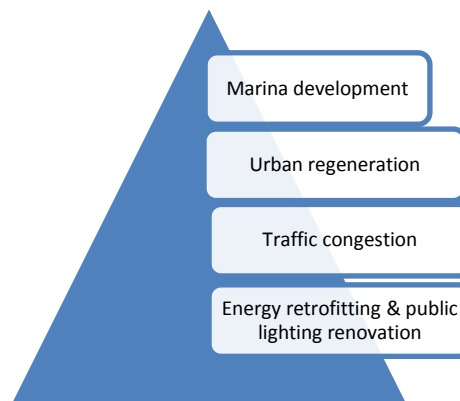
TABLE 3 – BUILDINGS OWNERSHIP

OWNERSHIP	NUMBER OF BUILDINGS	PERCENTAGE
OWNED BUILDINGS	25	53%
RENTED BUILDINGS	11	24%
GRANTED USE	3	6%
OTHER	8	17%
TOTAL	47	100%

## Objectives and priorities

The main critical issues in Alimos municipality are on a priorities scale:

FIGURE 4- PRIORITIES SCALE



### Marina Development

- Modernisation of the marine infrastructure to improve international accessibility
- General Operational Plan & Environmental Strategy
- The Alimos Marina General Operational Plan aims to develop and modernize the existing infrastructure of the tourist port.

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It requires use of the port infrastructure of the marina, and the development of the land area of about 210 acres, with a view to shaping a modern and quality pole of tourism, leisure and cultural activities.

The final objective of the proposed development is on the one hand the high quality service of marine tourism with pleasure yachts having homeport Athens city and travel to the Saronic Gulf, the Cyclades and the South Aegean and secondly the formation of a quality coastal recreation area that will be the way out of the city of Alimos on the beach

### **Urban Regeneration**

The main Objective is the Economic and social regeneration of cities and of neighbourhoods in crisis in order to promote sustainable urban development.

The main priority aims at renovating public spaces and building social facilities, with a view to enhancing the overall quality of the public space in Alimos.

The Renovation of buildings and public space, the generation of local employment the improvement of education and training systems for disadvantaged groups, the development of environmentally friendly public transport systems, the introduction of more efficient energy management systems and the use of renewable energy

### **Traffic congestion**

Traffic congestion poses a challenge for all large and growing urban areas, wasting time and exposing citizens to unnecessary pollution and stress every day. The municipality of Alimos is working for improving public transport to reduce traffic congestion avoiding its overall impact.

### **Energy retrofitting & public lighting renovation**

The energy efficiency of educational buildings and the improvement of indoor air quality is the top priority of the Municipality. A preliminary study has been carried out for the improvement of the thermal conditions in several school buildings. The municipality is seeking financing to proceed in implementation.

Energy efficiency upgrading of street lighting systems is a simple way to improve public services while generating long-term cost savings for municipality of Alimos, improving quality of life for citizens, increasing perception of safety and security etc.

Projects involve retrofitting of existing streetlights with energy efficient lamps and fixtures, and automatic controls to optimize performance and energy use.

## 1.2. MUNICIPALITY ADMINISTRATIVE AND LEGAL FRAMEWORK

The integrated energy design and energy efficiency of the buildings is one of the top priorities of Alimos. The objective is to utilize all available financing tools and leverage mechanisms in order to achieve the desired results on time. According to the five-year operational plan and the SEAP (Sustainable Energy Action Plan under preparation), the target is to carry out retrofitting works in approximately 50% of the municipal buildings to achieve energy consumption reduction of at least 25% compared to the current one.

Ultimately, the target is to save energy and resources, cut CO<sub>2</sub> emissions, promote environmental conservation and awareness through renewable energy technologies penetration in everyday life.

In this context, the municipality of Alimos is participating in the European Initiative: Covenant of Mayors and is preparing the Sustainable Energy Action Plan as required.

Several attempts were made in the past to utilize NSRF (National Strategic Reference Framework) funds in order to make interventions in municipality buildings and schools (for example the 2nd elementary school of Alimos), to achieve energy and resource savings.

The municipality of Alimos has planned the following actions to take place in the near future (see below).

- Compile a feasibility study to upgrade municipality lighting to LED technology
- Compile reports on the energy retrofitting for municipality buildings

The main constraints the municipality of Alimos is stumbling upon are the following:

- Difficulty in finding appropriate financing tools
- High cost of financing
- Missing regulatory framework
- Bureaucracy and long-winded licensing procedure

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### 1.3. MUNICIPALITY FINANCIAL FRAMEWORK

The integrated energy efficiency planning is a high priority to the municipality of Alimos. Many efforts have been made in the past to utilize and extract financing from the following sources:

- Utilize the existing NSRF funds
- Participation in the Public Investment Programme
- Municipality funds
- Utilization of modern investment tools (such as Jessica, Jeremy)
- Banking facilities
- Corporate social responsibility

From the above mentioned financial sources, NSRF is the main one. But, currently there is no open invitation to submit proposals, as the NSRF is in a transition period at the moment.

Practically the only available tool to finance energy efficiency initiatives is the municipality budget. The problem is that the majority of the budget is devoted to cover current operational needs of the municipality and there is no room to allocate funds to energy efficiency measures.

The lowest absorption shows the Fund Jessica, for which 258 million were allocated but only 9.27million are absorbed to date. The Fund aims to support investment in sustainable urban development, while seeking leverage private capital and, despite the fact that is running for nearly four years, only now begins to mature projects for integration. A further problem is the allocation of funds in all regions of the country, many of which have no experience in performing similar projects based on European standards.

The main hurdle and barrier in the adoption of private financial instruments (such as bank loan) is mainly the cost of leverage and the ineffective regulatory framework.

The other source of private funding is the Corporate Social Responsibility. Through this channel, the municipality of Alimos can attract funds to accommodate its plans and this is tactic that will be followed in the near future. Nevertheless, it has to be noted, that given the critical economic situation of the country, not many private companies have as a priority to allocate part of their budget to Corporate Social Responsibility activities.

## 1.4. ENERGY DATA OF THE MUNICIPALITY OF ALIMOS

The integrated energy design and energy efficiency of the buildings is one of the top priorities of Alimos. The ultimate goal is to save 30 to 40% of the annual energy needs of the municipality buildings. This is planned to be achieved through cooperation with ESCOs. In the following tables energy data (electricity-oil-gas consumption, CO<sub>2</sub> emissions and cost) regarding the public buildings of Alimos Municipality are displayed. This is annual consumption based on year 2011 except for the natural gas consumption which based on 2014 data.

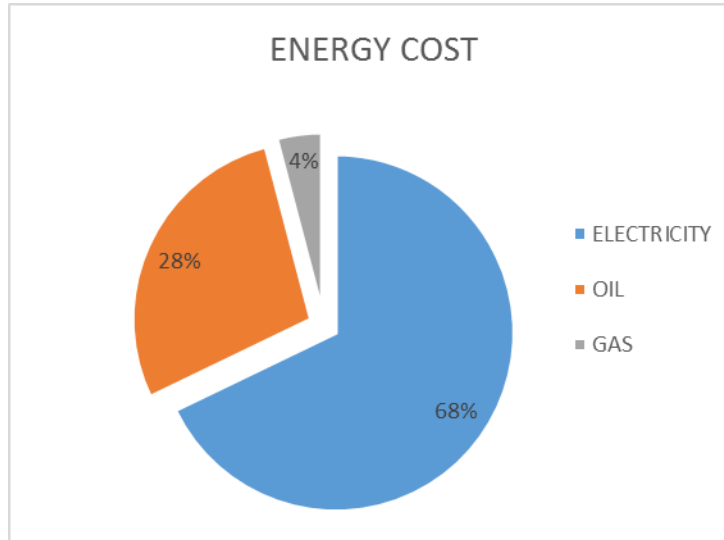
TABLE 4 – ENERGY DATA

	ELECTRICITY CONSUMPTION [kWh]	CO <sub>2</sub> EMISSIONS [tons]	COST FOR ENERGY [€]
PUBLIC BUILDINGS	1,872,798	2,152	337,104

	OIL HEAT CONSUMPTION [lt]	CO <sub>2</sub> EMISSIONS [tons]	COST FOR FUEL [€]
PUBLIC BUILDINGS	128,332	343	139,369

	GAS CONSUMPTION [kWh]	CO <sub>2</sub> EMISSIONS [tons]	COST FOR FUEL [€]
PUBLIC BUILDINGS	132,505	27	20,335

FIGURE 5 - ENERGY COST PERCENTAGE FOR EACH SOURCE



The ESCOs will finance the energy retrofitting projects and will receive payments on the ‘pay as you save’ scheme. Approximately 50% of the buildings owned by the Municipality (about. 12 buildings) could be renovated with this model.

Finally the municipality of Alimos is planning to negotiate the electricity supply with other major electricity service companies (other than the Public Power Corporation) in order to save money from the electricity bills. These funds will be allocated to renewable energy projects.

### 1.5. RENOVATION EXPERIENCES IN THE MUNICIPALITY OF ALIMOS

There are no major energy renovation projects similar to CERTuS. However, as part of the maintenance works energy equipment is replaced by new when it does not function properly.

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## 1.6. REGULATORY AND POLICY FRAMEWORK ON ENERGY EFFICIENCY AND NEARLY ZERO ENERGY BUILDINGS IN YOUR COUNTRY

### ***Energy saving/nZEB definition at national level***

Greece has not yet defined the levels of nZEB. According to the new Directorate of Energy Policy and Efficiency of the Ministry for Environment, the relevant regulation is expected to be issued by the end of 2015. Different levels of energy performance will be set for the various building use typologies. However, it appears that for existing public buildings, with the exception of the buildings of the Central Government, nZEB levels will not be compulsory unless major renovations take place.

### ***National Law and Strategy Plan devoted to energy refurbishment of the existing buildings stock, and existing gaps in the legislation***

In 2010 the new regulation regarding energy performance in building (KENAK) was published. This law, in addition to the definition of the requirements for the new and refurbished buildings, establishes also the need of the energy performance certification. Any building or part of a building needs to be certified in order to be rent or sold. Also, according to this certification the energy renovation of a building can be funded under several national programs. The most widespread funding programs are the one about energy savings in residential buildings (EKSOIKONOMO KAT' OIKON) and the one about energy savings in municipal buildings (EKSOIKONOMO II).

The new Greek law (published in 2015) which is going to define the nZEB targets, in order to be consistent with the Commission Directive 2012/27/EU, will also impose the renovation of 3% of buildings owned and occupied by the central governments.

For the period 2014 – 2020 the central government has issued the national action plan for energy efficiency that includes the following funding opportunities relevant to the central and wider public sectors including local authorities.

TABLE 5 – ENERGY MEASURES

Measure	Estimated No of beneficiaries	Implementation period	Duration of measure life	Estimated end-use energy savings (ktoe)
Energy improvement of public buildings	280 buildings	2015-2020	-2024+	12.8
Application of energy management according to ISO 50001 in public bodies including local authorities	4,000 buildings	2015-2020	-2024+	28.1
Energy managers in public buildings	15,000 buildings	2014 - 2020	-2024+	52.6
Replacement of old light trucks in both public and private sectors	10,000 trucks	2015 - 2020	-2024+	11.3
Development of smart metering systems for the electricity consumption in the tertiary sector	5,760,000	2014-2020	-2024+	96.8

***Local policy on energy efficiency for buildings, with a special focus on the existing buildings stock:***

The integrated energy design and energy efficiency of the buildings is one of the top priorities of Alimos. Currently, the report is being drafted.

***Sector specific regulation at regional/local level (e.g. Building regulation)***

The regulation regarding energy performance in building (KENAK) defines all the parameters which are needed for the calculations of the performance. These parameters are used both in the study of the energy performance of a new buildings as well as during the energy audit of the existing.

The methodology which is followed is the same for the whole country but some parameters vary depending on the climatic zones (four zones). The parameters which are taken into consideration are the following:

- 
- Operation conditions: schedules, internal temperature, natural ventilation, hot water, internal gains, weather data
  - Specifications of building envelope: building materials, glazing, shading devices, thermal bridges, passive systems
  - Specifications of HVAC and hot water systems: COP of systems, losses of systems, COP of auxiliary systems, efficiency of heat recovery systems
  - Specifications of electrical and electronics systems: efficiency of lighting system, lighting level, efficiency of cogeneration of heat and power system, renewable energy sources, BEMS

Taking into account these parameters the final primary energy consumption for a building is calculated. The comparison between the calculated consumption and the consumption of the baseline model classifies the building to the corresponding energy class.

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## 2. ESCOs AND MUNICIPALITIES COOPERATION FRAMEWORK

Innova BIC, with the support, of:

- Municipalities of Messina (Italy);
- Municipalities of Errenteira (Spain);
- Municipalities of Coimbra (Portugal);
- Municipalities of Alimos (Greece)

explored the previous experienced and the potential obstacles of the cooperation between municipalities and ESCOs. This analysis is an important part of the task 3.1 (*analysis of the economic regulatory and policy framework*), because - as mentioned in the document of the projects - “building envelope improvements entail quite long payback times which are not attractive to ESCOs or commercial banks under current market practice”, while municipalities are often reluctant to collaborate with for different reasons. To that end, a questionnaire has been developed to investigate the current “state of the art” of the relationship between municipalities of Messina, Errenteira, Coimbra, Alimos and ESCO agencies. This questionnaire has been created to get the point of view of the municipalities’ partners of the project. The questionnaire was shared with the project coordinator before sending it to the Municipalities in order to gather suggestions and inputs to better address and improve the analysis. This collection of the information together with the *Analysis of the economic, regulatory and policy framework of CERTuS’ Municipalities* will be used to address a proper future strategies about the financial schemes and the kind of initiative to increase the cooperation between energy agencies and the public administrations. This deliverable will analyse not only the result of the questionnaire filled in by Municipality of Alimos, but it will take into consideration also the ones coming from the others CERTuS municipalities (Errenteira, Coimbra and Messina) in order to have a general framework and to compare the experiences of different Municipalities.

## 2.1. METHODOLOGY

Innova BIC has realized a questionnaire, devoted to partner municipalities to gather their experience and point view with regard to cooperating with ESCOs, with a set of *open and closed questions*. The questionnaire has been divided in two sections

1. Section 1: questions about the general profile of the municipalities;
2. Section 2: questions on cooperation status

The questionnaire has been sent to municipalities in order to explore the state of the art in the cooperation between ESCOs and CERTuS municipalities as well as to detect the key elements for improving this relationship. In particular, it has been highlighted that: “the cooperation between ESCOs and Municipalities can play a key role in turning energy-consuming Municipal premises into Nearly Zero Energy Buildings, through accelerating the pace of investment and mobilizing private sector finance”. In other words, the object of the questionnaire is to explore the state of the art of ESCOs and municipalities cooperation so far, so as to detect existing barriers to be overcome as well as opportunities to be seized. The choice of the questions has been made taking into consideration three main indicators:

- Estimate of time to fill out the questionnaire;
- Number of questions appropriate to have a general framework of the cooperation between the ESCOs and Municipalities without lost important information;
- Mix of open and closed questions

The questions are 14. In the section 1 (questions about the general profile of the municipalities) we asked:

1. Country and Name of Municipality
2. Name of the interviewee
3. Position held of organization

In the Section 2 (questions on cooperation status), a set of 10 questions have been selected with different answer mode:

- 
- *Closed format questions* - Yes or no (dichotomy variable). In both cases the respondents must explained why
  - *Closed format questions* - a set of statements where the respondents must indicated no more than two characteristics
  - *Open format questions*

Below the list of the questions:

Has your municipality ever cooperated with an ESCO?

- What of these characteristics you consider fundamental for ESCOs and Municipality cooperation?
- In your opinion, do you consider the precedent characteristic, indicated by yourself, part of your experience?
- Which kind of contract did you agree with ESCOs?
- Please, indicate the main futures of the contract agreed?
- Which kind of intervention was funded?
- Indicate the amount of investment?
- The payback period agreed with the ESCO for covering the investment was respected?
- What of these statements could you consider correct?
- Is your organization interested in cooperating soon with an ESCO for improving energy performance of its buildings?
- According to you, cooperation with ESCOs is useful for improving the energy performance of your organization. Why?

The questionnaire has been created last July and sent to the municipalities in September. It has been sent through as an email attachment in word format.

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## 2.2. GENERAL ANALYSIS OF RESULTS

Errenteira, Coimbra and Alimos have never cooperated with ESCOs. We can state that the CERTuS project is a first step in this direction. A questionnaire in this section, the results of the questionnaire on the cooperation between the four municipalities, partners of the project, and the ESCOs are presented.

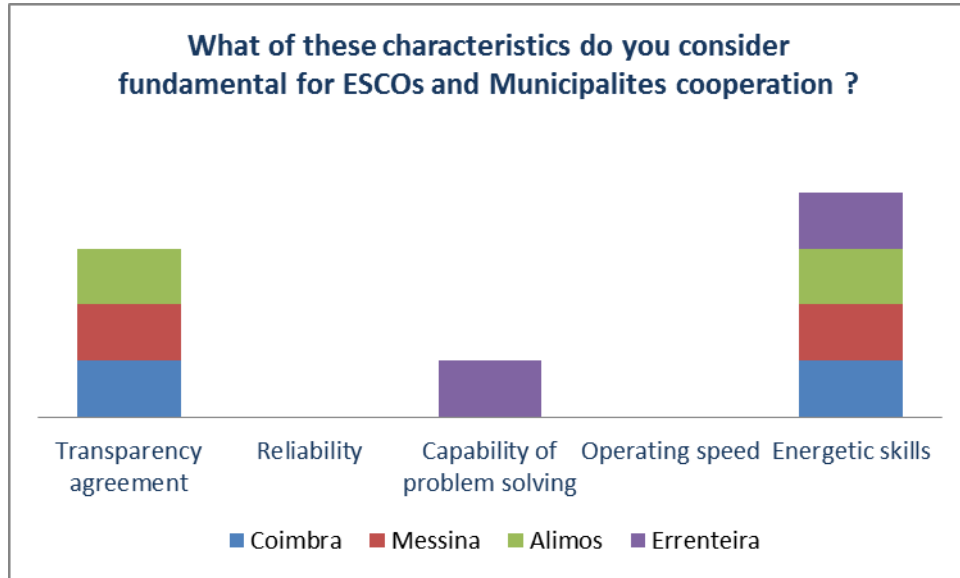
The analysis of the closed format questions regards two kinds of questions:

- *Closed format questions* - Yes or no (dichotomy variable). In both cases the respondents must explained why they have answered in that way.
- *Closed format questions* - a set of statements where the respondents must indicated no more than two characteristics

In general, the analysis of the closed questions has shown a lack of cooperation with the ESCOs and Municipalities. Except for the Municipality of Messina, who experienced a collaboration with an ESCO in the occasion of the SEAP preparation (sustainable energy plan - Covenant of Mayor). As a matter of fact, on this occasion the Municipality of Messina did not get any energy financial service but rather a consultancy support. While, from the open format questions, we can figure out that notwithstanding the other municipalities did not experience any cooperation with ESCOs, they expressed their intention and availability in the future to work with them. However, some requirements towards this cooperation have been highlighted, in other words they are available to cooperate with ESCO but within a specific regulatory plan. In that regard, they ask as essential features: transparency agreement and energetic skills. Regard this point, it seems important to identify and evaluate energy saving opportunities and to secure the project costs coverage and the support from project design to monitoring. Finally, in the future it will be important to pave the way for clear agreements between the Municipalities and the ESCOs, based on clear rules and responsibility, without any “bad surprise” and high risks.

The graph below shows the key features for cooperating with ESCOs. Energetic skills is an essential factor for choosing and being supported by an ESCOs, followed by the transparency of agreements instead of “reliability”. Reliability is in fact depends on mutual trust, while transparency of agreements is something “more” and relies on objective elements.

FIGURE 6 – KEY FACTORS IN COOPERATION BETWEEN ESCOS AND MUNICIPALITIES



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### 2.3. ANALYSIS OF RESULTS: MUNICIPALITY OF ALIMOS

Municipality of Alimos, as other Municipalities, has not previous experience of cooperation with ESCOs. Related future agreement with ESCOs, *Transparency agreements* and *energetic skills*, seems the main important characteristic to create an excellent cooperation. However, in Greece the EPC- Energy Performance Contracting – market is not still developed. Therefore, the Municipality of Alimos pointed out the need to have clear examples of real projects where energy performance contracts with ESCOs are successfully implemented. This is a common argument of the Greek local authorities because they are reluctant to act as pioneers in the field.

The municipality of Alimos is currently paving the ground for energy saving action plan to turn energy consuming municipal premises into nZEB and it is interested in starting collaborating with ESCOs. In fact, they consider the development of EPC market an opportunity to overcome the potential barriers and to invest into the future.

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## ANNEX A: SURVEY ON COOPERATION BETWEEN CERTUS MUNICIPALITIES AND ESCOS

CERTuS, acronym for Cost Efficient Options and Financing Mechanisms for nearly Zero Energy Renovation of existing Buildings Stock, is a project co-funded by the Intelligent Energy Europe Programme of the European Union, involving 13 Partners.

Southern European countries undergo a severe economic crisis. This hinders the compliance to the latest Energy Efficiency Directive, demanding strict energy efficiency measures for the public sector. Investments required to renovate public buildings and achieve nearly zero energy consumption have long payback times and the interest of financing entities is often low. Public entities often encounter difficulties in raising finance for investments. They often are not able to finance their whole investment programme directly from public funding and their capacity to leverage debt is increasingly limited. Many public buildings in Southern Europe require deep renovations to become nearly Zero Energy Buildings (nZEB) and this should not be regarded as a threat but rather as an opportunity for the energy service and the financing sector. Municipality buildings have large potential in terms of energy saving from fossil fuel. Cooperation between ESCOs and Municipalities can play a key role in turning energy-consuming Municipalities premises into Nearly Zero Energy Buildings, through accelerating the pace of investment and mobilizing private sector finance.

Therefore, the objective of this survey is to explore the state of the art of ESCOs and Municipality cooperation so far so as to detect existing barriers to be overcome as well as opportunities to be seized.

### General Profile

1. Country and Name of the Municipality: .....
2. Name of the interviewee:.....
3. Position held in the organization: .....

## Questions

4. Has your municipality ever cooperated with an ESCO?

a. If yes, describe which kind of cooperation

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.....  
.....  
.....

b. If not, according to you which is the main reason

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.....  
.....  
.....

5. What of these characteristics you consider fundamental for ESCOs and Municipality cooperation? (Please, indicate no more than two characteristics)

1. Transparency agreement
2. Reliability
3. Capability of problem solving
4. Operating speed
5. Energetic skills

6. In your opinion, do you consider the precedent characteristic, indicated by yourself , part of your experience?

Yes

No

If no, please indicate the reasons

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**7. Which kind of contract did you agree with ESCOs?**

(Please, indicate the years also)

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**8. Please, indicate the main features of the contract agreed?**

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**9. Which kind of intervention was funded**

- 1. Equipments upgrading
- 2. Energy Refurbishment
- 3. the management and maintenance of energy supply
- 4. Other, please specify \_\_\_\_\_

**10. Indicate the amount of investment?**

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**11.** The pay-back period agreed with the ESCO for covering the investment was respected?

Yes     No

If no, indicate the main reasons

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**12.** What of these statements could you consider correct ?

- The cooperation with ESCOs has been an excellent experience
- The Cooperation with ESCOs cannot be considered a good experience
- I have never collaborated with ESCOs, but I'm going to collaborate soon

**13.** Is your organization interested in cooperating soon with an ESCO for improving energy performance of its buildings?

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**14.** According to you, cooperation with ESCOs is useful for improving the energy performance of your organization. Why?

	<b>ENEA – Italian National Agency for New Technologies, Energy and Sustainable Economic Development (IT)</b>
	<b>Municipality of Messina (IT)</b>
	<b>Municipality of Errenteria (ES)</b>
	<b>Municipality of Coimbra (PT)</b>
	<b>Municipality of Alimos (EL)</b>
	<b>ISR – University of Coimbra (PT)</b>
	<b>SINLOC - Sistema Iniziative Locali Spa (IT)</b>
	<b>ETVA VI.PE. S.A. (EL)</b>
	<b>TECNALIA Research &amp; Innovation Foundation (ES)</b>
	<b>EUDITI Energy and Environmental Design LTD (EL)</b>
	<b>Innova B.I.C. Business Innovation Centre S.r.l. (IT)</b>
	<b>Danish Building Research Institute, Aalborg University Copenhagen (DK) - SBi/AAU</b>
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