ProDeSA
Energy Efficiency Project Development for South Attica

ENERGY EFFICIENCY PROJECT DEVELOPMENT ASSISTANCE FOR SOUTH ATTICA

Report on final bundling structure

Deliverable D4.3

Date: 28/01/2022

This project has received funding from the European Union's
Horizon 2020 research and innovation programme
under grant agreement No 754171

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Document Info Sheet

Dissemination Level:	**PU**
Document Name:	**Report on final bundling structure**
Deliverable no:	**D4.3**
Nature:	**R**
Responsible Partner:	**ENVINITY NV**
Version:	**Final**
Version Date:	**28/01/2022**
Reference	**PRODESA_WP4_Task 4.1_D4.1**

Authors and list of contributors

	Name	Entity
Author/s	**Stelios Psomas**	**ENFINITY**
	Eva Athanasakou	**EUDITI**
	Ioanna Liosi	**EUDITI**

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This deliverable contains original unpublished work except where clearly indicated otherwise.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.

Short Description

Task 4.1 deals with the bundling of the energy efficiency projects in the five leading municipalities and the pooling of financial resources. It is part of workpackage WP4 which further deals with the investigation of suitable tendering procedures and the drafting of the tender template(s) based on the selected identified financing schemes.

Key Words

Bundling, Energy Performance Contracting, financing scheme, energy efficiency interventions, PV systems, loan, ESCO, grant, Co-financing

Document History

	Version	Date	Contribution	Name	Entity
1	V.1	18/09/2020	Preparation of 1st Draft	Stelios Psomas	ENFINITY
2	V.1	26/11/2020	Contributions	Ioanna Liosi	EUDITI
3	V.2	18/01/2021	Contributions and comments	Ioanna Liosi	EUDITI
4	V.2	04/05/2021	Comments	Stelios Psomas	ENFINITY
5	V.2	28/07/2021	Comments	E. Athanasakou	EUDITI
6	V.3	29/11/2021	Final Draft version	Ioanna Liosi	EUDITI
7	V.4	28/01/2022	Final Version	Stelios Psomas	ENFINITY

PRODESA in Brief

Seven major municipalities in the Athens Metropolitan Area join efforts to launch showcase energy efficiency and renewable energy projects, utilizing innovative financial tools and attracting private investments.

The projects comprise energy efficiency interventions in 116 municipal buildings, integration of a total 3.2 MW of photovoltaics on the roofs of these buildings and re-lamping for the municipal lighting. Total energy savings is 45.6 GWh/y and renewable electricity production is 4.8 GWh/y. The total cost for interventions is 20.24 M€ and the PRODESA cost is 1.06 M€.

To achieve its objectives, the project shall focus on optimal bundling of the fragmented municipal projects to achieve considerable size, reasonable payback time and risk diversification. Bundling is also expected to lower processing costs.

Pooling of resources is used to optimise financial results for all parties and to ensure high participation of ESCOs in the tenders. The newly introduced National Revolving Fund for Energy Efficiency and the Utility ESCO Fund will be part of the pool. Pooling will facilitate the exploitation of innovative financing schemes. Crowdfunding has been recently introduced in the Greek legislation and this tool will be carefully studied and applied.

PRODESA is the first of its kind effort in Greece and aims to significantly contribute to the Energy Performance Contracting take-off. For this reason, the project consortium has pooled together Key Actors such as the National Centre for energy efficiency, the European Crowdfunding Network and entities with technical, financial and legal expertise.

Being a showcase project, it emphasises on capacity building, replicability, dissemination and exploitation of results.

Two replicator municipalities are directly involved in the project and a network of at least 30 replicators will be initiated with the help of the Central Union of Municipalities of Greece.

Partners

ALIMOS	DIMOS ALIMOU – MUNICIPALITY OF ALIMOS
AG. DIMITRIOS	DIMOS AGIOS DIMITRIOS
GLYFADA	MUNICIPALITY OF GLYFADA
VOULA	DIMOS VARIS - VOULAS - VOULIAGMENIS
CITY of AAK	MUNICIPALITY OF AGII ANARGIRI – KAMATERO
PALAIO FALIRO	MUNICIPALITY OF PALAIO FALIRO
AMAROUSION	MUNICIPALITY OF AMAROUSSION
KEDE	CENTRAL UNION OF MUNICIPALITIES OF GREECE
EUDITI LTD	EYDITI ENERGEIAKOS KAI PERIBALLONTIKOS SCHEDIASMOS EPE
CRES	CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING FONDATION
ENFINITY NV	ENFINITY NV
ECN	EUROPEAN CROWDFUNDING NETWORK
KELEMENIS &Co	KELEMENIS & CO. LAW FIRM

Abbreviations

kWh	Kilo Watt hour
kWp	Kilo Watt peak

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1. Introduction

Task 4.1 deals with the bundling of the energy efficiency projects in the five leading municipalities and the pooling of financial resources. It is part of workpackage WP4 which further deals with the investigation of suitable tendering procedures and the drafting of the tender template(s) based on the selected identified financing schemes. Therefore, at the end of this WP, final drafts of tenders will be delivered.

Following the applying law[1], a tender document must include the financing scheme of the envisaged procurement e.g., what funding resources will be made available by the municipality to reimburse the Contractor, and the draft contract between the municipality and the contractor. Thus, the financing scheme must be fully defined at the stage of tender launch.

This was a significant parameter in the design of the financing scheme and also determined to a certain extent the bundling of the projects. It was also a parameter that gave rise to delays in the implementation of the whole workpackage.

2. Task 4.1 objective

According to Part B of the Grant Agreement, in Task 4.1 the financing schemes and project bundling will be finalised. The works in the Task are based on the results drawn from WP2 'Finalisation of the design" and WP3 "Comparative assessment of available financing sources".

The bundling of energy efficiency projects must take into consideration a number of technical and financial criteria. Firstly, it must result in to sizeable projects so to attract the interest of private funds and in parallel benefit from the economy of scale.

Moreover, based on the results of Task 3.1 and the mapping of available financing resources presented in deliverable D3.7, in this Task, the mixing of financing resources was investigated for ensuring optimal financing of the energy efficiency projects' implementation.

3. Project bundling

Ideally PRODESA should deliver one bundle comprising all the energy efficiency projects. However, this was not possible because the municipalities wanted to keep their own pace of progress and control in the project development procedure. Thus, the project started with eight bundles.

The first level of bundling is performed across energy efficiency interventions and rooftop PVs for all the buildings of each municipality. Each bundle consists of 14 to 26 buildings and there are five such bundles ranging from app. 2.5 m€ to 3.5 m€. Detailed presentation of the bundles is given further below.

[1] The tenders must be in line with the regulation framework pertaining to public procurement and specifically the law 4412/2016 which transposes the EU Directives 2014/24/EU and 2014/25/EU. The law applies for all the three types of procurement i.e., works, supply and services.

The second level of bundling that was investigated is across buildings and streetlighting for the three municipalities which have foreseen investments in both these two categories.

The third level concerns bundling across municipalities and investment type i.e., buildings and / or streetlighting. This level of bundling is desired from the view point of developing projects of large scale with lower development and implementation costs. However, as mentioned before the municipalities were not willing to collectively undertake the development and implementation of the investments. All municipalities preferred to have control over the process and individually carry out the tender preparation, launching and selection of the Contractor.

Moreover, bundling across municipalities would require an additional organisational arrangement as for example an umbrella structure which the municipalities were not ready to adopt. The role of the umbrella structure can be assumed either by the Regional Government or by a Task Force membered by employees from the municipalities with some capacities in decision making. Such an arrangement could be very helpful for the small municipalities that do not have all the necessary expertise and human resources required for large scale project development.

3.1. Bundling across energy efficiency interventions

3.1.1. Buildings

Energy efficiency interventions are bundled across buildings or streetlighting separately. The buildings of each municipality were audited and suitable energy efficiency interventions were designed followed by a technical and economic assessment. This work was organised and carried out in workpackage WP2, Task 2.1 and Task 2.2.

The energy efficiency design was subcontracted following 5 tenders one for each municipality. Common specifications for the tenders were developed in WP2 so as to ensure the aims of the design would be achieved. Specifically, common objectives for the design were set as for example the replacement of the oil/gas burning heating system with a greener one such as heat pumps in combination with photovoltaic system. Moreover, common requirements, guidelines and tools were given to the Contractors for the technical and economic assessment of the energy efficiency options as well as common templates for the presentation and direct comparison of the options.

Five bundles were produced. Four of them incorporate options such as building envelope external insulation improvement, window replacement, heating system replacement, mechanical ventilation with heat recovery, lighting improvement and photovoltaic systems. The fifth one pools together 48 buildings where photovoltaic systems will be installed.

The bundles are presented in Table 3.1 below. In Appendix A, the energy efficiency options are tabulated per building and municipality.

The bundles were finalised based on three criteria namely, (i) to reduce as much as possible the payback period so that the whole project could leverage private funding (ii) address the needs for improvement of the buildings especially of the schools without compromising comfort or functionality by omitting long payback interventions, and (iii) ensure the key performance indicators of the project i.e. primary energy savings, electric energy generation from RES and investment cost, in line with the contractual obligations reported in the GA.

Table 3.1 Bundles of building energy efficiency projects in the 5 municipalities

Municipality	Buildings	EE options		RES-PVs		Total Investment
		Saved primary energy (MWh)	Cost (m€)	Produced energy (MWh)	Cost (m€)	(m€)
Alimos	20	1,424	1.85	616	0.52	2.37
Ag. Dimitrios	50			2,733	2.44	2.44
Glyfada[2]	26	2,662	0.63	600	0.48	1.1
Voula	20	490	2.3	632	0.52	2.83
City of AAK	26	1,141	3.69	730	0.59	4.28
Total	136	5,717	8.47	5,311	4.55	13.02

Although each bundle may not represent a large-scale investment, however, for the country and the local authorities, it is considered quite big because each one includes a significant percentage of the building stock of each municipality. Additionally, each bundle includes a large number of energy efficiency interventions and photovoltaic systems. An exception is the bundle of Partner 2 (Agios Dimitrios) which includes only photovoltaic systems.

Such large projects will be implemented for the first time in the country. The innovation however, lies with the financing scheme which mixes public funding and private financing as explained in the following chapter.

3.1.2. Streetlighting

Three municipalities, Partner 1 (Alimos), Partner 3 (Glyfada) and Partner 5 (the City of AAK) have prepared streetlighting energy renovation projects. The details of the foreseen investments are given in Table 3.2.

Table 3.2 Streetlighting energy efficiency projects in the 3 municipalities

Municipality	Saved primary energy (MWh)	Total investment (m€)
Alimos	11,090	3.14
Glyfada (*)	24,196	5.7
City of AAK	13,230	4.96
Total	48,516	13.8

(*) *At the time the deliverable was finalised, the municipality of Glyfada had not provided any information on the investment. If in the future data becomes available, it will be included in deliverable D4.3.*

[2] At the time the deliverable was finalised, the municipality of Glyfada had not provided any information on the investment. If in the future data becomes available, it will be included in deliverable D4.3.

The investments in streetlighting were developed following the specifications produced by CRES which were very similar to those of the TPD financing programme.

3.2. Bundling across buildings and streetlighting

Bundling building and streetlighting energy efficiency options is the second level investigated in PRODESA.

The benefit from bundling these different groups of interventions is substantial for the municipalities because they make building refurbishment quite attractive in terms of financeability. The following diagram depicts the concept in the case of Alimos municipality (Partner 1). The diagram shows the cumulative annual profit from the energy efficiency interventions in buildings and streetlighting and their combination.

As can be deducted, the annual payback period is around 11.5 years in the case of building interventions whilst in the combination of both it decreases in 6 years approximately. Thus, bundling with the streetlighting makes building interventions attractive also and financeable.

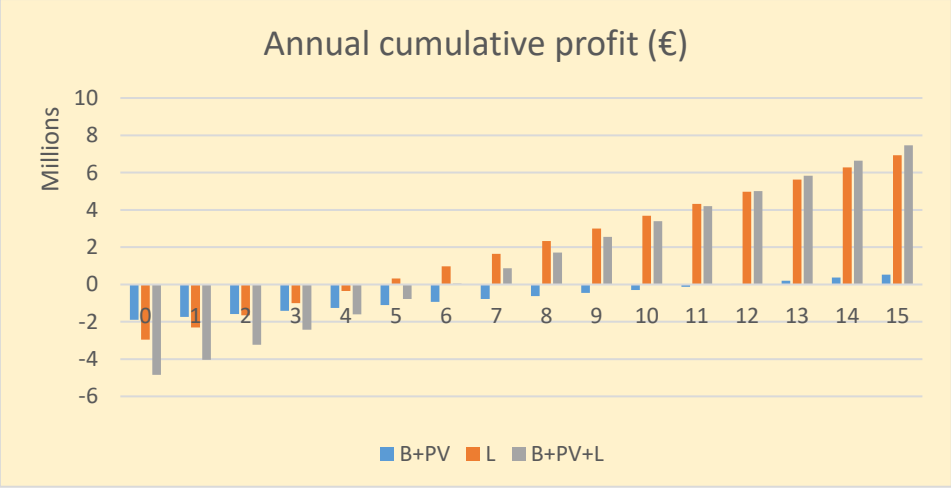

Diagram 3.1 Annual cumulative profit of EE interventions in buildings, streetlighting and combination of both groups

However, there are certain problems which need to be addressed in order for this type of bundling be deployed and used by the local and regional governments.

The main problem concerns the reimbursement of the contractor in case of an energy performance contract.

An EPC for streetlighting energy renovation can be repaid by the budget of the special municipal charges (reciprocal charges charged to the municipal citizens[3]) which cover the cost of special services mainly streetlighting and urban waste collection. Based on the regulatory framework, these charges are dedicated to these types of services and cannot be used to support financially any other activity. For example, if the cost of the services is reduced due to energy efficiency improvement of streetlighting then the resulting monetary savings can either be reinvested to improve further the service (e.g., streetlighting) or reduce the municipal charges after the improvement works have been reimbursed.

[3] Programme Kleisthenis, Law # 4555/2018, (Government Gazette 133/A/19-7-2018), article 182 'Definition, content and mode of calculation of reciprocal charges'

Thus, the income generated by the reduced expenditure for streetlighting cannot be invested in another type of action such as the energy efficiency improvement of municipal buildings.

This regulation for handling municipal service charges sets an obstacle in proceeding with bundling of the two groups.

Nonetheless, because the replacement with LED in the streetlighting has an ample margin for profit for the EP Contractor, by tendering both groups together the resulting project can still be very attractive for the ESCO. Moreover, if a municipality makes use of the currently available special financing instrument through the "Loans, and Deposit" Fund as described in the following chapter, the EP Contractor can receive an advance payment from the municipality that will support the work progress until first payment.

However, none of the PRODESA municipalities were willing to proceed with such a scheme as the preparation time until the tender between streetlighting and building investments was very different with streetlighting being ready for implementation much earlier.

4. The background information for selecting the financing scheme

4.1. Possible funding sources

The potential financing sources and mechanisms have been thoroughly identified in Task 3.1 and assessed against each other (benchmarking) under different criteria, related to their overall effectiveness to provide the required capital investment to PRODESA energy efficiency projects (see deliverable D3.7).

Investigation on the energy efficiency projects' sustainability as presented in the following chapter 4.2 shows the need for private financing to be attracted as municipalities cannot make available sufficient equity but also the need for a grant in order for the projects to be sustainable and attract private financing.

Private funds in principal demand short payback periods (less than 7 years) and double digit return on investment which is not the case for projects composed with a very high degree of energy efficiency interventions. This is especially so in the case of the PRODESA projects which are characterised by low energy savings and relatively high interventions costs.

Nonetheless such tools exist and the final mix of financing sources can and should accommodate different investor / funding profiles.

According to benchmarking results carried out in Task 3.1, the appropriate financing mix could include:

- a loan (through TPD, PF4EE or InfraFOF i.e., instruments with subsidised interest rate),
- raising money through crowdfunding,
- a PPP agreement,
- an Energy Performance Contract

The PPP agreement requires investments higher than 5mEUR so none of the current investments presented in Table 3.1 and 3.2can be financed by this mechanism. Only the streetlighting of Glyfada Municipality could be eligible but the final design has not been completed as yet.

Crowdfunding can provide municipalities with low-cost money as only the model of reward or charity crowdfunding is currently available for Greek municipalities. However, this mechanism can bring very little money that cannot contribute any relevant amount to the projects'

financing. The municipalities could use could use this mechanism for other energy saving projects repeatedly.

Taken into account the above restrictions, it appears that in general, the mix could include:

- an Energy Performance Contract in order to overcome the lack of bankability of some municipalities
- Public grants
- Equity or debt financing

Special attention is given to the TPD programme for streetlighting. This is an instrument offering debt financing with a favourable interest rate. The funds are provided by EIB with 75% and by the national 'Public Investments Fund' with 25%. The fund makes possible the cooperation of the municipalities with an ESCO through an Energy Performance Contract. The terms of the debt are as follows: The Fund provides up to 100% of the debt financing to the municipality. The contract between the municipality and the Contractor must have a duration of 10 years. Moreover, the Contractor must either contribute 25% of the investment cost to be reimbursed in 10 annual payments or deposit a guarantee of 25% of the investment cost to be released annually at equal amounts. The condition for the payments or guarantee release is that an agreed energy savings target is achieved.

Thus, the fact that a target of energy savings is associated with the payments (or the guarantee release) of the Contractor gives the contract the characteristics of an energy performance contract.

The municipalities are interested in this instrument as it provides low-cost financing.

It has to be clarified that the financing mix of each municipal project must be defined according to the needs of the municipalities and the objectives of the PRODESA project as well as the investment profile.

4.1.1. The financing scheme investigated in PRODESA

In order to facilitate private financing through an Energy Performance Contracting, the PRODESA team investigated the possibility to cooperate with the TPD 'Deposits and Loans' Fund the possibility to offer through an escrow account, payment guaranty to the ESCOs. Several meetings were held with the President of TPD for this purpose. The idea was the following:

As soon as a contract is signed between a municipality and an ESCO, an escrow account will be established with TPD where the equity of the municipality will be deposited and available for the ESCO payment. The equity may consist of debt from TPD, own capital, subsidies and/or donations. Through the escrow account all transactions between, municipality, TPD and ESCO take place.

The ESCO provides the remaining capital for the implementation of the energy efficiency renovation project. A loan with favourable terms may be granted to the ESCO from a bank since the gradual repayment of the ESCO is guaranteed by TPD. Discussions with one such bank i.e., Piraeus Bank had confirmed this possibility.

During operation, the economic benefit from the energy savings and RES is returned to the escrow account by the municipality (an agreed percentage of it) from which is paid the ESCO and the municipal debt to the TPD, if the municipality has borrowed its equity.

The following figure presents the mode of operation.

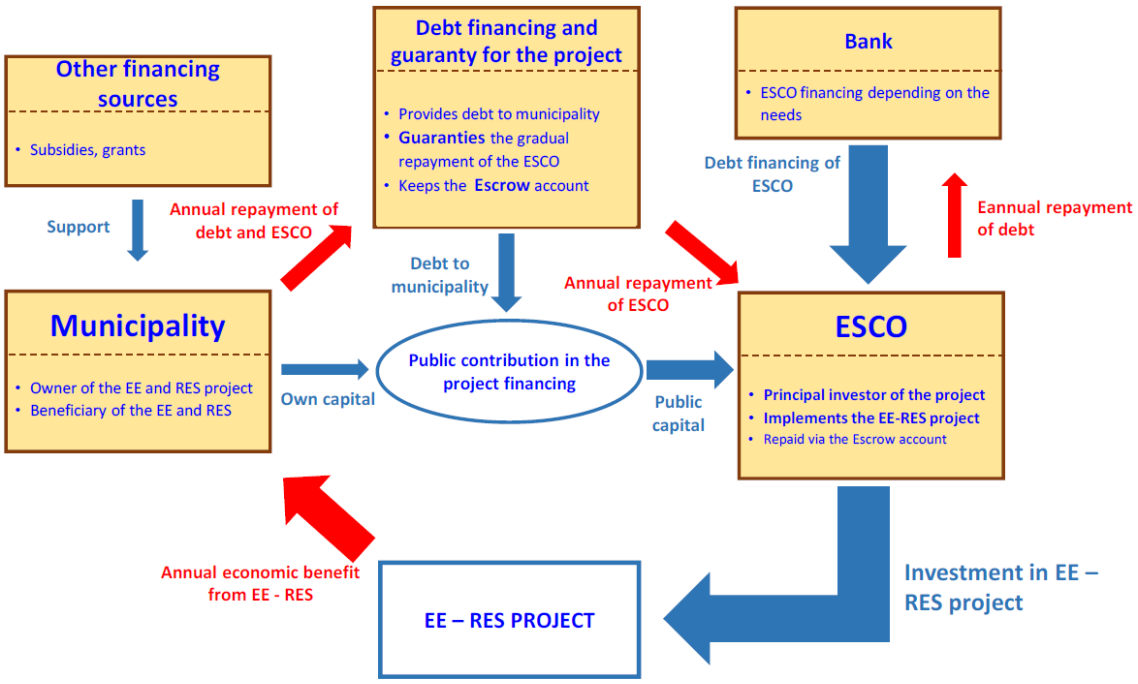

Figure 4.1 PRODESA financing scheme

In order for the TPD to be able to provide such guaranties an empowerment through a Ministerial Decree by the Ministry of Environment and Energy was required. TPD had applied for this empowerment in early 2019 a few months before the elections. Partner 10 (CRES) being the Consultant of the Ministry for the Environment and Energy had cooperated with the competent staff of the Ministry to prepare the procedure for empowering TPD. Because it involved guarantees from a public entity it had to be approved by the Greek Parliament. But due to the announcement of the national elections, the approval was postponed for the new Parliament.

At the end of month M30, it was announced that this issue would be discussed in the Parliamentary Committee of Commerce and Development by mid M31 and then, in the Parliament as part of a relevant bill. A colleague, Mr. S. Psomas from Partner 11 (Enfinity) has been invited to participate in the discussion of the Parliamentary Committee of Commerce and Development.

The issue of the guaranteed payments by TPD had been also discussed by Partner 9 with the new hierarchy of the Ministry for Environment that took office after the elections.

Also, Partner 9 and Partner 11 have lobbied for this issue with GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH), the Consultant of the Ministry and the European Bank for Reconstruction and Development (EBRD). Both entities were very supportive.

Finally, the empowerment was achieved during this period through the enforcement of the Law 4643/2019 (article 28 paragraph 4) and TPD can provide guarantee of payments to the ESCOs.

More specifically, article 28/paragraph 4 of the Law states that in case a local authority signs an Energy Performance Contract for a part or the whole of an investment whilst this investment is eligible for financing by TPD through a new financing instrument, stated in this article, then TPD is empowered to provide the aforementioned guarantee. The Law was announced in the official gazette on M32 (3/12/2019).

This new instrument called 'ELECTRA' and managed by TPD receives funds by the European Investment Bank (EIB). The funds are provided as a loan to the country. The loan given to the public bodies by TPD will be covered by the country with funds of the Public Investments Fund.

So, PRODESA partly succeeded its ambition because these guarantees apply only through the new ELECTRA programme.

Currently, Partner 10 (CRES), through another initiative, will continue this effort in establishing the guaranty mechanism in cooperation with the Development Bank.

4.2. The financing schemes investigated for each investment

For the investigation of the most appropriate financing scheme for each investment, the tailor-made economic evaluation tools that were developed in the context of PRODESA were used. The tool is running on EXCEL and is composed of three individual excel tools applying to investments in buildings, PV systems and streetlighting. In addition, two excel tools were developed to generate results for combined investments across buildings, PV systems and streetlighting. The aforementioned tools are thoroughly described in Deliverable D2.6 – 'Economic evaluation of the energy efficiency projects' and are available at the project's website.

A number of scenarios were studied for each municipality. For each scenario, three financing schemes were examined, namely:

1. 100% Loan
2. 100% financing by an ESCO
3. Co-financing by the municipality and the ESCO

It should be noted that despite the fact that the tools were developed to evaluate the potential benefits for the municipalities, they also include the contractor's point of view. The reason is that it was deemed necessary to assess the viability of the project for the contractor for certain scenarios in order to define a more realistic cost.

The criterion for determining the final cost of the project in the case of the ESCO or Co-financing was that the Internal Rate of Return of the ESCO should be equal or higher than 10 (IRR≥10) and the Profitability Index (P.I.) should be very satisfactory according to the following scale.

Table 4.1 Definition of P.I. score

Profitability Index	
Negative	<0
Non satisfactory	0-0,1
Satisfactory	0,1-0,3
Very satisfactory	0,3-0,4
High	0,4-0,6
Very High	>0,6

The assumptions that were made for the calculations are presented in the following table and were the same for all municipalities, with some exceptions on the duration of contract with the ESCO.

Table 4.2 Assumptions made for the calculations

Local Authority interest rate (*)	3.78%
Contractor interest rate	5%
Tenor	10 years/25 years

Duration of contract with the Contractor-ESCO	10 years
Financial evaluation time for the municipality	25 years
Average annual inflation	1.5%

(*) The interest rate was the subsidized interest rate of the TPD.

4.2.1. The financing scheme PRODESA has worked out

The preliminary financing schemes that were evaluated for each municipality for energy efficiency interventions, PV systems and streetlighting are presented in D4.1 – 'Report describing possible bundling scenarios to help municipalities decide'.

4.2.2. Financing schemes for energy efficiency interventions and RES

The current chapter presents the final financing schemes that were evaluated for each municipality, namely 'Loan', '100% financing by an ESCO' and 'Co-financing by the municipality and the ESCO'. Throughout the duration of the project, many different scenarios were examined based on the available data at that time. The main reason the financing schemes changed many times is the available grants and the fact that some of them were not included in the final bundling because it was not accepted by the supervising bodies to include the buildings that would get the grant in a larger pool that will be partly financed through an EPC.

In addition to the public grants related changes to the final bundling, the following changes were made to the overall investments:

- fixed costs relevant to construction works which are foreseen by the law governing public procurement (L 4412/2016) were added to some interventions
- modifications in interventions
- changes in the costs of EE interventions
- changes in the cost of PV systems according to the current market prices

Therefore, the following financing schemes presented in this chapter may differ for the ones that the municipalities will finally tender.

Municipality of Alimos

The financing schemes examined for the Municipality of Alimos concern the energy efficiency interventions and PV systems in 20 municipal buildings, as described in D2.1 but with a few alterations in the cost of some interventions. The municipality managed to receive a grant of 880,000 € from the Region through an application to SYDNA (Association of South Attica Municipalities). The financing schemes that were examined are as follows:

1. Public subsidy and coverage of the remaining amount by 100% by the municipality through borrowing with a 10-year loan agreement
2. Public subsidy and coverage of the remaining amount by 100% by the ESCO through EPC of a 10-year duration
3. Public subsidy and coverage of the remaining amount with co-financing from the municipality and the ESCO. The contribution of the municipality is ensured by loan. Both the loan agreement and the EPC with the ESCO are for 10 years.

Table 4.3 Financing scheme for the Municipality of Alimos – Data for the municipality

	Loan 100%	ESCO 100%	Co-financing – Municipality 5%
Project cost (€)	2,455,424	2,489,935(*)	2,455,424
Subsidy (€)	880,000	880,000	880,000
Loan and interest (€)	1,921,140	---------	135,273
Total project cost (€) (**)	3,105,278	2,489,935	2,479,767
Total project cost for the municipality (€)	2,801,140	1,609,935	1,599,767
Payback period (years)	12	10	10
Prof. Index	0.34	0.43	0.44
Net Present Value (€)	825,560	1,064,465	1,073,717

(*) Premium for ESCO 1%

(**) The total project cost includes, depending on the financing scheme, the interest of the loan of the municipality and/or the premium for the Contractor - ESCO

Table 4.4 Financing scheme for the Municipality of Alimos – Data for the Contractor

	Loan 100%	ESCO 100%	Co-financing – Municipality 5%
Project cost (€)	2,455,424	2,489,935	2,455,424
Loan and interest for the Contractor (€)	---------	629,446	513,591
Prof. Index	0.65	0.33	0.33
Net Present Value (€)	922,484	449,093	449,422

Among the financing schemes presented in the tables above, the Profitability Index for the municipality is higher in the case of Co-financing. Also, the second financing scheme with subsidy and private funds from the ESCO presents quite high profitability index, almost similar to that of the Co-financing scheme. For the Contractor, the two aforementioned financing schemes are economically attractive with P.I. higher than the criterion mentioned in Chapter 4.2.

The total benefit for the municipality in the end of the 25-year duration for each financing scheme is presented in the following table.

Table 4.5 Total benefit for the Municipality of Alimos

	Loan 100%	ESCO 100%	Co-financing – Municipality 5%
Benefit for the municipality (€)	2,224,806	2,532,671	2,546,181

Moreover, in addition to the financial benefit, there are other benefits for the municipality that are not quantified in the calculations, such as:

- Upgrading air quality and thermal comfort conditions in schools and workspaces

- Increasing the property value due to the energy renovation
- Significant contribution of the municipality in the effort of alleviating the implications of climate change which is carried out by reducing by about 60% the energy needs and the provision of "green electricity"

The total benefit for the municipality at the end of the 25-year period is similar in all three financing schemes presented. The 'Co-financing' scheme seems to be the most profitable plan for both parties. However, the '100% Financing by the Contractor-ESCO' scheme present many advantages and its performance is almost similar to the 'Co-financing' scheme:

- faster execution as no extra time is needed to secure a loan
- non-registration of a loan in the balance sheets since the municipality pays annual installments to the Contractor
- attracts more private funds, which is also an objective of the PRODESA project

Given the high profitability index of the investment for the municipality, they can make the project more attractive to the ESCO either by slightly increasing the budget or by paying higher payments to the Contractor in the first years. This will make it easier for companies to overcome the difficulty of borrowing from banks as the time consuming and demanding loan approval and the significant guarantees that a company should provide are well known.

Municipality of Agios Dimitrios

A number of changes were held in the financing scheme of the Municipality of Agios Dimitrios. Upon request from the municipality, the cost of the PV systems was increased by about 5% and some buildings were removed from the initial project. Thus, the total number of buildings that the municipality will install PV systems is 35 and the updated total installed power capacity is 2,381 kWp.

Following the changes that took place, four scenarios were examined for the municipality:

1. The financing of the project is carried outby the municipality with a loan from the Consignment of Deposits and Loans Fund (TPD) and the Contractor is paid with the completion of the PV systems installation. This scenario is a common practice followed by a public body.
2. The implementation of the project is financed by the Contractor – ESCO by 100%. The municipality does not contribute initial capital but repays the Contractor – ESCO with periodic payments during the contract, which is consider to last **10 years**.
3. The implementation of the project is Co-financed by two parties, namely the municipality and the Contractor – ESCO by 22% and 78%, respectively. The participation of the municipality is ensured by a loan from the TPD.
4. The implementation of the project is financed by the Contractor – ESCO by 100%. The municipality does not contribute initial capital but repays the Contractor – ESCO with periodic payments during the contract, which is consider to last **7 years**.

The results are shown in the following two tables. The first table presents the financial data of the project for the municipality, while the second for the Contractor, either he undertakes the project as a simple Contractor or participates in the financing of the project.

Table 4.6 Financing scheme for the Municipality of Agios Dimitrios – 10-year contract – Data for the municipality

	Loan 100%	ESCO 100%	Co-financing – Municipality 22%
Project cost (€)	2,435,062	2,605,517(*)	2,435,062
Subsidy (€)	0	0	0
Loan and interest (€)	2,969,422	---------	653,273
Total project cost (€)	2,969,422	2,605,517	2,552,621
Total project cost for the municipality (€)	2,969,422	2,605,517	2,552,621
Payback period (years)	7.4	6.6	6.4
Prof. Index	1.33	1.34	1.46
Net Present Value (€)	3,227,003	3,501,074	3,548,845

(*) Premium for ESCO 7%

Table 4.7 Financing scheme for the Municipality of Agios Dimitrios – 10-year contract – Data for the Contractor

	Loan 100%	ESCO 100%	Co-financing – Municipality 22%
Project cost (€)	2,435,062	2,605,517(*)	2,435,062
Loan and interest for the Contractor (€)	---------	1,525,895	966,400
Prof. Index	0.58	0.30	0.30
Net Present Value (€)	679,239	357,620	356,870

(*) Premium for ESCO 7%

As shown in table 4.10, the financing schemes of 'ESCO 100%' and 'Co-financing' ensure shorter payback periods and very satisfactory P.I. for the municipality. Similarly, for the Contractor, the criteria that have been set for the viability of the investment are ensured. In addition, the annual economic benefit for the municipality is quite high from the first year of the project operation and therefore it was considered appropriate to reduce the contract duration from 10 years to 7 years and study the results (Tables 4.8 and 4.9)

Table 4.8 Financing scheme for the Municipality of Agios Dimitrios – 7-year contract - Data for the municipality

	ESCO 100%
Project cost (€)	2,435,062
Subsidy (€)	0
Loan and interest (€)	---------
Total project cost (€)	2,435,062

Total project cost for the municipality (€)	2,435,062
Payback period (years)	6.2
Prof. Index	1.43
Net Present Value (€)	3,480,484

Table 4.9 Financing scheme for the Municipality of Agios Dimitrios – 7-year contract – Data for the Contractor

	ESCO 100%
Project cost (€)	2,435,062
Loan and interest for the Contractor (€)	1,425,382
Prof. Index	0.33
Net Present Value (€)	388,210

Table 4.10 Total benefit for the Municipality of Agios Dimitrios

	Loan 100%	**ESCO 100% 10-year contract**	**Co-financing – Municipality 5%**	**ESCO 100% 7-year contract**
Benefit for the municipality (€)	6,810,691	7,158,075	7,227,491	7,303,881

The economic benefit for the Municipality of Agios Dimitrios is similar in all four financing schemes presented. Among the financing schemes presented in Table 4.6, 'Co-financing' seems to be the most profitable scheme for both parties. However, the 'ESCO 100%' scheme offers a number of other advantages, as already mentioned in the Municipality of Alimos.

Comparing the financing schemes of ESCO with a 10-year and a 7-year contract, it seems that the annual benefit for the municipality in the second case is lower during the contract period, as the Contractor will have to be paid in a shorter period of time. Nevertheless, the economic indicators are higher and the economic benefit for the municipality at the end of the 25-year period is greater.

Therefore, if a higher profit is desired in the first years, then a 10-year contract is more appropriate for the municipality. Otherwise, the 7-year contract brings both the municipality and the Contractor a greater benefit overall.

Municipality of Vari-Voula-Vouliagmeni

The Municipality of Vari-Voula-Vouliagmeni applied for a grant of 1.3m€ to an open call for proposals of the GR-Energy program, funded by the EEA-EFTA countries (Iceland, Lichtenstein, and Norway) and Greece. The proposal was retained at the reserve list and then was approved for funding.

However, the supervising body did not accept the inclusion of the 7 buildings to be financed in a larger pool that will be partly financed through an EPC. The municipality could not refuse the grant and hence decided to withdraw these buildings from the PRODESA pool. Therefore, the

financing scheme for the Municipality of Vari-Voula-Vouliagmeni includes energy efficiency interventions in 7 buildings and installment of PV systems is 21 buildings.

The energy efficiency interventions include the improvement of roof insulation, the replacement or improvement of the heating/cooling system in some buildings and the replacement of existing lighting systems with LED. In all buildings but one, rooftop PV systems will be installed.

It should be noted that the cost of interventions associated with roof insulation includes the contractor's benefit 18%, as defined by law, and the unforeseen costs 15%.

Upon request from the municipality the financing scheme evaluated is the '100% Financing by the Contractor-ESCO' and both the loan contract duration of the municipality and the contract duration with the ESCO were selected to be 5 years.

Table 4.11 Financing scheme for the Municipality of VVV – Data for the municipality

	ESCO 100%
Project cost (€)	1,722,527(*)
Subsidy (€)	0
Loan and interest (€)	---------
Total project cost (€)	1,722,527
Total project cost for the municipality (€)	1,722,527
Payback period (years)	13.4
Prof. Index	0.19
Net Present Value (€)	332,962

(*) Premium for ESCO 27%

Table 4.12 Financing scheme for the Municipality of VVV - Data for the Contractor

	ESCO 100%
Project cost (€)	1,722,527(*)
Loan and interest for the Contractor (€)	838,786
Prof. Index	0.35
Net Present Value (€)	256,542

(*) Premium for ESCO 27%

In order to ensure that the criterion set for the P.I. is met, a premium of 27% was added to the project cost. The P.I. for the Contractor is very satisfactory, making the investment attractive to ESCOs.

Municipality of Agii Anargiri-Kamatero

Initially, the Municipality of Agii Anargiri-Kamatero requested public funding from two financing sources, namely (i) the Regional Government as part of the programme 'Partnership Agreement for the Development Framework 2014-2020' which is funded partly by the European Structural

Funds and, (ii) the Green Fund which is governed by the Ministry of Environment and Energy and is managing state funds.

Moreover, similarly to the Municipality of Vari-Voula-Vouliagmeni, the Municipality of Agii Anargiri-Kamatero applied to the GR-Energy program and was approved. However, the supervising body did not accept the inclusion of the 7 buildings to be financed in a larger pool that will be partly financed through an EPC. Therefore, the municipality had the opportunity to exchange 2 buildings and so the PRODESA pool of buildings was reduced by 3 buildings only.

In relation to the grant of the Regional Government, the municipality did not get the approval from the Special Management Service of the Attica Region Operational Programme (SMSAROP), the body that is contributing to the financing scheme. Thus, the municipality had to split the tender in two; one, consisting of 4 buildings to be funded by SMSAROP and equity, and the other, of 19 buildings to be tendered with mixed financing (i.e., from the Public Green Fund and the EPC).

In addition to the public grants related changes to the investment, the cost of PV systems was increased according to the current market prices.

The scenario examined for the Municipality of Agii Anargiri-Kamatero concern energy efficiency interventions and PV systems in 19 municipal buildings for the financing scheme of '100% financing by an ESCO' for the amount remaining of the grant of the Green Fund.

Table 4.13 Financing scheme for the Municipality of Agii Anargiri-Kamatero

Municipality	0%
Grant	12,8%
Contractor-ESCO	87,2%

It should be noted that the project cost included in the following tables includes the extra cost that derives from the contractor's benefit 18%, as defined by law, and the unforeseen costs 15%.

Table 4.14 Financing scheme for the Municipality of Agii Anargiri-Kamatero – Data for the municipality

	ESCO 100%
Project cost (€)	4,417,431
Subsidy (€)	563,909.5
Loan and interest (€)	---------
Total project cost (€)	4,417,431
Total project cost for the municipality (€)	3,853,522
Prof. Index	-0.29
Net Present Value (€)	-1,299,367

The project cost includes a premium of 18.7% (Inc. VAT), which covers the services of the Contractor-ESCO, i.e., project financing and monitoring of the energy consumptions and savings in buildings.

The premium has been calculated so as to meet the P.I. and the IRR criteria set for the Contractor-ESCO, regardless of a possible discount given on the cost of the project.

4.2.3. Financing schemes for streetlighting

Municipality of Agii Anargiri-Kamatero

Various financing scenarios have been investigated for the Municipality of Agii Anargiri-Kamatero regarding the streetlighting interventions. The municipality decided to select the scheme offered by the public Fund for Consignment and Loans, (TPD). Thus, in June 2019 they tendered the project for improvement of streetlighting in the amount of 4,961,286.60 €.

Municipality of Alimos

Various financing scenarios have been investigated for the Municipality of Alimos regarding the streetlighting interventions. The municipality decided to select the scheme offered by the public Fund for Consignment and Loans, (TPD). Thus, they tendered the project for improvement of streetlighting in the amount of 3,139,765.56 €.

5. Conclusions

6. ANNEX 1

Municipality of Alimos

Buildings	Roof and shell insulation	Glazing	Heating system	Mechanical ventilation	LED	Solar collectors	Swimming pool pumps	PV systems	Total
3ο ΝΗΠΙΑΓΩΓΕΙΟ			5.394	5.642	1.289			12.648	24.973
5ο ΝΗΠΙΑΓΩΓΕΙΟ	13.857		1.004	3.385	472			5.084	23.803
9ο ΝΗΠΙΑΓΩΓΕΙΟ	10.072		6.014	6.770	1.744			3.720	28.321
1ο ΔΗΜΟΤΙΚΟ	32.164	71.335	21.204	21.440	3.759			21.328	171.230
2ο ΔΗΜΟΤΙΚΟ	34.874	14.404	11.160	11.284	3.619			10.168	85.509
3ο ΔΗΜΟΤΙΚΟ	19.312	65.390	14.632	13.541	2.614			25.420	140.909
5ο ΔΗΜΟΤΙΚΟ	20.217		2.071	18.054	3.318			20.336	63.997
6ο ΔΗΜΟΤΙΚΟ - 11ο ΝΗΠΙΑΓΩΓΕΙΟ	50.904	116.000	26.226	27.082	10.703			48.856	279.770
7ο ΔΗΜΟΤΙΚΟ	17.264	45.031	12.276	12.412	3.213			35.092	125.288
1ο ΓΥΜΝΑΣΙΟ			22.568	27.082	6.152			12.152	67.953
2ο ΓΥΜΝΑΣΙΟ			24.180	22.568	6.468			44.640	97.856
3ο ΓΥΜΝΑΣΙΟ			23.436	23.696	5.414			26.660	79.206
5ο ΓΥΜΝΑΣΙΟ			21.948	20.311	6.825			44.640	93.725

1ο ΛΥΚΕΙΟ	19.861	173.704	36.456	38.366	11.669			45.756	325.811
2ο ΛΥΚΕΙΟ - 4ο ΓΥΜΝΑΣΙΟ	65.195	190.535	51.770	49.650	15.497			71.176	443.823
4ο ΛΥΚΕΙΟ			34.782	30.467	13.318				78.566
ΔΗΜΑΡΧΕΙΟ			44.082	23.808	9.414			9.176	86.480
ΓΡΑΦΕΙΑ ΠΕΡΙΒΑΛΛΟΝΤΟΣ	32.775	22.221	6.820	5.952	2.352			21.328	91.448
ΔΗΜΟΤΙΚΗ ΒΙΒΛΙΟΘΗΚΗ		71.335	12.276	7.899	1.805			4.588	26.568
ΔΗΜΟΤΙΚΟ ΚΟΛΥΜΒΗΤΗΡΙΟ		14.404	9.052	9.027	4.645	20.584	14.880	30.256	120.188
Σύνολο	**316.497**	**698.618**	**387.351**	**378.436**	**114.289**	**20.584**	**14.880**	**493.024**	**2.455.424**

Municipality of Agios Dimitrios

α/α	Εγκατάσταση	Ισχύς Φ/Σ	Κόστος Αναβαθμισης Ηλ. Εγκ.	Κόστος εγκαταστάσης Φ/Β	Κόστος εγκατάστασης νέο (5% προσαύξηση)
1	1ο Νηπιαγωγείο	6,67	**804,12**	**13227,64**	**14.135**
4	4ο Νηπιαγωγείο	20,88	**1174,25**	**24069,14**	**25.273**
5	5ο Νηπιαγωγείο	50,07	**3282,67**	**89559,62**	**94.038**
5	5ο Δημοτικό				
5	4ο Γυμνάσιο				
6	6ο Νηπιαγωγείο	7,25	**167,47**	**14363,35**	**15.191**
7	7ο Νηπιαγωγείο (Φωτοβολταικα 10KWp)	13,94	**173,93**	**19881,91**	**20.876**
8	8ο Νηπιαγωγείο	18,56	**434,00**	**23166,92**	**23.724**
10	10ο Νηπιαγωγείο	34,8	**235,60**	**35386,25**	**37.156**
11	11ο Νηπιαγωγείο	58,58	**1576,41**	**53971,37**	**56.670**
11	14ο Δημοτικό				
12	12ο Νηπιαγωγείο	24,94	**272,80**	**27207,96**	**28.568**
13	13ο Νηπιαγωγείο	14,5	**329,94**	**20494,22**	**21.519**
14	14ο Νηπιαγωγείο	54,81	**1114,91**	**53781,84**	**56.471**
14	10ο Δημοτικό				
16	16ο Νηπιαγωγείο	18,85	**192,27**	**25866,96**	**27.160**
17	17ο Νηπιαγωγείο	94,25	**682,00**	**89320,86**	**93.787**
17	18ο Δημοτικό				
18	18ο Νηπιαγωγείο	22,91	**473,88**	**26367,05**	**27.685**
19	Ειδικό Νηπιαγωγείο	19,72	**1332,00**	**25177,95**	**26.437**
19	1ο Ειδικό Δημοτικό				
22	3ο Δημοτικό	49,88	**2058,73**	**47217,71**	**49.579**

23	4ο Δημοτικό	90,11	**1626,15**	**83808,56**	**87.999**
24	6ο Δημοτικό	84,1	**1575,13**	**77170,28**	**81.029**
26	8ο Δημοτικό	78,59	**1268,22**	**71963,09**	**75.561**
28	11ο Δημοτικό	57,42	**914,68**	**56673,58**	**59.507**
29	12ο Δημοτικό	54,81	**896,67**	**51947,88**	**54.545**
31	15ο Δημοτικό	87,87	**878,53**	**77797,54**	**81.687**
32	17ο Δημοτικό	64,96	**965,33**	**61826,77**	**64.918**
33	20ο Δημοτικό	70,47	**1541,22**	**65123,37**	**68.380**
34	2ο Γυμνάσιο	76,56	**1957,28**	**70283,57**	**73.798**
35	3ο Γυμνάσιο	52,49	**1561,36**	**51084,34**	**53.639**
36	5ο Γυμνάσιο	62,64	**1205,76**	**58279,88**	**61.194**
37	6ο Γυμνάσιο	271,73	**3459,60**	**250358,48**	**262.876**
37	1ο ΕΠΑΛ				
37	2ο ΕΠΑΛ Εσπερινό				
37	1ο ΣΕΚ				
38	Ειδικό Επαγγελματικό Γυμνάσιο	182,99	**5189,19**	**153756,16**	**161.444**
38	Ε.Ε.Ε.Ε.Κ				
40	1ο Γυμνάσιο	299,28	**3379,93**	**96170,04**	**100.979**
40	Ι.Ε.Κ.			**96170,04**	**100.979**
40	1ο Λύκειο			**96170,04**	**100.979**
41	2ο Λύκειο	45,82	**2173,46**	**44015,54**	**46.216**
42	3ο Λύκειο	82,94	**2768,66**	**76146,29**	**79.954**
47	Κλειστό Γυμναστήριο Αργοστολίου	64,67	**535,32**	**59409,45**	**62.380**
48	Κλειστό Γήπεδο μπάσκετ (και λοιποί χώροι)	99,47	**2179,94**	**89792,31**	**94.282**
50	Νεκροταφείο	43,5	**3717,01**	**42831,83**	**44.973**

Municipality of Vari-Voula-Vouliagmeni

ΚΤΙΡΙΑ	ΜΟΝΩΣΗ ΔΩΜΑΤΟΣ	ΜΟΝΩΣΗ ΔΩΜΑΤΟΣ ΜΕ ΕΡΓΟΛΑΒΙΚΟ	ΜΟΝΩΣΗ ΔΩΜΑΤΟΣ ΜΕ ΕΡΓΟΛΑΒΙΚΟ ΚΑΙ ΑΠΡΟΒΛΕΠΤΑ	ΣΥΣΤΗΜΑ ΘΕΡΜΑΝΣΗΣ/ΨΥΞΗΣ	ΦΩΤΙΣΜΟΣ LED	ΑΠΕ	ΣΥΝΟΛΟ	ΦΠΑ	ΣΥΝΟΛΟ ΜΕ ΦΠΑ
Κτ.5 - Παιδικός Σταθμός Βάρης		0	0	36,000	14,266	1,840	52,106	12,506	64,612
Κτ.8 - Αίθουσα Πολ.Χρησ. Βάρης		0	0		41,426	57,760	99,186	23,805	122,990
Κτ.19 - 1ο Νηπιαγωγείο Βούλας	12,710	14,998	17,247	53,000	5,539	10,000	85,786	20,589	106,375
Κτ.20 - 2ο Νηπιαγωγείο Βούλας	14,546	17,164	19,739			6,640	26,379	6,331	32,710
Κτ.21 - 3ο Νηπιαγωγείο Βούλας	13,296	15,689	18,043		6,851		24,894	5,974	30,868
Κτ.22 - 1ο Δημοτικό Βούλας	20,544	24,242	27,878	120,001	59,509	36,552	243,940	58,546	302,485
Κτ.26 - Δημ. Κατάστημα	21,749	25,664	29,513	85,000	20,973	19,120	154,607	37,106	191,712
Κτ.2 - Πνευματικό Κέντρο Βάρη		0	0			3,464	3,464	831	4,295
Κτ. 3 - Χώρος Πολ/κών Εκθ.		0	0			3,552	3,552	852	4,404
Κτ.15 - ΚΑΠΗ Βούλας		0	0			3,552	3,552	852	4,404
Κτ.18 - Παιδ. Σταθμός Βούλας		0	0			4,088	4,088	981	5,069
Κτ.24 - Αίθ. πολ. χρήσεων		0	0			1,776	1,776	426	2,202
Κτ.23 - 2ο Δημοτικό Βούλας		0	0			48,888	48,888	11,733	60,621
2ο Γυμνάσιο Βάρης		0	0			33,600	33,600	8,064	41,664
3ο Νηπιαγωγείο Βάρης		0	0			8,000	8,000	1,920	9,920
Δημοτικό Σχολείο Διλόφου Βάρης + ΑΠΧ		0	0			8,000	8,000	1,920	9,920
Δημοτικό Σχολείο Βάρκιζας		0	0			8,000	8,000	1,920	9,920
Νηπιαγωγείο Βάρκιζας		0	0			12,800	12,800	3,072	15,872
1ο Γυμνάσιο Βούλας		0	0			18,400	18,400	4,416	22,816
1ο Λύκειο Βούλας		0	0			33,600	33,600	8,064	41,664
3ο Δημοτικό Σχολείο Βούλας (όλο)		0	0			50,400	50,400	12,096	62,496
4ο Δημοτικό Σχολείο Βούλας		0	0			8,800	8,800	2,112	10,912
4ο Νηπιαγωγείο Βούλας		0	0			800	800	192	992
5ο Νηπιαγωγείο Βούλας		0	0			9,600	9,600	2,304	11,904
2ο Γυμνάσιο Βούλας		0	0			47,200	47,200	11,328	58,528
2ο Λύκειο Βούλας		0	0			24,000	24,000	5,760	29,760
Λύκειο Βουλιαγμένης		0	0			8,800	8,800	2,112	10,912
Δημοτικό Βουλιαγμένης		0	0			68,000	68,000	16,320	84,320
ΣΥΝΟΛΟ	**82,845**	**97,757**	**112,421**	**294,001**	**148,564**	**537,231**	**1,092,216**	**262,132**	**1,354,348**

Municipality of Agii Anargiri-Kamatero

ΚΤΙΡΙΑ	Μόνωση δώματος	Μόνωση δώματος ΜΕ ΕΡΓΟΛΑΒΙΚΟ	Μόνωση δώματος ΜΕ ΕΡΓΟΛΑΒΙΚΟ ΚΑΙ ΑΠΡΟΒΛΕΠΤΑ	Σύστημα Θέρμανσης	Φωτισμός LED	BEMS	ΑΠΕ	Σύνολο χωρίς ΦΠΑ	Απολογιστικά ΓΕ & ΟΕ	Πρόβέψη αναθεώρησης	ΣΥΝΟΛΟ ΧΩΡΙΣ ΦΠΑ	ΦΠΑ	ΣΥΝΟΛΟ ΜΕ ΦΠΑ
2ο Νηπ/γείο Αγ. Αναργύρων	11,893	14,033	16,138	18,000	2,225	3,000	5,000	44,364			44,364	10,647	55,011
3ο Νηπ/γείο Αγ. Αναργύρων	17,885	21,104	24,270	23,000	2,983	3,000	5,000	58,252			58,252	13,981	72,233
5ο - 11ο Νηπ/γείο Αγ. Αναργύρων	18,884	22,283	25,626	23,000	3,320	3,000	4,500	59,446			59,446	14,267	73,713
10ο Νηπ/γείο Αγ. Αναργύρων	13,822	16,310	18,756	18,000	2,156	3,000	5,000	46,913			46,913	11,259	58,172
1ο Δημ/κό - ΥΦΙΣΤΑΜΕΝΟ ΠΡΟ 55		0	0					0			0	0	0
1ο Δημ/κό - ΠΡΟΣΘΗΚΗ ΑΝΕΞΑΡΤΗΤΟ	112,926	133,252	153,240	91,000	21,596	10,000	35,000	310,836			310,836	74,601	385,437
2ο Δημ/κό Σχολείο Αγ. Αναργύρων	113,692	134,157	154,280	60,000	13,168	5,000	17,500	249,948			249,948	59,987	309,935
3ο-9ο Δημ/κό Σχολείο Αγ. Αναργύρων	51,686	60,989	70,138	60,000	29,278	7,000	17,500	183,916			183,916	44,140	228,056
4ο Δημ/κό Σχολείο Αγ. Αναργύρων	31,643	37,339	42,940	60,000	16,666	5,000	19,800	144,406			144,406	34,657	179,063
5ο - 10ο Δημ/κό Σχολείο Αγ. Αναργύρων	33,399	39,410	45,322	68,500	17,905	7,000	22,200	160,927			160,927	38,622	199,549
6ο Δημ/κό Σχολείο Αγ. Αναργύρων	105,253	124,198	142,828	68,500	12,672	7,000	24,700	255,700			255,700	61,368	317,068
7ο Δημ/κό Σχολείο Αγ. Αναργύρων	35,493	41,882	48,164	45,000	18,814	5,000	17,500	134,478			134,478	32,275	166,753
4ο Γυμνάσιο Αγ. Αναργύρων	29,934	35,322	40,620	65,000	19,472	7,000	19,800	151,892			151,892	36,454	188,346
3ο Λύκειο Αγ. Αναργύρων	28,586	33,731	38,791	70,000	16,144	7,000	22,200	154,136			154,136	36,993	191,128
Πειραματικό Λύκειο Αγ. Αναργύρων	20,863	24,619	28,311	80,000	16,389	5,000	19,800	149,500			149,500	35,880	185,380
1ο-3ο ΕΠΑΛ Αγ. Αναργύρων	78,636	92,790	106,709	120,000	48,559	10,000	37,000	322,268			322,268	77,344	399,612
Παλαιό Δημαρχείο	25,548	30,147	34,669	100,000	9,228	7,000	10,500	161,397			161,397	38,735	200,132
Πολιτιστικό Κέντρο "ΣΠΥΡΟΣ ΑΠΟΣΤΟΛΟΥ"	29,005	34,226	39,360	185,000	17,355	7,000	10,500	259,214			259,214	62,211	321,426
Β΄ ΚΑΠΗ	12,393	14,624	16,818	28,000	3,819	4,000	9,800	62,437			62,437	14,985	77,422
Δ' ΚΑΠΗ	13,548	15,987	18,385	42,000	7,917	5,000	7,000	80,302			80,302	19,273	99,575
ΣΥΝΟΛΟ	**785,089**	**926,404**	**1,065,365**	**1,225,000**	**279,666**	**110,000**	**310,300**	**2,990,331**	**11,820**	**1,806**	**3,002,151**	**720,516**	**3,722,667**

Σημείωση: Το ποσό της πρόβλεψης αναθεώρησης δεν έχει ληφθεί υπόψη στους υπολογισμούς για το χρηματοδοτικό σχήμα.

PROJECT COORDINATOR
Alimos Municipality

Agios Dimitrios Municipality

Glyfada Municipality

Vari Voula Vouliagmeni Municipality

Agii Anargiri Kamatero Municipality

Palaio Faliro Municipality

Amaroussion Municipality

Central Union of Municipalities in Greece

EUDITI Energy and Environmental Design LTD

Center for Renewable Energy Sources and Saving (CRES)

ENFINITY NV

European Crowdfunding Network (ECN)

Kelemenis & Co