

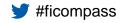


Energy Efficiency in existing Housing Programme EXOIKONOMO & II

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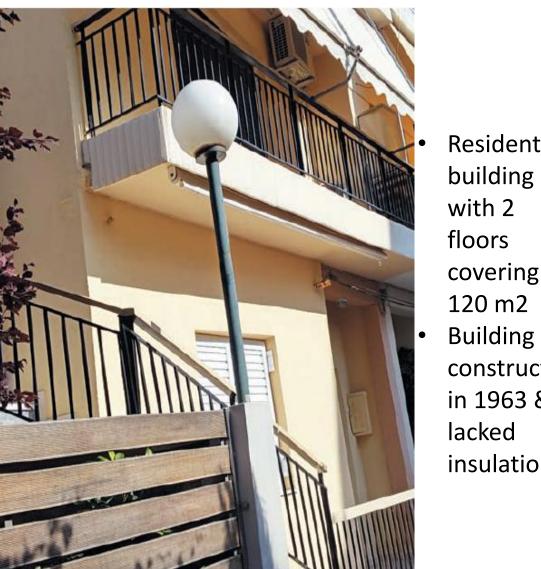




EXOIKONOMO I & II Energy savings projects



Renovation & energy performance improvement of a two-dwelling building in Athens



Budget: EUR 17 321 € (including VAT)

Category 1: Replacing glazing - frames & installation of external shading systems Category 2: Installing thermal insulation in the building shell, including the roof Category 3: Upgrading the heating & hot water systems

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EXOIKONOMO I & II Energy savings projects





EXOIKONOMO I Strategy of the Programme



- Basic objectives: establishment of **FI combined with grants** that can cover the investment gap as much as possible.
 - □ 1st aim: energy upgrade of a great number of households;
 - 2nd aim: attraction to the programme of low income households, by providing stronger incentives to them.
- Comparison of different scenarios, including:
 - The mix of incentives;
 - The max possible Leverage Ratio, that is able to be achieved through the financial-credit system;
 - The subsidy of the given interest;
 - The recycling of resources of the current programme;
 - The affected indicators (i.e. employment).







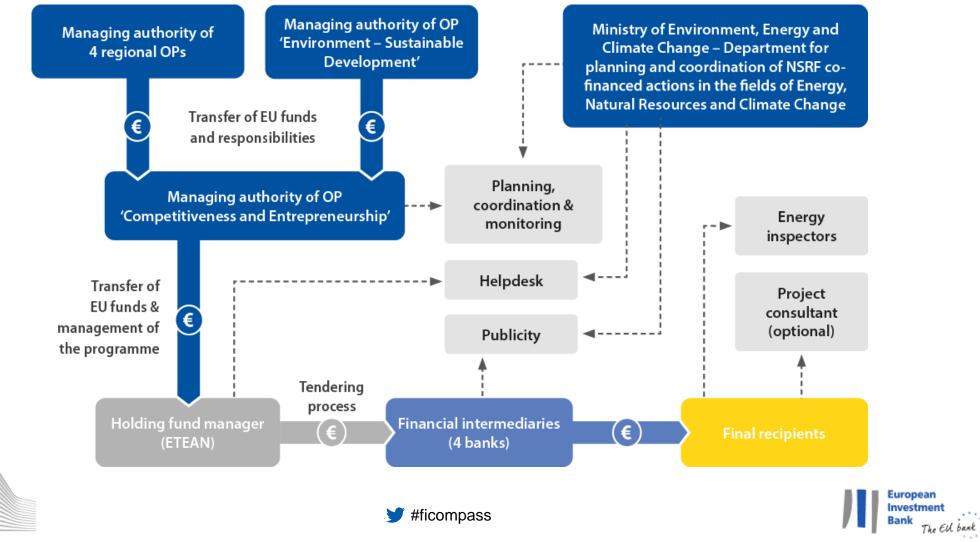


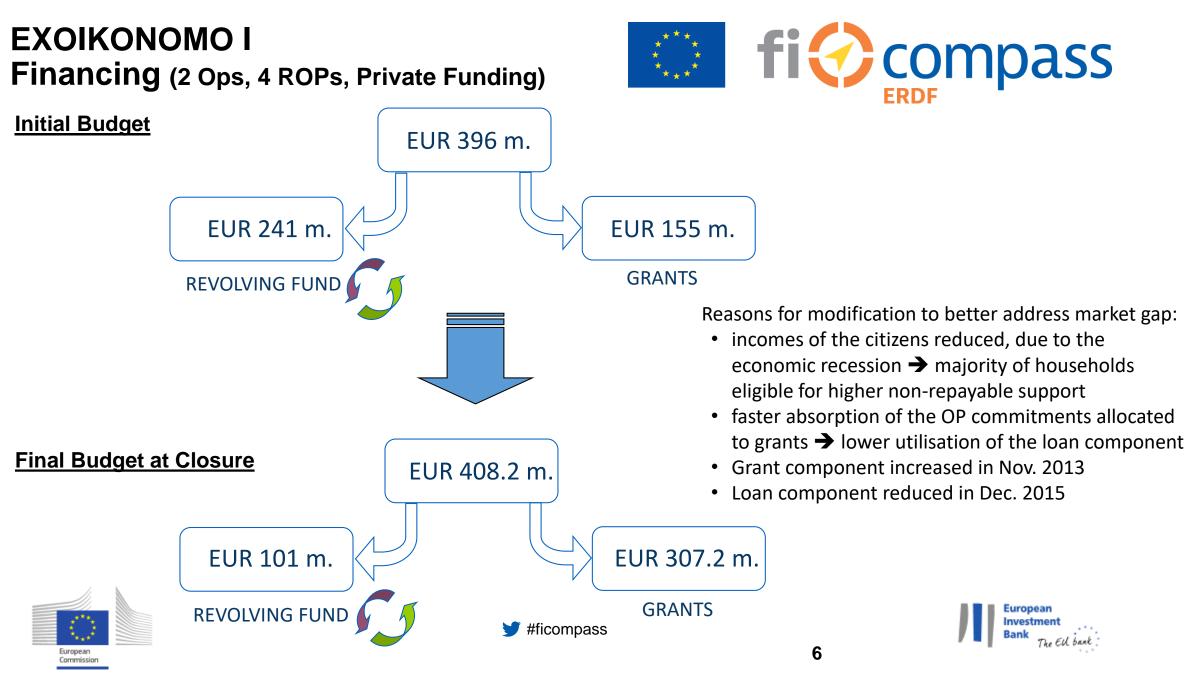


EXOIKONOMO I Organisational Structure

European Commission







EXOIKONOMO I Basic aspects of the Programme



- Eligibility: Legality / Energy category D or less
- Two sources of Financing: Loans combined with Grants
- Grants up to 70% to 3 categories of Homeowners
- Liquidity (capital) in the form of loans under particularly favourable terms (duration 4-6 years / without mortgage, but guarantor needed)
- Cost of the Energy Inspections / Audits: covered 100%
- **Project Consultant's fee** (up to EUR 250, without VAT)
- Payment of suppliers / contractors through banks without the involvement of the Homeowners





EXOIKONOMO I Criteria Selection / Incentives



Category	Personal Income (€)	Family Income (€)	Incentives
A1	<= 12.000	<= 20.000	70% grant / 30% loan (100% subsidy of interest up to 30.11.2016)
A2	12.000 - 40.000	20.000 - 60.000	35% grant / 65% loan (100% subsidy of interest up to 30.11.2016)
В	40.000 - 60.000	60.000 - 80.000	15% grant / 85% loan (100% subsidy of interest up to 30.11.2016)

Indicatively, the allowed interventions:

- Installing thermal insulation in the building shell, including the roof
- Replacement of frames and glasses of windows (glass panels)
- Upgrade of the heating and hot water system

Maximum eligible budget of interventions (including VAT): not exceed **EUR 15,000** per property

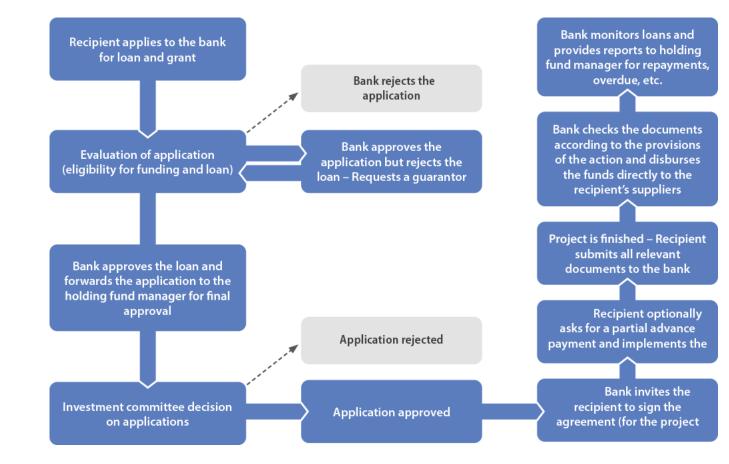




EXOIKONOMO I Implementation Steps







Preparation

- Creditability Check (by the banks)
- 1st Energy Inspection / Identification of Interventions (by Energy Auditor)
- Collection of Supporting Documents / Offers from Constructors – Suppliers (by Energy Auditor / Consultant)

Application Submission -Evaluation/Approval of Application Loan Agreement - Implementation of Interventions

Completion of Interventions

- 2nd Energy Inspection to establish that the energy targets set in the application have been achieved
- Financing Paying off





EXOIKONOMO I Information & Publicity

• Campaigns in TV / Radio / Internet



- 2 informative leaflets & special poster: distributed to all banks' branch network
- Internet banners with a relevant link to the Programme's website in 4 banks' websites
- Projections in 110 000 ATM & 7 telephone campaigns (10 000 calls)
- Participation in 2 exhibitions (Εξεςονομώ / EXPO 2011, 76th Thessaloniki International Exhibition)

Aiming to :

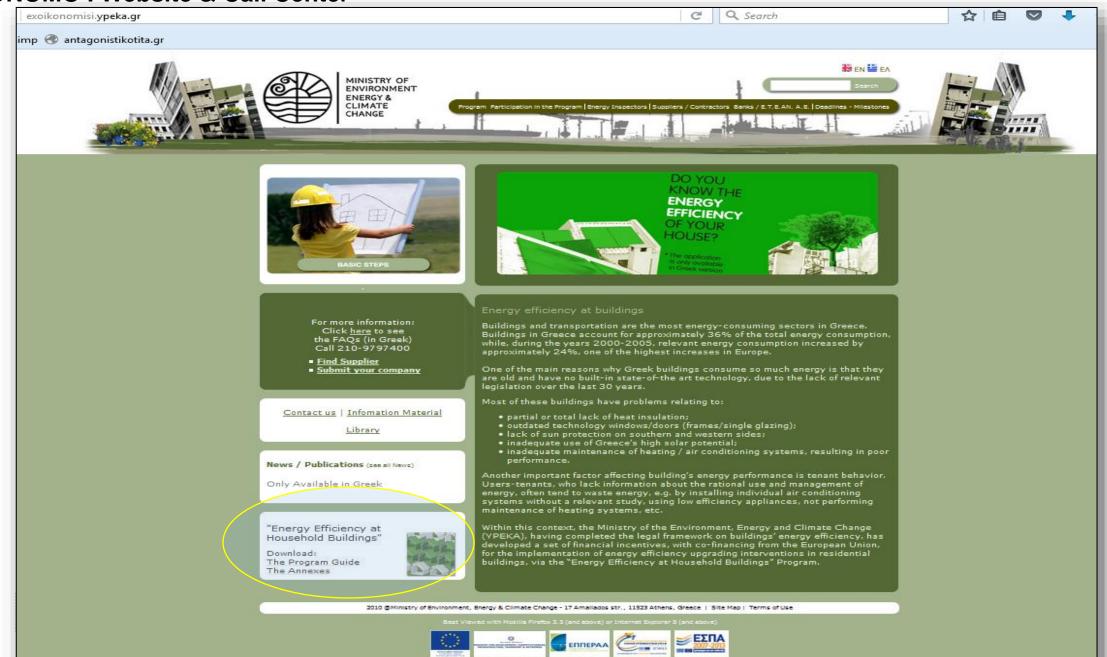
- make the programme well-known all over the country;
- improve population's energy efficiency awareness.







EXOIKONOMO I Website & Call Center



EXOIKONOMO I Ads, Leaflets, Posters



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EXOIKONOMO I Achievements (1/2)

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By March 2017:

• 51.152 households reduced their energy consumption



- Annual primary energy savings: 73.35 thousand tonnes of oil equivalent (ktoe)
- Energy savings in the domestic sector: 853 GWh
- Greenhouse gas emission reductions: 612 kt CO2
- EUR [148m] private co-financing from partner banks achieving EU Leverage of 2.57





EXOIKONOMO I Achievements (2/2)



- Total area of renovated residences: 5.2 mil m2
- On average, energy consumption reduced by 42.5% (165 kwh/m2)
- 83% of the completed interventions involved the replacement of frames/glass panes
- 53.9% thermal insulation
- 71.6% upgrade of the heating system and domestic hot water supply.

INTERMEDIATE PROGRAMME: between Programming Periods (2007-2013 & 2014-2020)

- Exactly same criteria / incentives as EXOIKONOMO I
- Total Budget : EUR 130 mil (Loans: 44.5 + Grants: 85.5)
- 11.670 households energy upgraded
- Energy savings:185,7 GWh







EXOIKONOMO I Field Survey (1/3)



- On-going evaluation of OPCE 2007-2013 (July 2013);
- Questionnaires to Final Recipients with completed projects in all Regions (sent: 1.140 questionnaires → replied: 372, 33%);
- Interviews with Executives of ETEAN S.A.;
- Interviews with Executives of selected 4 banks;
- Interviews with Representatives of Construction Sector's Enterprises.





EXOIKONOMO I Field Survey (2/3)



- 1. Numerous & detailed application form documents (bureaucratic);
- 2. Bank delays (not well-informed personnel, in approving applications and loans, final checking completion documents);
- 3. Many organisations involved, difficulties in communication;
- 4. Absence of an Integrated IT System between MA, Ministry of Environment & Energy, Fund Manager & selected banks;





EXOIKONOMO I Field Survey (3/3)



5. Problematic coordination for blocks of residential flats to apply jointly for financial support;

Households ownership issues;

- 6. Erratic / delayed flow of funds from Public Investments Programme;
- No certification applicable for construction crews undertaking energy efficiency restorations in households (quality of work varies as a result);
- 8. Frequent construction work implementation delays or delays in procurement of materials.





EXOIKONOMO I Socio-Economic Objectives & Benefits

- 1. Energy savings; reduction of home expenses for heating & cooling;
- 2. Reduction of CO₂ emissions;
- 3. Thermal comfort in houses;
- 4. Population awareness on energy-efficient technologies;
- Increase of employment in the Construction Sector: more than 1.700 Greek enterprises, 4.000 engineers & 300 bank employees;
- 6. Increase in construction material certifications (CE requirement in Energy Savings in Households tender);
- 7. Results: affected by other factors, like economic crisis & recession → in-depth impact evaluation for the future

(i.e. real energy savings not by interventions, but because of decreased oil / electricity consumption in houses).









EXOIKONOMO I Good practices



- 1. Minimum change of energy saving category (at least one category up or 30% of energy savings);
- 2. Required **Energy Audits** (before & after the works) for certification of achieved target;
- 3. Correlation of given top eligible expenditure limits per expenditure category with market prices;
- 4. Required certification of materials (**CE marking**); Standards & certification tend to be enacted in the market;
- 5. Improved population's energy efficiency **awareness** (low before the mechanism's procurement, one of the reason for its slow start)









"Energy Efficiency in existing Housing Programme EXOIKONOMO II





EXOIKONOMO II Ex-ante assessment key findings (October 2016, 3rd ed.)

- Financial gap: Need for more resources (Regional OPs resources included)
- Energy-intensive building stock
- Need of combination loans with grants experience from previous Programming Period
- Leverage Ratios
 - Phase A (3/2018)
 EUR [100m] private co-financing from partner banks achieving EU Leverage of 3.05
 - Phase B (9/2019)

EUR [50m] private co-financing from partner banks achieving EU Leverage of 3.00







EXOIKONOMO II Basic aspects of the Programme



- Eligibility: Primary housing / Legality / Energy category D or less
- Two sources of Financing (choice of using private resources instead of taking a loan): Loans & Grants / Grants only / mandatory only Loans (100% of budget) for high-income households
- Grants up to 70% will be provided to 7 categories of citizens who can apply to the Programme
- Liquidity (capital) will be granted to citizens in the form of loans under particularly favourable terms. Duration 4-6 years, 0% mortgage, but guarantor may required
- Compensation of the cost of the 2 Energy Inspections/Audits; covered 100% by the Programme (up to EUR 310 for single flats / up to EUR 806 for blocks of residential flats)
- Compensation of the project consultants' fee (up to EUR 248 for single flats / EUR 620 for blocks of residential flats)
- · Payment of suppliers / contractors through banks, without the involvement of the homeowner



EXOIKONOMO II Strategy / Objectives of the Programme

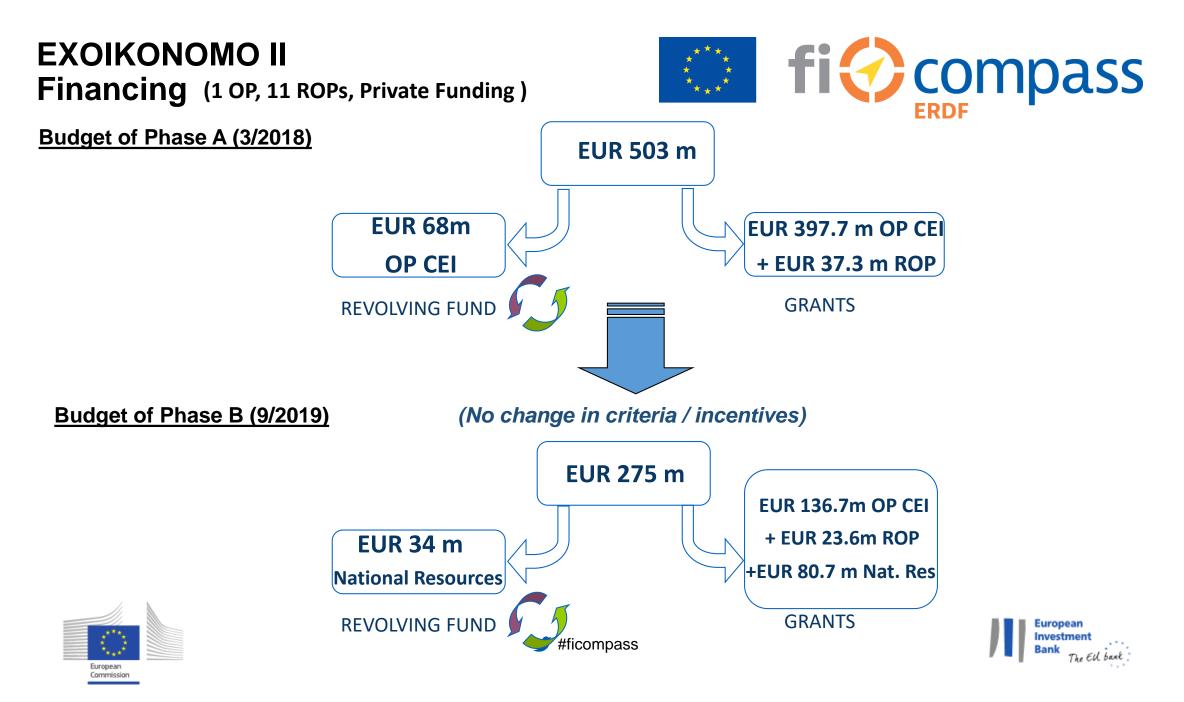


- Improving the energy efficiency of the housing building stock
- Energy saving & thus the reduction of imports of oil, natural gas, etc.
- Interventions at the improved **energy performance** of buildings through:
 - \checkmark the penetration of energy efficient systems for the cooling / heating of premises
 - \checkmark the production of hot water for use,

- Εξοικονόμηση Κατ' Οίκον ΙΙ
- ✓ energy saving technologies, such as high-performance heat pumps, utilisation of solar energy, the replacement of frames and the thermal insulation of the shell of buildings (masonry, ceiling, pilot)
- ✓ innovative energy saving technologies (e.g. smart systems, energy storage systems, energy management systems)







EXOIKONOMO II Significant Modifications from previous Programme EXOIKONOMO I

- Creation of a MIS Platform for submission / evaluation of applications
- **Upgrade** of given top eligible expenditure limits
- Eligibility of remuneration for issuing permits / studies needed
- Improved graduation of income categories (7 categories instead of 3)
- Increased energy target (40% of energy saving for the categories1-2, & 70% for the categories 3-7)
- Loan is **Optional** (loan obligatory only for high incomes, category 7)
- **Reduction** of management cost per application (EUR 95 instead of EUR 135)
- Evaluation of submissions by a central body (Fund Manager evaluation of loan by banks).



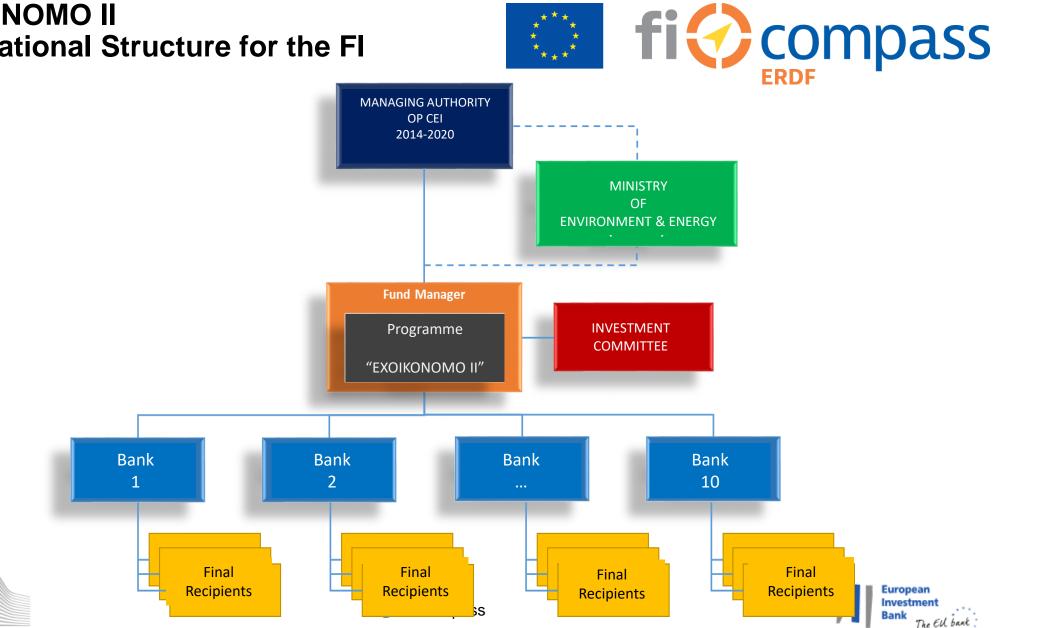






EXOIKONOMO II Organisational Structure for the FI

European Commission



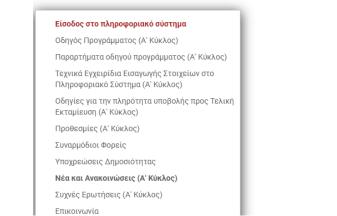
EXOIKONOMO II MIS (platform for applications)





Πρόγραμμα «Εξοικονόμηση κατ' οίκον ΙΙ»

Επιλεξιμότητα - Υλοποίηση Ελάχιστες Ενεργειακές Απαιτήσεις Ενεργειακή Επιθεώρηση Παραστατικά Δαπανών Αρχική Το Πρόγραμμα





Β' Κύκλος - 2019





Επικοινωνία

https://exoikonomisi.ypen.gr/





EXOIKONOMO II Incentives



Indicatively, the allowed interventions:

- Installing insulation in the whole building (roof & walls)
- Replacement of frames and glass of windows (glass panels)
- Upgrade of the heating and hot water system
- Upgrade of solar water heater systems, heat pumps, etc.



Maximum eligible budget of interventions (including VAT): not exceed EUR 25 000 per property





EXOIKONOMO II Criteria Selection



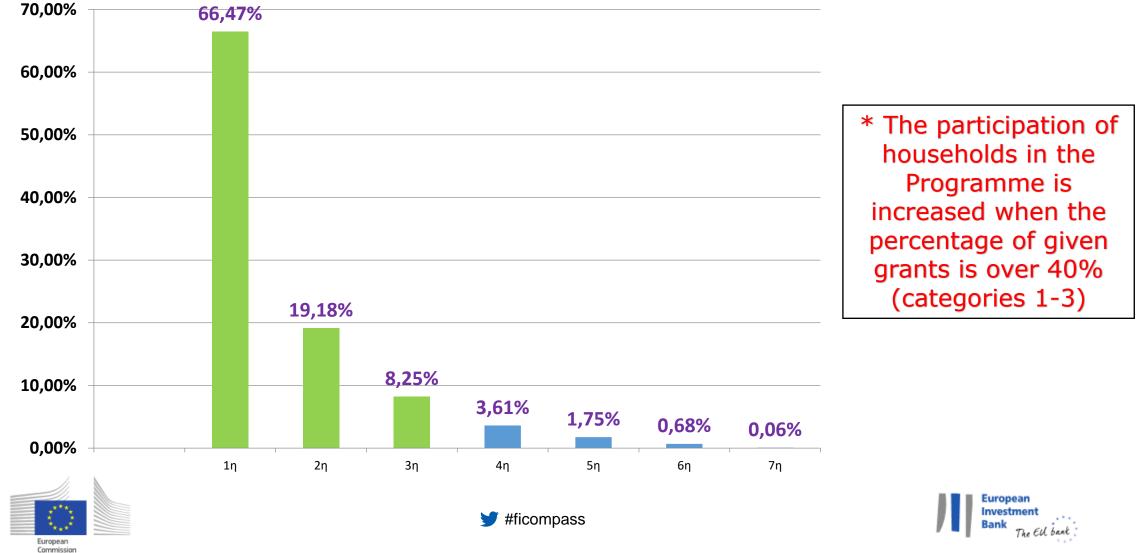
Category	Personal Income (€)	Family Income (€)	% Grant	% increased per Child	Max % of given Grant
1	≤ 10.000	≤ 20.000	60	5	70
2	10.000 - 15.000	20.000 - 25.000	50	5	70
3	15.000 - 20.000	25.000 - 30.000	40	5	70
4	20.000 - 25.000	30.000 - 35.000	35	5	70
5	25.000 - 30.000	35.000 - 40.000	30	5	50
6	30.000 - 35.000	40.000 - 45.000	25	5	50
7	> 35.000	> 45.000	0	0	0





EXOIKONOMO II Participation per income category





EXOIKONOMO II Some Statistics (up to November 2019)

Phase A

- Total budget: EUR 503 million
 - > EUR 68 million: Loans (Fund)
 - > EUR 398 million: Grants from OP CEI (EPAnEK)
 - > EUR 37 million: Grants from 9 Regional OPs
- Submissions: **42.650** households will improve their energy category
- 26.000 houses have already completed their works (60 % of the Programme so far)
 - EUR 363 million: total eligible cost (private fund incl.)
 - > EUR 33 million: Loans currently given
 - > EUR 230 million: Grants currently given

Phase B

- Total budget: EUR 275 million
 - EUR 34 million: Loans (Fund)
 - EUR 137 million: Grants from OP CEI (EPAnEK)
 - > EUR 24 million: Grants from 11 Regional OPs

fi compass

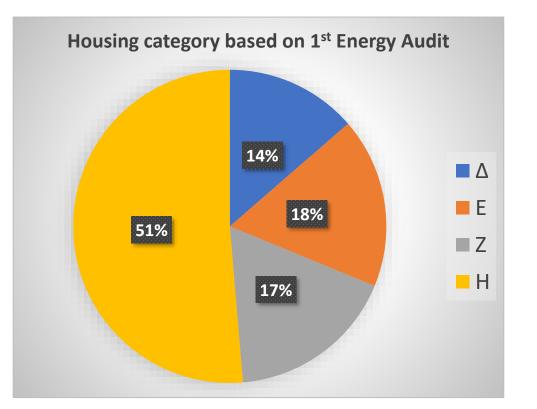
- EUR 80 million: National Resources
- Submissions: 22.750 households
 - ➢ 6.628 currently approved submissions by I.C.

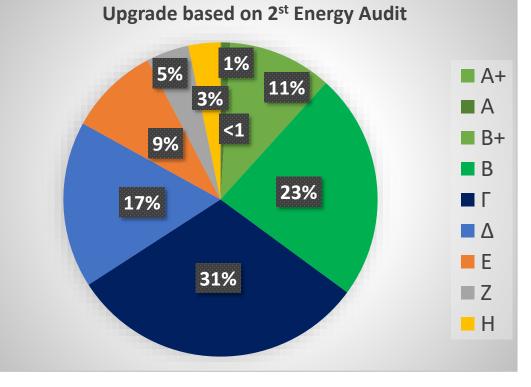




EXOIKONOMO II Energy efficiency upgrade







Before

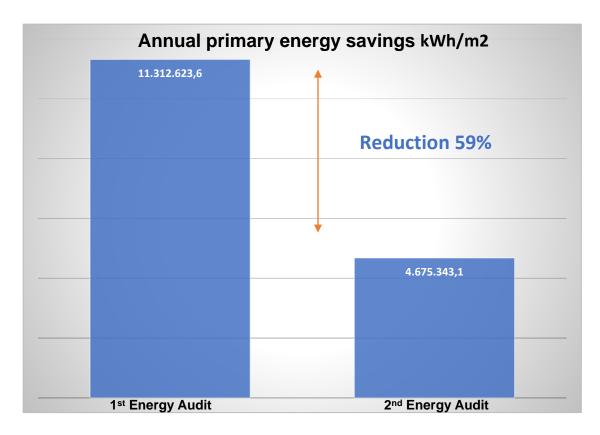
After



Based on 26.000 projects completed so far



EXOIKONOMO II Energy savings



Based on 26.000 currently completed projects





Annual primary energy savings kWh/m2					
Before	11.312.623,60				
After	4.675.343,10				
	6.637.280,50	energy savings		6	

- Reduction on average their energy consumption by 59%
- **650** GWh of energy savings currently
- 0,3 3,2 € / kwh average cost of energy saving



EXOIKONOMO I & II Summary

EUR 540 million total budget (Loans & Grants)

63.000 completed projects

EUR 593 million total eligible cost (private fund incl.)

1.040 GWh energy savings

42.5% Av. reduction of energy consumption

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EUR 778 million total budget (Loans & Grants) EUR 263 million given so far

26.000 currently completed projects/ & **39.000** projects on the run

EUR 363 million total eligible cost (private fund incl.)

650 GWh current energy savings

59% Av. reduction of energy consumption

0,3 – 3,2 € /kwh Average cost of energy saving Digitalisation Speed

Still great demand: Looking for resources for starting a Phase C ... to be continued !





OPERATIONAL PROGRAMME COMPETITIVENESS • ENTREPRENEURSHIP • INNOVATION 2014-2020





