



financing products
for green investments



*Fin*a●Ret

Financing Small-Scale and RET & EET Investments “A Result Report”

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1. Introduction

The FINA-RET project was funded under the 2006 call of IEE Programme. The objective of FINA-RET was to specify and package financing products addressing investments on small-scale Renewable Energy (RE) and Energy Efficiency (EE) technologies' applications. The project has been built on the fact that a financing product, like any other industrial or service product, should meet the objectives of its potential consumers, in a profitable way for its provider. Considering this fact, the project has developed an integrated approach for eliciting the requirements of the potential investors, along with an in-depth analysis of the environment within which the financing products under consideration will be developed, implemented and promoted.

This report is part of FINA-RET's Final Report and its objective is to present in a coherent way the project's findings and concluding remarks. The information provided in this report is presented in detail in the project's deliverables, the majority of which (i.e. those with public status) are available on the project website.

The report is organized in seven more sections. Section two provides a briefing in the project implementation approach in order to facilitate the reader to follow the rationale upon which the report is constructed. Sections three to seven provide the major project conclusions following the sequence of project implementation, while section eight provides some closing remarks on the project's findings.

2. FINA-RET Rational and Approach

Substantial resources and effort have been devoted so far on a European and national level in order to support the development and implementation of renewables and energy efficiency technologies. However, there are some non-technical factors that act as barriers to their implementation on a large scale. These factors are:

1. the current energy prices do not reflect all costs of energy
2. the amortization cost of RE and EE technologies is relatively high (especially compared to their scale of investment, leading also to a long pay-back period)
3. there is lack of sustainable, flexible and easy to access financing products for small-scale RE and EE technologies' applications
4. there is lack of market-oriented mechanisms for the effective promotion of RE and EE technologies introduction
5. there is a lack of continuity, consistency and integration in the legislative and regulatory framework governing RE and EE technologies market and application in several member states.

Among these factors, less attention and effort has been devoted till now to the identification, development and promotion of financing products that address the needs of stakeholders (i.e. farmers, SMEs, industries, individual households, etc.) aiming to invest on small-scale RE and EE technologies' applications. However, it has been identified, long time now [FINA-RET 2007], that the implementation of small-scale renewable energy projects -whether electricity, biogas or heat- requires specialized financial tools, initiatives and measures targeted to the specific project conditions. Several options, including dedicated funds, bundling of investments with services, and customer based investments, proved to be effective and deserve further promotion. Emerging evidence in developing countries [FINA-RET 2007] and some EU countries [Purina 2005, Weiss and Sprau 2002] suggest that micro credit or micro lending, financial leasing programmes, vendor credit, targeted project credits, equity financing and flexible debt financing, as well as specialized grants and subsidies linked to micro enterprises, households, farmers and local communities can have considerable success in promoting RE and EE technologies implementation. Such financing products require the actual involvement of private financing sector such as banks, credit institutions and financial intermediaries, as well as NGOs and international agencies, like the World Bank, the European Bank for Restructuring and Development, DANIDA, KfW, etc.

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Considering the above stated issues related to renewables and energy efficiency technologies' investments, the project FINA-RET aimed to support the deployment of these technologies through the identification, specification and packaging of sustainable, flexible and easy to access financing products (i.e. loans, funding and awarding programmes) addressed mainly to individuals and SMEs that wish to invest on renewables and energy efficiency technologies in order to meet their energy needs and increase their energy performance.

To achieve this task a systematic approach of designing the financing product under consideration was identified. This approach emphasized on the elicitation of the user requirements and characteristics of the financing products, while considering the characteristics of the environment within which the financing products would be developed in order to secure the efficiency and effectiveness of these financing products for all parties involved in their development, supply and consumption.

Figure 1 that follows provides an overview of the integrated methodological approach developed and implemented within FINA-RET [FINA-RET 2007].

As illustrated in the figure, the proposed approach involved the identification and categorization of small-scale renewables and energy efficiency technologies based on their investment characteristics and requirements in order to: (a) match the investments with different investor profiles and (b) identify alternative types of financing products that could be applicable to the identified categories of investments and investors' profiles. This information along with a review of past and on going financing measure and mechanisms, supporting investments in renewables and energy efficiency technologies, set the ground for the development and implementation of surveys to potential investors and major market actors. More specifically, based on the identification of: (i) the target groups, (ii) the investments' characteristics, (iii) the alternative types of financing measures applicable to the investments under consideration and the principles of their development process and (iv) the past experience in developing financial support measures and mechanisms for renewables and energy efficiency application (i.e. the success and failure factors of the measures, the problems encountered, the mechanisms and means used for their development, etc.) a survey to potential investors (i.e. households and SMEs) and a survey to major market actors (i.e. technologies' providers, construction industry and policy makers) were designed and implemented.

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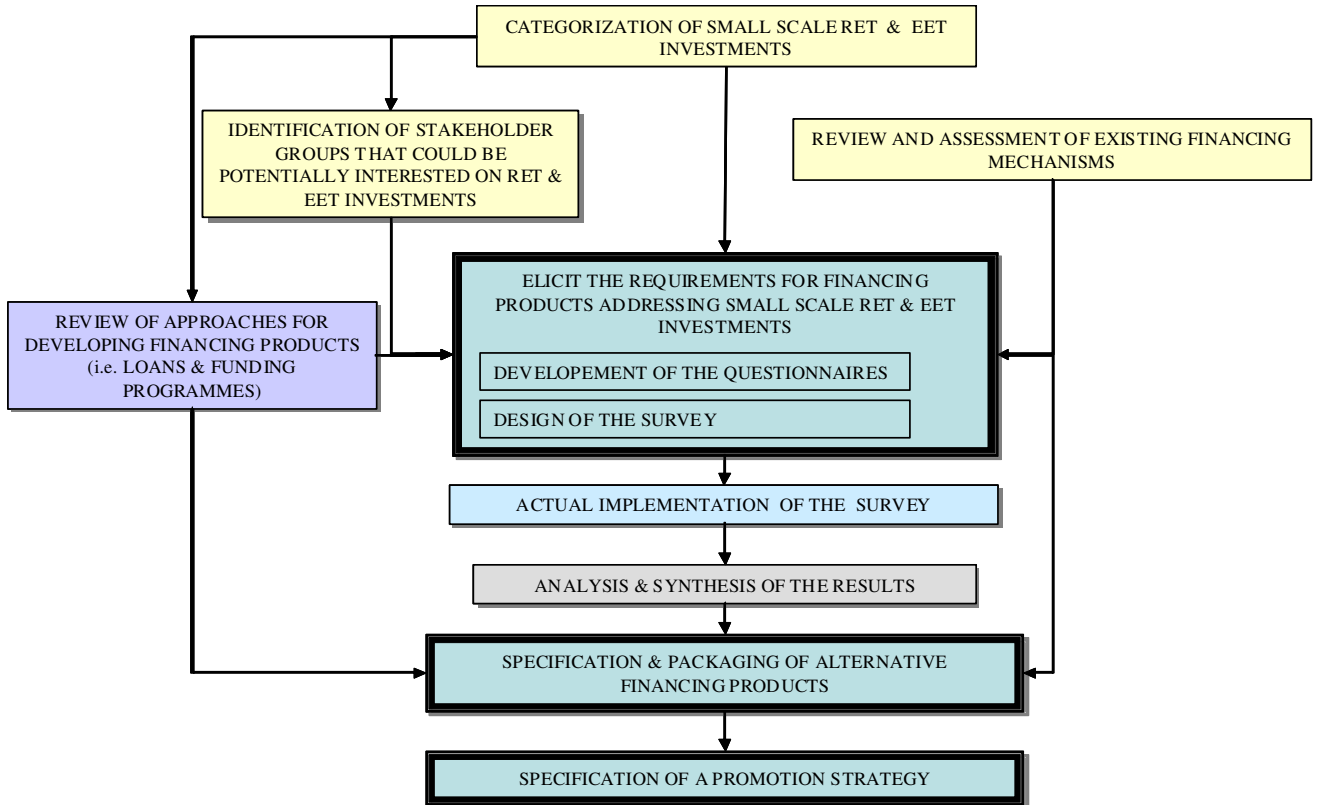


Figure 1: Methodological Framework

Additionally, in order to enhance and validate the acquired knowledge and information from the surveys, a sequential approach was adopted with regards to the surveys' implementation as illustrated in Figure 2 [FINA-RET 2009A].

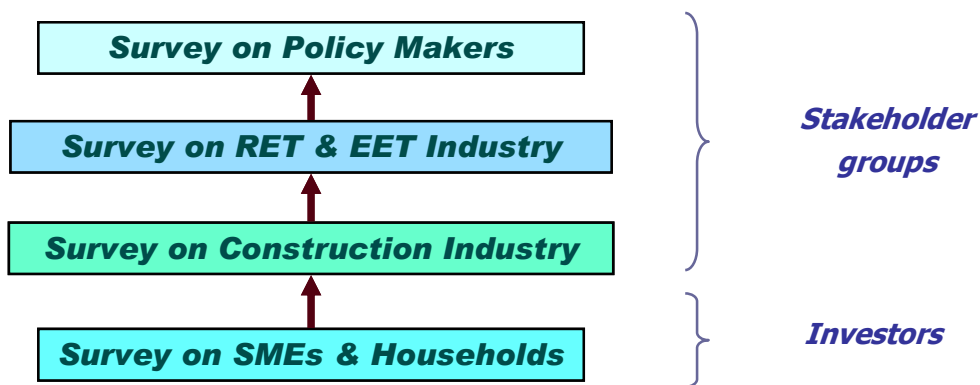


Figure 2: Surveys' Development Process

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According to the figure, the process was initiated by surveying SMEs and households. Then, based on the results of the analysis of these surveys, the methodological instrument for the construction industry survey was developed. Through construction's industry survey the major related outcomes of the SMEs and households surveys were validated, while major issues imposed by SMEs and households related to the construction industry were answered. In a similar way, based on the findings of the construction industry and investors surveys the RET & EET industry survey was developed. Finally, policy makers' survey took place based on the outcomes of all previous surveys, in order to identify if there is political will and ability to support and facilitate the take up of the market of small-scale renewable and energy efficiency technologies through the direct or indirect support of the financing of their investment.

This approach has two major benefits: first, it provides with the opportunity to have a first validation of the surveys' results and second, the final outcome of this process offers with issues of general consensus, which are to be considered in financing products design and promotion.

The surveys were conducted in all five countries involved in the project, i.e. Austria, Cyprus, France, Greece and Italy.

As illustrated in Figure 1, the outcome of the surveys along with the analysis of the past experience led to the specification and packaging of generic financing products addressing investments on renewables and energy efficiency technologies. Within the project framework, prototypes of the specified generic products were developed by Millennium Bank in Greece and Cyprus Development Bank in Cyprus.

Further to the specification and packaging of the products, the project also dealt with issues related to the promotion of these financing products. Specifically, based on the information identified, an attempt was made to specify a promotion strategy for the identified products.

Last but not least, within FINA-RET, four national workshops were organized and implemented, e.g. in Austria, Greece, Cyprus and Italy [FINA-RET 2009E]. More specifically, the objective of these workshops was to validate and communicate the project's final results, i.e. both the surveys' results as well as the financing products specified with representatives of the banking institutions, policy makers, representatives of the technologies' industry as well as the constructions industry.

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3. Small-Scale RET & EET Applications' Investments

In order to categorize the various technology applications according to their investment features in each national context, investor's profile, system size, investment cost, possible subsidies, payback time, etc. were considered.

FINA-RET developed a methodology to compare a set of RE & EE technologies applications suitable for households and SMEs. This methodology allows us to select the technologies, characterize them, taking into account the local energy framework, and compare them from the perspective of financing engineering.

Methodological steps

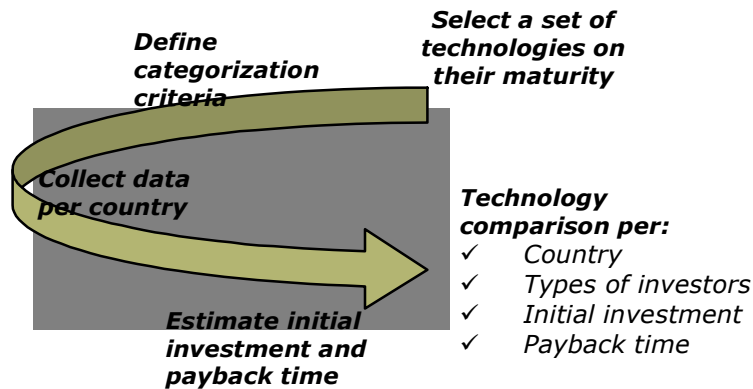


Figure 3: Methodological Steps

Four high-level criteria were used for the categorization: investor's profile, risk, initial investment cost and payback time. The investor's profile influences the type and size of technology application. The level of risk is related to the availability and reliability of a technology. The initial investment cost and payback time are considered as the two key dimensions to size a financing product, in terms of client targeting, contract amount and duration.

Categorization criteria and parameters

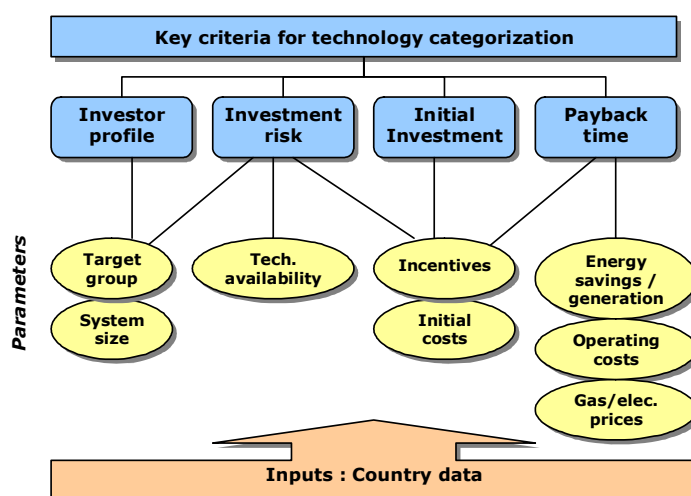


Figure 4: Categorization and criteria Parameters

Concerns raised on the key parameters are summarized as follows:

- Technologies at early development stage are considered high-risk investments or addressing niche markets, with limited interest for financing bodies: technologies are therefore selected on their maturity.
- Two segments are considered with regards to technology applications: the residential sector on one hand and the commercial and small industrial sector with similar applications on the other.
- Initial investment costs are estimated after incentives depending on the country subsidies.
- Payback time estimations take account of the local incentives, energy retail prices and operational revenues & costs including maintenance with a 6% discount rate. A special consideration for all technologies generating energy savings, is that the initial energy source substituted impacts on the economic profitability of the installation (in some countries 1 kWh of gas can cost over 3 times less than 1 kWh of electricity). Those technologies are assessed twice: in substitution of electricity and in substitution of gas.

The parameters used to assess initial investments' cost and payback time present some dispersion in values: the system size and performances vary and the different climates impact on the energy generation / savings. **Minimum and maximum values** are therefore considered in order to get an overview of the whole range of Investment / Payback for each technology and target.

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In order to better support the methodology, a tool was developed in order to assess automatically the initial investment after incentive and the payback time according to the technology's features in one given national context.

A total of 24 technologies were selected for an assessment on the residential and commercial/industrial segments. To characterize these technologies, a large set of data has been gathered by the FINA-RET partners in Austria, Cyprus, France, Greece and Italy. National market surveys and manufacturers' information were collected in all 5 countries.

The technology configurations studied took into account the energy sources substituted (different energy prices between electricity and gas) and the system size related to the target group (small individual systems or larger collective systems). 24 different RE & EE technologies configurations were considered:

Renewable and Energy Efficiency Technologies Considered	
<ul style="list-style-type: none"> ▪ Collective solar thermal water heater (electricity consumption saving / gas consumption saving) ▪ Collective geothermal heat pump (closed loop systems) ▪ Collective high efficiency air heat pump ▪ Collective biomass boiler ▪ Collective condensation gas boiler ▪ Collective mini/micro cogeneration gas ▪ Collective grid connected PV ▪ Collective building insulation of envelop (walls and roof) (electricity consumption saving / gas consumption saving) ▪ Collective building efficient windows (double glazed & low-emissivity) (electricity consumption saving / gas consumption saving) ▪ Collective micro-hydro ▪ Collective micro wind turbine 	<ul style="list-style-type: none"> ▪ Individual solar thermal water heater (electricity consumption saving / gas consumption saving) ▪ Individual geothermal heat pump (closed loop systems) ▪ Individual high efficiency air heat pump ▪ Individual biomass boiler ▪ Individual condensation gas boiler ▪ Individual grid connected PV ▪ Individual stand alone PV ▪ Insulation of heating network ▪ Single household insulation of envelop (walls and roof) (electricity consumption saving / gas consumption saving) ▪ Single household efficient windows (double glazed & low-emissivity) (electricity consumption saving / gas consumption saving)

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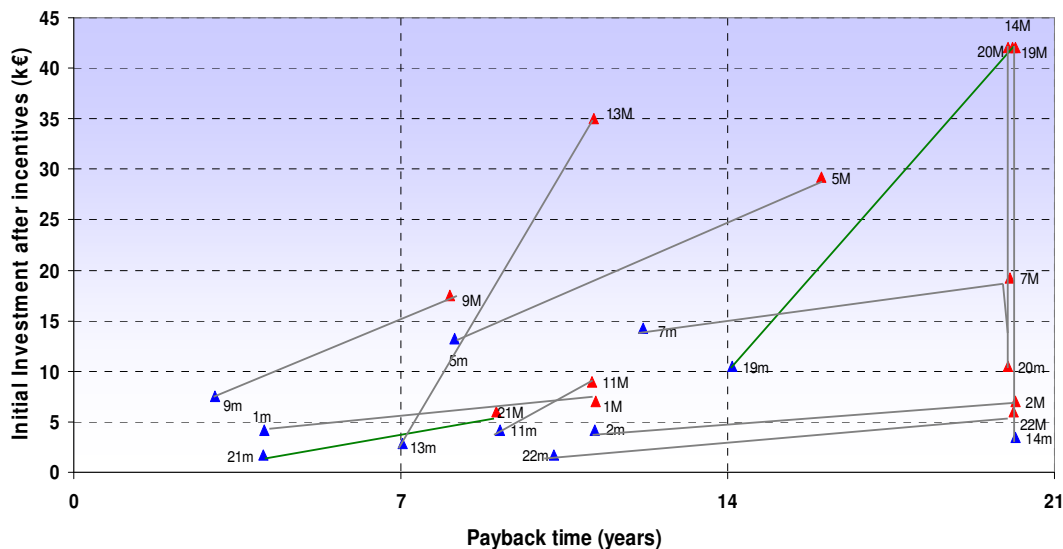
FINANCING SMALL-SCALE RET & EET INVESTMENTS

- Heat recovery system for compressed air machine (total compressors 1MW)
- High efficiency electrical motors
- Fluorescent bulbs program collective

The graph below shows the results of the analysis performed on the data collected in Austria. It also displays the relative positioning of the technologies according to the initial investment after incentive and the payback time, for the residential target group.

3.1.1. Austria

Austria: RE & EE Technologies for Residential target group



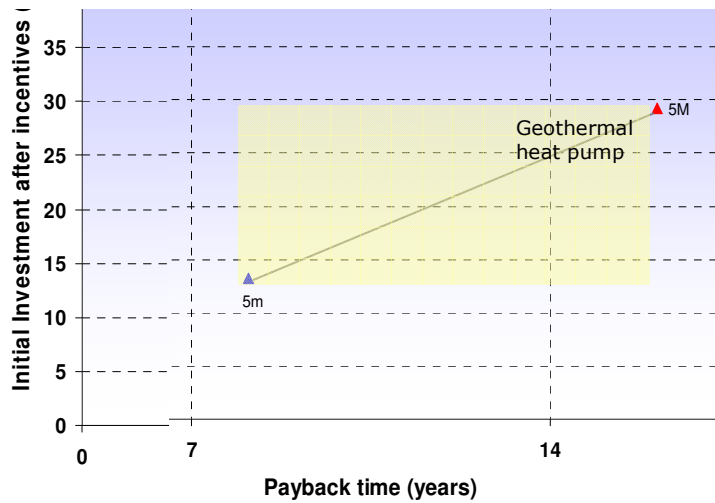
As illustrated in the above graph for a given technology, two extreme points are displayed: one for the minimum values of payback time and initial investment and one for their maximum values. These two extreme values define a rectangle in the two dimensions of the graph: the area covered represents the total range of values estimated for one technology.

For instance, as far as a Geothermal heat pump application in Austria is considered, the initial investment (incentives deduced) amounts from 14.000 up to 30.000 €, with a payback time varying between 8 and 17 years. This gives an idea on the shape of the possible financial products to be developed in order to support investment in such technology, in terms of typology of product, financial amount, rate applied and contract duration.

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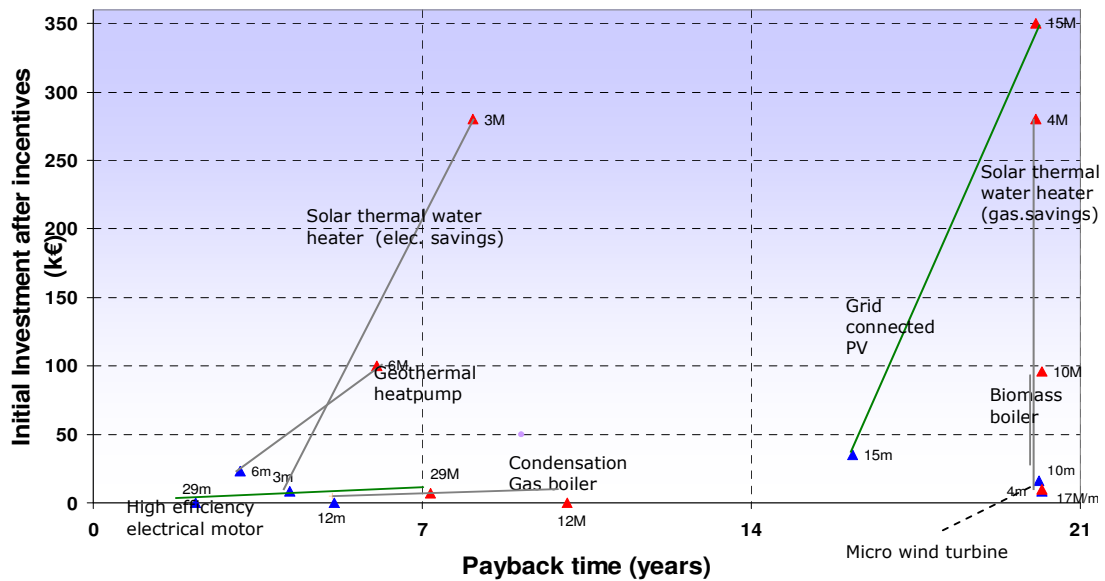
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For a better readability, only the diagonal of the rectangle of values is displayed.

Austria : RE & EE Technologies for Commercial/Industrial target group



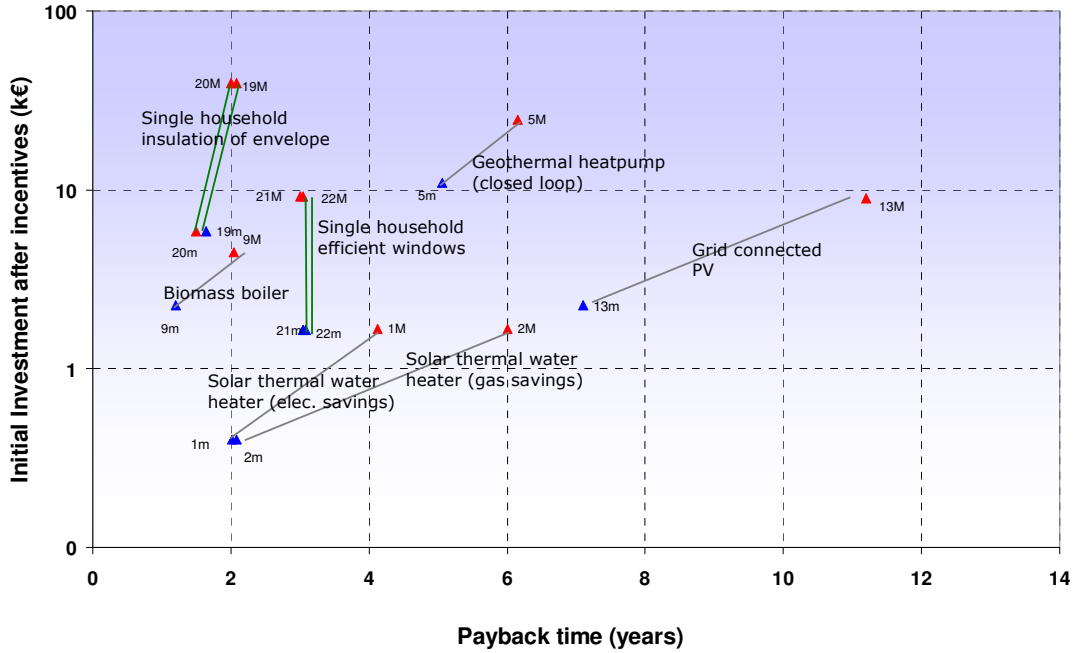
At this point it should be mentioned that the quality of collected data is a fundamental prerequisite for the elaboration of the graphs and tables presented hereunder.

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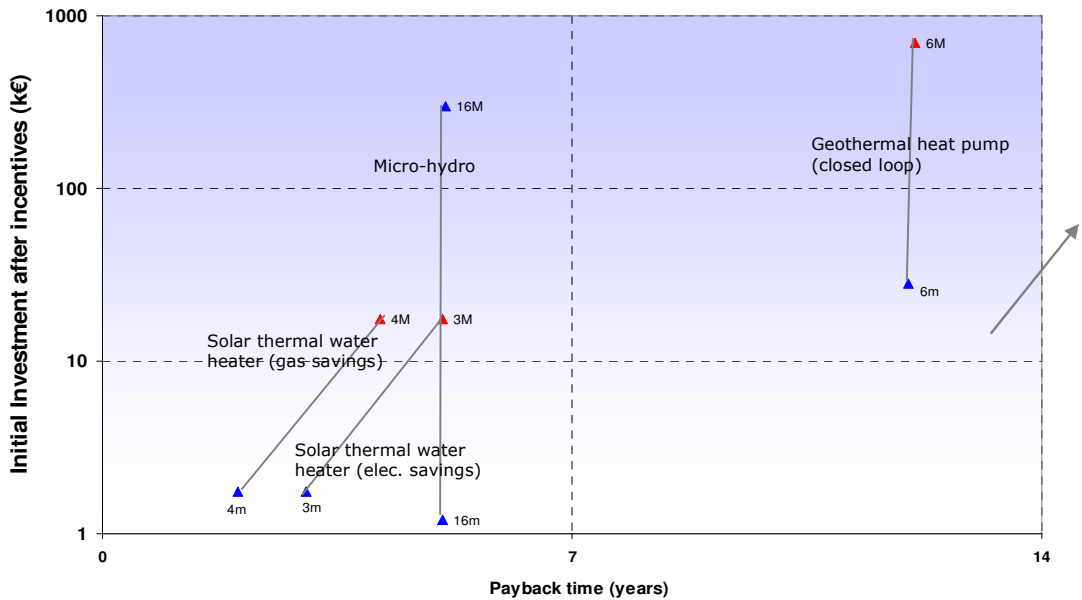
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3.1.2. Cyprus

Cyprus: RE & EE Technologies for Residential target group



Cyprus: RE & EE Technologies for Commercial/Industrial target group

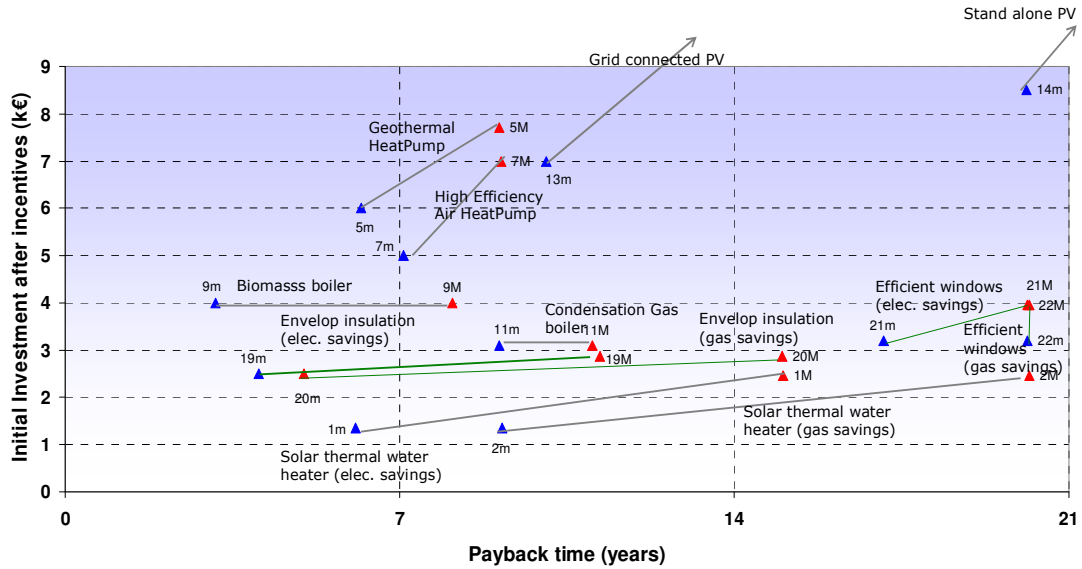


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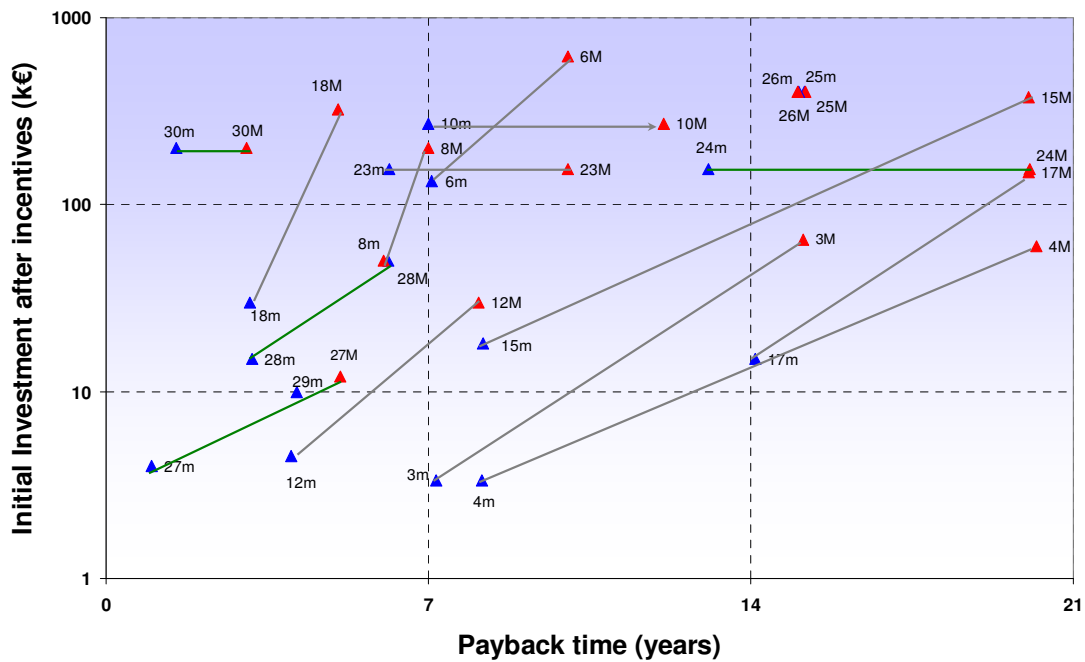
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3.1.3. France

France: RE & EE Technologies for Residential target group



France: RE & EE Technologies for Commercial/Industrial target group

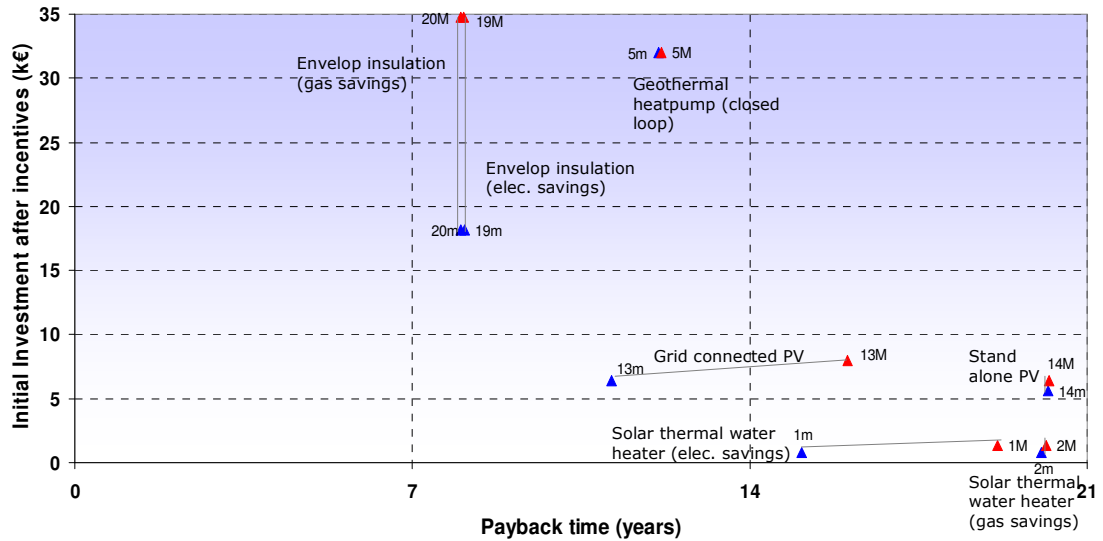


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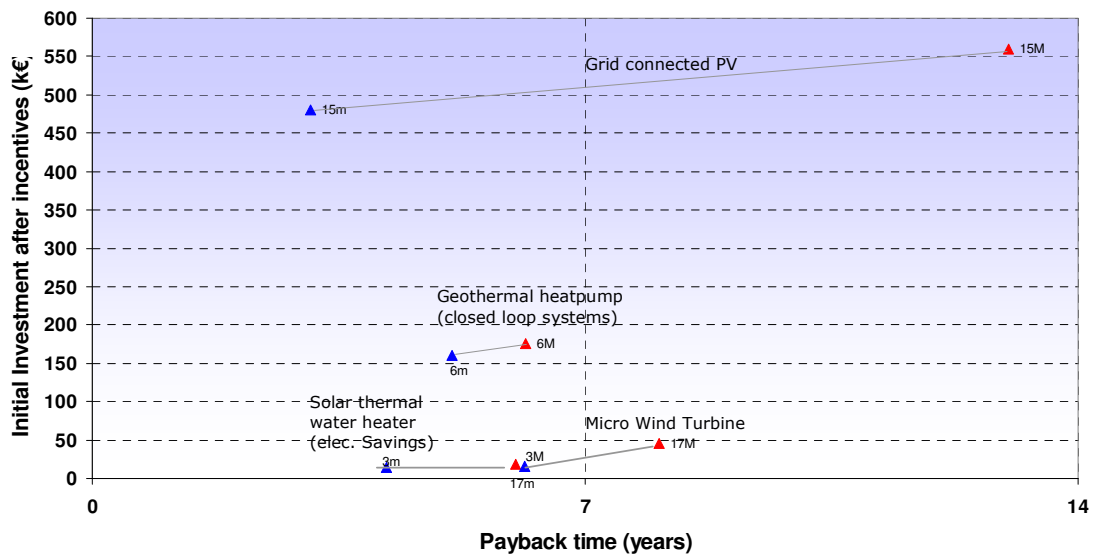
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3.1.4. Greece

Greece: RE & EE Technologies for Residential target group



Greece: RE & EE Technologies for Commercial/Industrial target group

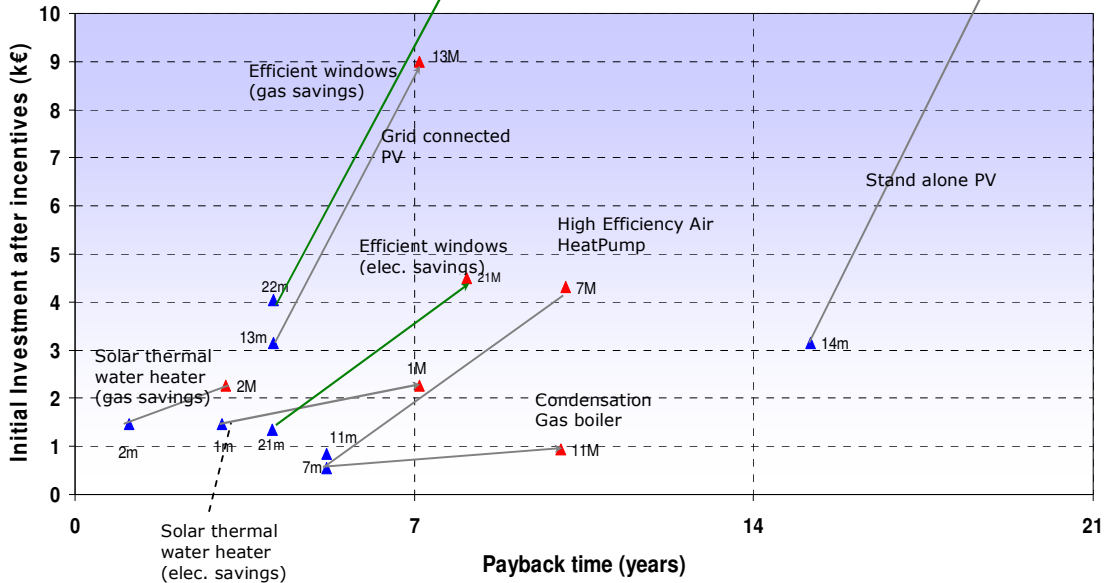


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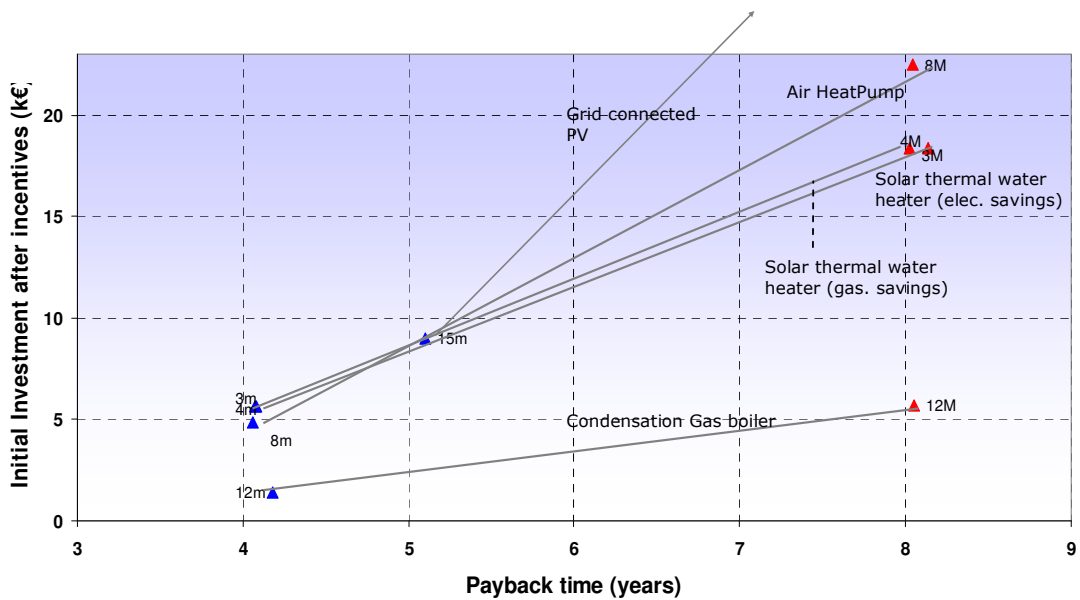
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3.1.5. Italy

Italy: RE & EE Technologies for Residential target group



Italy: RE & EE Technologies for Commercial/Industrial target group



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4. Financing Products for Small-Scale RET & EET Investments: A Review

Within the last decade, and for some countries like Austria and Switzerland much longer, (i.e. since 1990) the effort to develop and implement financial programmes, measures, initiatives and products in order to support the development of the RET and EET market or to increase their competitiveness and market share (e.g. in the case of private banking) has been encountered from national, private or European level organizations.

Within the framework of FINA-RET an extensive review of past and on going public and private financing instruments for RET and EET applications was performed. The outcome of this review was rather important for the project's further development since it provided a good understanding both on financing of small-scale RET and EET, as well as on the characteristics of RET and EET market.

The review involved 261 financing measures have been reviewed, implemented in 18 European countries. Among them 105 were public oriented, 149 were private initiatives, while seven were public-private partnerships.

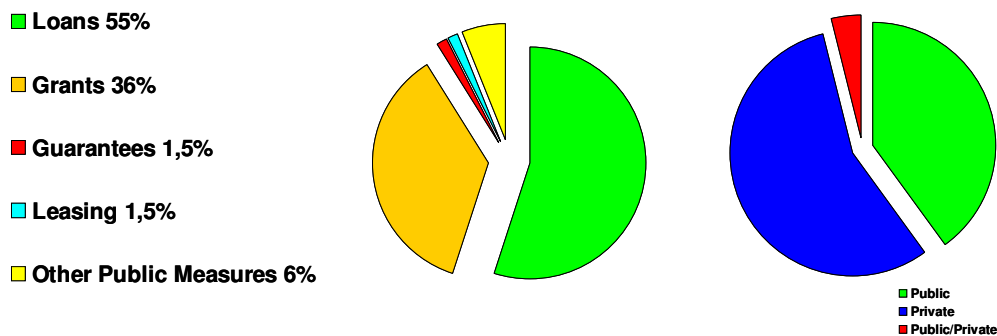


Figure 5: Financing Initiative Reviewed Statistics

In order to ensure the identification and collection of all the information required for the project's further development and to make sure that comparison among the various financing measures would be possible, the review followed a carefully designed and systematic approach.

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While studying the identified financing initiatives emerged some major conclusions and concerns:

1. The maturity of a market for financing tools for RET and EET applications lays on several factors. It is often associated to a long term experience regarding this kind of dedicated financing products (e.g. in Austria dedicated products have been introduced in the '90s) and sometimes it is reflected by a large number of tools available. Nevertheless, data collected show that the best indicator for the maturity of a dedicated financial market is its degree of specialization in terms of target technologies and context-specific customization.
2. The more specialised is a market for financing tools for RET/EET, the better it performs. This means that dedicated financing products/schemes, in order to be effective, must be tailored to specific needs (economic rationale and environmental sensitiveness), enclosing a strong correlation with specific targets (end-users) and be deeply rooted in the legal and fiscal country-specific context.
3. When a market is mature, and specialized, it is backed by a strong and long term public attention and concern about environmental and energy-related issues. Public focus on RE and EE is usually associated with better performing financial markets. Nevertheless, although the development of a dedicated market can have an impact in increasing public awareness on RE and EE, public focus and concern commonly serve as an enabler, triggering and boosting the development of dedicated private financing tools/public schemes aiming at the diffusion of RET/EET applications.
4. The importance of bottom-up dynamics is also confirmed by the fact that public intervention, when not integrated into a strong relationship with public attitudes, proves very ineffective in achieving the development of financing mechanisms for the diffusion of RET/EET. Collected data revealed that, in each of the countries surveyed, there has been a public effort in the design of related products/measures. Nevertheless, when such effort originated from a public initiative alone (sometimes in the aim to conform to international/EU prescriptions) and was not supplemented with a strong receptiveness from the public (private individuals and the productive sector), it turned out to be very weak in achieving the intended goals (e.g. in Italy there are many loans tailored on expected public incentives. In this way, the borrower would not be supposed to undergo a drain of funds. This could be a potential success factor for the diffusion of RET/EET, nevertheless the positive effect is usually thwarted by the unwillingness of the public to invest without a short-term return and by poor/inaccurate information available for small consumers).
5. The findings above are not to underestimate the role of the public sector in supporting the diffusion of RE and EE technologies applications. In the countries where the intervention

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of public authorities is neither well structured nor rooted in the social and the economic context and not complemented by similar efforts coming from the public and the private banking institutions, its impact on the diffusion of RET and EET is weak, if not negligible. Furthermore, when public intervention is not reflecting country-specific features, and therefore act in a context lacking receptiveness, it can also have negative effects on the offer of the private banking system. Specifically, where financial markets are less mature, an unspecific and untailored intervention from the public sector (e.g. in directly subsidizing end-beneficiaries) is likely to have a “crowding-out” effect on private actors. On the contrary, under different circumstances, the public sector proves to be a powerful enabler for private offer of financing products addressed to investments in RET and EET. This is well shown in the Netherlands, where the catalysing element for the offer by the private banking sector of preferential loans lays in tax exemption for interests on savings being invested in the Greens Funds, which is accessible only for RET/EET investments.

In conclusion, FINA-RET’s review revealed that mature, sound and specialized financial markets reveal to be able to boost the diffusion of RET and EET by generating sophisticated financing products built on public supporting initiatives. This major outcome points out the need for Country-specific, customized solutions, integrating all relevant actors (end-users, public authorities, private banking institutions) in the development of a set of differentiated and specialized financing tools, both private and public in nature, which can give rise to mutually reinforcing synergies for the diffusion of RET/EET applications. In the following table (Table 1) a few success stories worth mentioning, are presented.

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Table 1: Best Practice for financing Small Scale Investments on RET & EET

Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
1	<p>Eco-prêts ("PREV'AIR", "Prêt économie d'énergie", etc)</p> <p>It's a bouquet of loans, specifically designed for RET/EET investments. Each of them is addressed to a specific typology of investment, including the retrofitting of buildings. All of them present variable interest rates, but within a fixed range.</p>	<p>France is a very mature and aware market. Both households and SMEs are highly responsive to the environmental issues. The financial markets are very developed in this particular segment and benefit from a strong action of the government, which is highly committed in favoring the diffusion of RET/EET (Grenelle de l'environnement).</p>	<p>The usual channels (bank's branches and website) have been successfully sided by the promotion through the institutional channel (ADEME) and the benchmarking provided by an independent third-party ("tésté pour vous").</p>	NONE	<p>The product success mostly dependent on the great sensitivity and concern of the French population about the environmental issues. It is a good case of how much important can be a successful awareness raising action that prepares the ground in terms of multiplying effect of future efforts.</p>

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
2 MINERGIE LOANS	<p>The product relies upon the "MINERGIE" certification of the investment. Only labelled investment projects can access the MINERGIE loans. MINERGIE loans are preferential loans that have an interest rate which is from 0,25% to 1% lower than market rate. This is possible thanks to: (i) a guarantee released by the government; (ii) tax exemption on the interests received by the lenders; (iii) lower risk due to the certification of the energy performance of the investment.</p>	<p>Switzerland is a very mature market for RET/EET. The Swiss government is engaged in the promotion of green technologies for more than 20 years. Households and SMEs are very responsive to the environmental issues and this allowed the market to develop, before the rest of Europe, and Switzerland to gain an important role as a front-runner in the diffusion of environmental-friendly solutions and behaviour. The MINERGIE loans are available on the Swiss market since 1992.</p>	<p>(i) Convenient for the borrower; (ii) capitalising on the public support (guarantees + tax exception); (iii) providing the end-user also with non-financial services (the bank take responsibility to obtain the MINERGIE certification of the investment project).</p>	<p>The necessary investments in HR (training for managers) and dedicated software prevented an easy implementation outside the Zurich Canton.</p>	<p>MINERGIE loans are available in approximately 70% of the country, but most of the impact of the initiative is affecting the Zurich Canton. The possibility to replicate outside the Zurich Canton is hampered by the necessity of a strong engagement of the Cantonal Banks. Most probably, a strong support action made at national level could have set more favourable conditions for Banks from other Canton to join the initiative.</p>

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
<p align="center">SUNTECHNICS- PRESTITEMPO</p> <p align="center">3</p>	<p>This financial product stems from a cooperation agreement established between a German banking group, operating in Italy (Deutsche Bank), and a Swiss provider of PV plants (Suntechnics). It is a mid-term loan for investments in PV, addressed to households, similar to consumer credit in its features, for which no guarantee is required. Suntechnics is in charge to design and implement the investment and to market the financial solution agreed and developed by Deutsche bank.</p>	<p>Although both households and SMEs state to have great concern about the environmental issues and the government showed strong engagement in the last 5 years (introduction of the "Conto Energia"), the development of the market in Italy is very slow. A number of reasons are behind this; Among these, surely the following play an important role: (i) demand scarcely capable to make a long-term evaluation of the investments in RET/EET, (ii) feeling of distrust towards the banking sector, (iii) uncertainty about the</p>	<p>The partnership between installers and the banking group was fundamental to overcome the reluctance of the Italian households and SMEs to go directly to banks to borrow money for this kind of investments. The USP perceived by the households of this product is not in its financial terms, but in the possibility to have a "ready-to-use" solution for both the technical and the financial</p>	<p align="center">NONE</p>	<p>It has to be noted that such a more sophisticated market solution (integration of the financial offer in the technical offer) that proved to be capable to overcome one of the main negative characteristics of the Italian market for the RET/EET dedicated financial products (i.e. the distrust of the demand towards the banking sector) has been set-up by foreign companies. This reveals how the market in Italy is not that much developed and how Italian market players are not able to see the window of opportunity just yet.</p>

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
<p style="text-align: center;">4</p> <p style="text-align: center;">MICRO RINNOVABILE</p>	<p>This financing product refers to a mid/long-term loan. Proceeding fees consist 0,5% of the loan amount (not less than 75€). Loan amount is disbursed at once, during the production of the project (also possible to have the loan disbursed in three instalments). Depreciation period may take up to 18 months. Financing limits may reach the amount of 40.000€.</p>	<p>actual commitment over the time of the government in supporting RET/EET investments, (iv) poor financial culture of the demand side (sophisticated financial solutions are not understood and positively evaluated).</p>	<p>High consistency with the ethical values of the bank, favourable terms and conditions, easy proceedings, highly trained bank staff, cooperation with technical experts in order to promote good practice, lacking of</p>	<p>Limited promotion budget and lack of public support to spread awareness on the initiative.</p>	<p>Banca Etica is an Italian bank which invests the financial resources collected from the public only in initiatives which present a high social-ethical environmental value. Investments in RET/EET are perfectly fitting with Banca Etica's mission.</p>

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
5	<p>The Facility combines European Investment Bank (EIB) loans at finest terms with grants from the Kolzoduy International Decommissioning Support Fund (KIDS Fund). Public sector promoters of RET/EET projects, financed under the Facility are entitled to a grant equal to 20% of the EIB loan amount provided by the respective EIB partner bank, subject to a successful completion of the project, certified by the Facility's Independent Energy Expert.</p>	<p>Bulgaria is considered an emerging market regarding RET/EET. Many steps are now being taken in order to promote RES. Indicatively, (i) a bill is foreseen for 2011 on the market mechanisms for encouraging production of electricity and heating power from renewable energy sources and (ii) Bulgaria is currently implementing the Bulgarian Energy Efficiency and Renewable Energy Credit Line (BEERECL).</p>	<p>other well-grounded financing products on the supply-side.</p> <p>i) Loans combined with grants as well as technical assistance, supporting project planning and implementation.</p> <p>ii) The EIB has contracted an Independent Energy Expert ("IEE") who assists municipalities and intermediary banks in project identification, planning and completion.</p>	<p>NONE</p>	<p>The Facility targets projects by Bulgarian municipalities or other public or private sector promoters.</p>

FINANCING SMALL-SCALE RET & EET INVESTMENTS

	Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
		<p>Private sector promoters could receive a grant equal to 7.5% of the EIB loan amount for their energy efficiency projects and 20% of the EIB loan amount for their renewable energy projects. The EIB financing amount usually reach up to 50% of the total project cost and in exceptional cases, up to 75%.</p>				
6	FINESA	<p>This is a comprehensive set of services and products to support the preparation and implementation of innovative energy projects focused on energy savings and energy generation from renewables. The program offers an information service, consulting, financing, and project management.</p>	<p>In Czech Republic households and SMEs present insufficient awareness of climate change.</p>	<p>Thanks to a partnership with the International Financial Corporation (IFC), an organisation, part of the World Bank Group (www.ifc.org), Ceska Sporitelna has become the lead commercial</p>	NONE	<p>Promotional Strategy included: Web site, dissemination at bank branches, newsletter, brochures, promotion notes on the bank statement, conventions, fairs.</p>

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
RELATIONSHIP TO THE ENVIRONMENT 7	These are special loans - with S/M/L terms- for regeneration of the environment and minimization of manufacturing energy requirements and are offered either directly or in cooperation with European financial and credit institutions.		(i) Loans offered in cooperation with European financial and credit institutions. (ii) Most aspects of these loans are tailored to each investors' needs.	NONE	
VARIOUS FINANCING TOOLS (GERMANY) 8	(i) Interest Rate: Fluctuates from 1,75% to 4,47% nominal interest rate, usually there is a fixed interest period that can vary from 5 to 20 years. (ii) Type of collateral:	Germany is a global leader in the industry of renewable energy resources. It is (along with Spain) the European leader in wind energy	(i) Repayment-free start up years (ii) Interest Rate below capital market level in some cases	NONE	Available Financing Tools 1) Forderdarlehen Neubau: Okologisch Bauen Energiesparhaus 40 2) CO2 building rehabilitation 3) Housing modernisation -

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
	Depends on the special features of each case.	projects. The German renewable energy industry is one of the most important growth industries in Germany. The Renewable Energy Sources Act (EEG), which came into force in 2000, has supported much of the success renewable energy in Germany.			EKO PLUS 4) Ecological construction 5) Renewable energies program 6) ERP environmental protection and energy saving program 7) KfW home ownership 8) Forderdarlehen Neubau: Okologisch Bauen Energiesparhaus 60 9) Forderdarlehen Neubau: UmweltBank - Darlehen mit Okobonus 10) Forderdarlehen Sanierungsmaßnahmen: KfW CO2 - Gebäudesanierung 11) Forderdarlehen Sanierungsmaßnahmen: KfW Wohnraum Modernisieren Oko-Plus 12) Forderdarlehen Sanierungsmaßnahmen: KfW Wohnraum

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
<p style="text-align: center;">GREEN FUNDS SUBSIDIZED LOANS</p> <p style="text-align: center;">9</p>	<p>The key element in this model is the Green Funds Scheme, a tax incentive scheme enabling individual investors to put money into green projects that benefit nature and the environment. Individuals who invest in a green fund or save money with financial institutions, practicing green banking, receive a rate lower than the market interest rate but the tax incentive compensates for this. In their turn, the banks charge green projects with a low interest rate.</p>	<p>The Green Funds Scheme has had a clear impact on the way in which people think about their responsibility for the environment. The scheme enjoys broad public support in Netherlands and has encouraged the banking sector to offer a wide range of sustainable investment products, enhancing its contribution to corporate social responsibility. And together with other tax incentives and grants, the</p>	<p>(i) Easy proceedings. (ii) Loan of a lower interest rate than the market's (- 2%). (iii) The various stakeholders work together to improve the living environment by funding innovative environmental technologies and investing in nature and the landscape.</p>	<p style="text-align: center;">NONE</p>	<p>Modernisieren Standard 13) Forderdarlehen Sanierungsmabnahmen: UmweltBank-Darlehen mit Oko Bonus 14) Solarstrom Erzeugen</p>
	<p>The Green Funds Scheme creates a win-win situation: cheaper loans for green projects, a reasonable return for investors and benefits for the environment. The Green Funds' Scheme is an undoubted success. Thousands of projects – from environmental friendly greenhouses and wind turbines to organic farming and afforestation – have been implemented with funds provided by a few hundred thousand</p>				

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Name of the product	Characteristics of the product	Characteristics of the Market	Success Factors	Failure Factors	Comments
		<p>scheme has increased environmental investment among entrepreneurs, making Netherlands a breeding ground for new environmental technology.</p>			<p>individual investors. Thanks to the scheme, new environmental technology found its way on to the market and is now widely accepted. But even more important, all the stakeholders – individuals, banks, entrepreneurs and government – have started to realise that green investment is profitable for both people and the environment.</p>

Concluding, the following issues should be considered while developing, assessing or reviewing a financing measure, programme, product or incentive:

- ◆ The effectiveness and performance of financing initiatives is subject to the socio-economic and cultural settings and the degree of awareness of the target groups
- ◆ Appropriate Promotion Strategy should be developed Based on Awareness
- ◆ Process required for accessing and applying for a financing initiative must be transparent and simple
- ◆ Compatibility and complementarity of public initiatives with private initiatives should be achieved
- ◆ Consistency in the evolution of the legislative and institutional framework as well as of related measures and incentives is necessary
- ◆ Financing measures and initiatives that decrease the investment risk, i.e. guarantees, feed-in tariff, etc. have a positive impact in the overall market development
- ◆ Supportive programmes and incentives addressed to professions and business initiatives that can facilitate the take-up of the market, i.e. consultancies, ESCOs, construction companies with integrated services, etc. should be developed
- ◆ Stimulation and awareness of the banking sector is required
- ◆ Attention should be paid in order to ensure sustainable development of the market and maximum results in relation to energy savings and energy production output
- ◆ Initiatives that create synergies among market stakeholders and promote the overall market development based on the perception of the public should be designed.
- ◆ Banking sector should exploit the business opportunity available in the Energy Services sector

5. Market Perception On Small-Scale RET & EET Investments

Surveys' results¹ on households and SMEs in all five countries reveal that Europeans consider themselves to have:

- A high degree of environmental concern, and
- Awareness on contemporary energy issues.

With regards to renewables and energy efficiency technologies French and Austrians seems to be well aware, while, Greeks, Cypriots and Italians they consider themselves aware, their overall replies reveal confusion with regards to expected costs and benefits from investments on RET and EET. In general, it can be said that self-perception of respondents is somehow biased by a substantial impossibility to be dispassionate about themselves.

However it was stressed by the majority of the interviewees, including the representatives of the construction industry that customized information on specific technologies is needed to support them taking decisions either for retrofitting of their buildings or for including them in new constructions. More specifically, they expressed the need to have more than information, i.e. consultation and decision support, both for identifying the appropriate investment, as well as for identifying the appropriate way for financing it. This awareness raising action should be a priority in the policy agenda, both at regional and national level.

With regards to the most trusted sources of information on the technologies and investments under consideration there was a consensus among all interviewees in all five countries. As illustrated in figures 6 (Figure 6) and 7 (Figure 7) environmental protection organizations and scientists consider to be the most trusted sources, while political parties, governments and journalist the least trusted ones.

¹ Over 2.000 households in Greece, France and Italy, a 1.020 in Austria and 850 in Cyprus, as well as a hundred of SMEs in each country, were interviewed. The identification of the interviewees were on a random basis and the interviews were conducted via telephone using the approach of structured interviews.

FINANCING SMALL-SCALE RET & EET INVESTMENTS

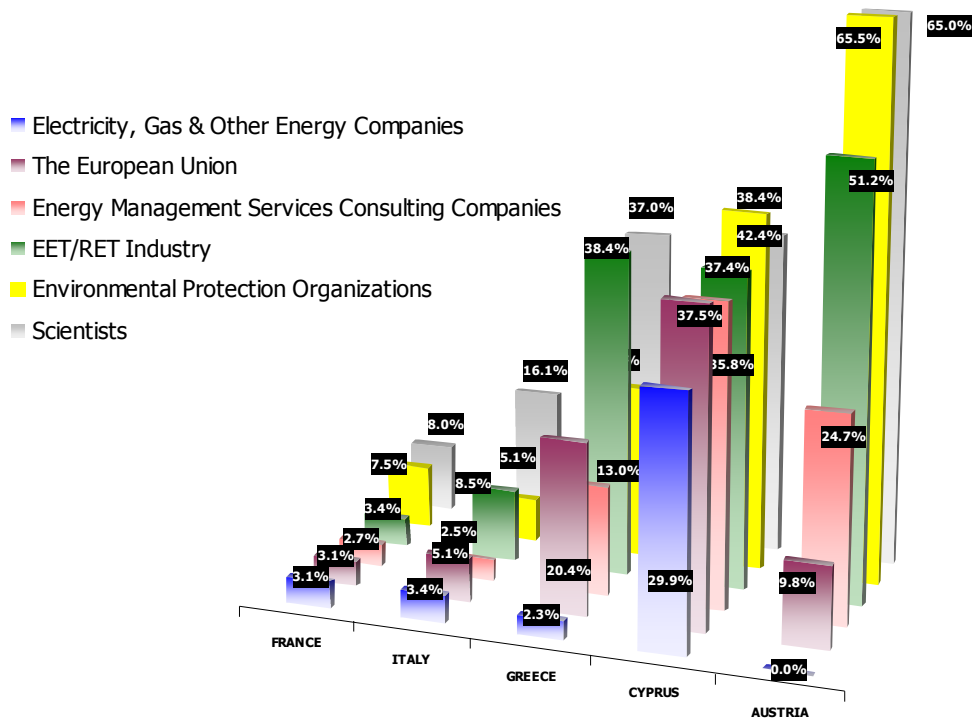


Figure 6: Most trusted sources of information

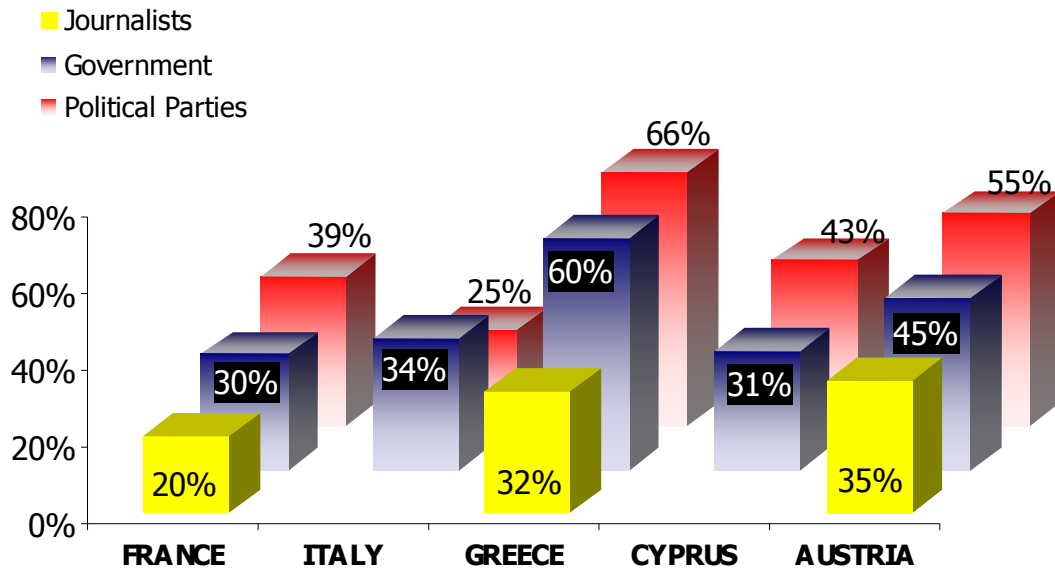


Figure 7: Least trusted sources of information

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In Italy, Greece and Cyprus the socio-economic and cultural settings are quite similar and to a great extent the way that individuals (i.e. households and SMEs) face the investments of renewables and energy efficiency technologies in their buildings and production processes is also quite similar. Some major common aspects that share all three markets are:

- Lack of well designed incentives and measures (public)
- Vague impression on investments' environmental and economic benefits
- Lack of continuity and consistency on the institutional and legislative framework of implementing these technologies (no strategy in policy design)
- Complex and bureaucratic application process either for implementing a technology or for applying for a subsidy or grant
- Lack of cooperation between public and private sector.

Another commonality between Greeks and Italians is that they both do not trust the banking system of their country, while an important difference of Italy from Greece and Cyprus in that RET and EET market is better deployed, i.e. all different technologies are available there is a quite developed network of sales, certification processes have been applied, ESCOs already exist, etc.

The Austrian market is much more developed than the above described ones. Austria is a market that public interventions have supported a lot its development. More specifically, subsidy schemes and grants are available for the majority of the technologies, while there is a formal certification process on energy efficiency. Furthermore, the State has supported actively the development of the energy services sector and has invested substantially on awareness. More specifically, it has realized and implemented, as much as possible the provision of customized technology specific information to the citizens. Despite the fact that technologies² market is quite developed the development of private financing sector is limited to loans (not real preferential ones) that provide the matching funds to subsidies. An argument for this situation is that although there is a coordination and cooperation between national and local levels that support the market development all over the country, there is no collaboration between public and private organization in order to lead to equilibrate market. Actually, an issue raised is that investments follows the different subsidies available each time, without being a result of mature decision and design that will lead to the maximum result in terms of cost-effectiveness and energy sustainability. Another issue highlighted by the analysis in Austria is

² FINA-RET Consortium, Deliverable D3.3: "Financing Products for Investments on Small-Scale RE and EE Technologies Applications: A User Requirements Report " , September 2009

that the oversupply of subsidies and measures leads to the postponement of investments, since among investors there is a belief that always “something” will be available.

The French market seems to be the most developed one in the sense that all market actors, including the state, are involved in the development of RET and EET market. The French government within the last few years has identified and implemented an integrated approach to support energy sustainability by involving all market actors, including private financing. Measures and financing schemes provided are designed in a way that synergies between the state, the private financing sector, the construction industry, the technologies industry and the consumers are created leading to a win-win environment for all. This approach also support the development of competition in all market segments leading to products (technologies, constructions, loans, etc.) that are of interest to the final consumers and to energy security and environment protection.

A competitive advantage of the approaches implemented both in Austria and France is that the state support and exemplification they provide lead to a better understanding of the general public on energy sustainable consumption and production and therefore to a progressive behavioural change.

Figure 8 that follows, demonstrate the intention to invest and the amount willing to invest of households in the five countries. As can be easily perceived from the figure, strong incentives and high awareness make Austrians willing to invest on higher amounts. In the case of France, the current confusion on the cost of buildings’ retrofitting is reflected in their answers (i.e. the 25% of respondents will invest up to 3.000 euros). The answers of Greeks, Italians and Cypriots are quite consistent with the description of the market provided above.

With regards to SMEs, as illustrated in the Figure 9, the situation is pretty similar. As concerns the payback time, the majority of the interviewees compensate the relationship with the size of investment and the expected benefits. In any case the major issue is the initial amount they are willing to invest.

The major issues reported from households for not investing are:

- High initial investment cost (for all surveyed countries except from Italy that reported lack of interest)
- Lack of awareness (except from Austria, France).

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While the major issues for not investing for SMEs are:

- Cyprus: Lack of technology adapted to my case
- France: Lack of funds
- Greece: Lack of incentives and lack of funds
- Italy: Lack of interest and lack of awareness.

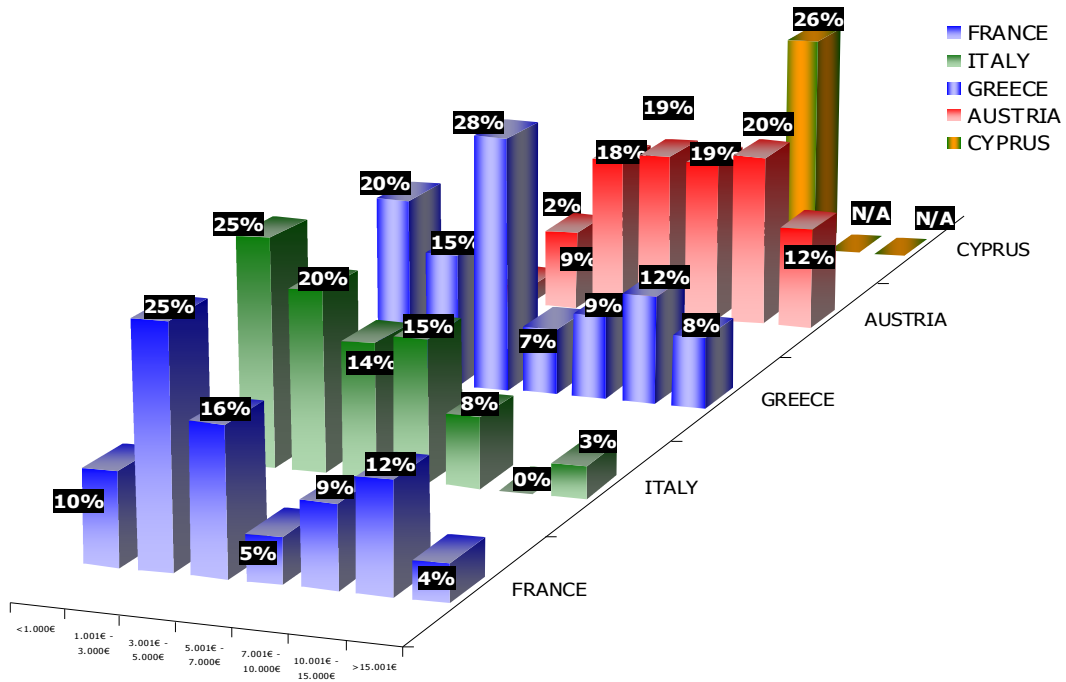


Figure 8: Households: Intention to invest – Amount to be invested

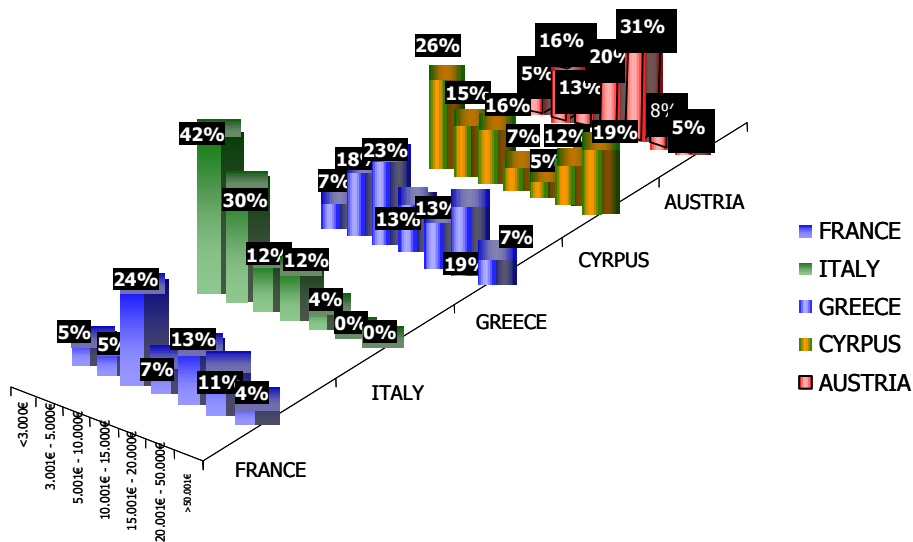


Figure 9: SMEs: Intention to invest – Amount to be invested

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With regards to the importance of the loan features, as this has succumbed from the synthesis and validation of the results, it may be stated that households besides to interest rate, also consider rather important the loan's flexibility and the link between the loan features and the expected outcomes of the investment (see Table 2 below). The more aware a market is on the expected costs and benefits of RET and EET application the higher is the importance given to the linkage of the loan with the outcome of the investment (i.e. specialized loans).

Table 2: Households - Prioritization of loan features

HOUSEHOLDS	
Loan Feature	Priority in terms of Importance
1. Interest rate	Austria (1st) Cyprus (1st) France (1st) Greece (1st) Italy (1st)
2. Flexibility (i.e. in terms of its characteristics)	Austria (2nd) France (3rd) Greece (3rd) Italy (2nd)
3. Link of the level of instalments with the energy savings attained from the RET/EET investment (including any payments received from feed-in tariffs)	Austria (3rd) Cyprus (2nd) France (2nd) Italy (3rd)
4. Longer repayment period	Cyprus (3rd) Greece (2nd)

In the case of SMEs and due to the fact that they are more familiar with borrowing procedures and given that energy savings are directly involved with reduction of their production and/or operational cost, the priority in terms of the loans features, further to interest rate, are different to those of households as illustrated in the table (Table 3) that follows. More specifically, they pay more attention on the specialization of the loan to the investment characteristics (SMEs have a better understanding of the risk foreseen from the investment).

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Table 3: SMEs - Prioritization of loan features

SMEs	
Loan Feature	Priority in terms of Importance
1. Interest rate	Austria (1st) Cyprus (1st) France (1st) Greece (1st) Italy (1st)
2. Link of the level of instalments with the energy savings attained from the RET/EET investment (including any payments received from feed-in tariffs)	Austria (2nd) Cyprus (2nd) France (2nd)
3. Flexibility (i.e. in terms of its characteristics)	Austria (3rd) Greece (2nd)
4. Quick response	France (3rd) Italy (2nd)
5. Longer repayment period	Cyprus (3rd) Greece (3rd) Italy (3rd)

Although the ease of access and application was not assigned with a high importance, in all countries surveyed it was mentioned as a failure and deterrent factor from borrowing in order to invest.

Given the overall answers provided by the interviewees the following issues considered of paramount importance while designing a loan for financing RET and EET investment or while designing a subsidy or a grant for RET and EET investment:

1. Capitalize on any available public initiative or design public initiatives that will give ground to the development competitive financing products by the private sector
2. Focus as much as possible to a specific technology in order to capitalize to its expected results
3. Consider the characteristics of the specific target group and design an application process as easy as possible.

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In Table 4 that follows an attempt was made to present the analysis and synthesis performed so far in an ease to understand and use manner. The table provides in brief the issues that should be considered in developing and promoting a financing product addressing RET and EET investments within different markets.

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Table 4: Most important issues to be considered in developing and promoting a financing product addressing RET & EET investments within different markets

Market characteristics & attributes	Financing Products Characteristics	Promotion Approach Characteristics	Comments
<p>Full deployment of the RET and EET sector (i.e. all technologies available, energy specialized consultants, certification process, etc.).</p> <p>Existence of several subsidy schemes and incentives.</p> <p>Existence of several financing products offered by the private sector.</p> <p>Synergies and cooperation between private and public sector – leading to an integrated, innovative- approach.</p> <p>Aware investors yet in certain cases misinformed.</p>	<p><u>Innovative, highly specialized</u> financing products with:</p> <ul style="list-style-type: none"> ▪ competitive interest rate, ▪ flexible terms, ▪ linkage between the level of instalment and the pay-back period with the pay-back of the investment and the expected benefits, ▪ easy application proceedings 	<p>Message: should focus on the <u>competitive advantages of the financing product</u> and possibly on the <u>consistently sustainable profile of the bank.</u></p> <p>Key campaign person: a representative of an <u>NGO</u> or an <u>energy related research organization</u> or an <u>association of consumers.</u></p> <p>Promotion channels: direct with a lot of publicity, through consumers' associations, technology providers & construction industry.</p>	<p>The major concern in this market is the competition available in financing products from private banks.</p>
<p>Full deployment of the RET and EET sector (i.e. all technologies available, energy specialized consultants, certification process, etc.).</p> <p>Existence of several subsidy schemes and incentives.</p>	<p><u>Innovative, highly specialized</u> financing products with:</p> <ul style="list-style-type: none"> ▪ competitive interest rate, ▪ flexible terms, ▪ linkage between the level of 	<p>Message: should focus on the <u>capacity it provides to capitalize better on the existing subsidies, grants and other incentives</u> that it is related to and on the expected</p>	<p>The concern in this market is to diversify the product and the bank from the rest that have not actually made</p>

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Market characteristics & attributes	Financing Products Characteristics	Promotion Approach Characteristics	Comments
<p>Synergies and cooperation between national, regional and local government.</p> <p>Aware investors.</p> <p>Limited offer of financing products from the private sector.</p>	<p>instalment and the pay-back period with the pay-back of the investment and the expected benefits,</p> <ul style="list-style-type: none"> ▪ easy of application proceedings, ▪ correlation with available subsidies and incentives. 	<p>benefits from the investment.</p> <p>Key campaign person: a representative of an <u>NGO</u> or an <u>energy related research organization</u> or an <u>association of consumers</u>.</p> <p>Promotion channels: direct with a lot of publicity, through technology providers & construction industry.</p>	<p>any attempt to enter this sector. It may be worth to focus on a more systematic investment in building and supporting a holistic “green” strategy.</p>
<p>Deployment to a satisfactory level of the RET and EET sector (i.e. all technologies available, energy specialized consultants, certification process, etc.).</p> <p>Existence of several subsidy schemes and incentives.</p> <p>Existence of financing products from the private sector.</p> <p>Lack of cooperation between public and private sector.</p> <p>Lack of awareness of investors.</p>	<p><u>Specialized financing products</u> with:</p> <ul style="list-style-type: none"> ▪ competitive interest rate, ▪ flexible terms, ▪ linkage between the level of instalment and the pay-back period with the pay-back of the investment and the expected benefits, ▪ easy of application proceedings, ▪ correlation with available subsidies and incentives. 	<p>Message: should focus <u>on the benefits of the investment per se</u>, the <u>capacity it provides to capitalize better on the existing subsidies, grants and other incentives</u> that it is related to and the fact that <u>there is no hidden agenda</u> (create trust).</p> <p>Key campaign person: a representative of an <u>NGO</u> or an <u>energy related research organization</u> or an <u>association of consumers</u>.</p>	<p>It is very important that the financing institutions considering entering this market, focus initially on the development of an overall strategy that will provide a holistic “green” strategy and will not give the impression of just occasional profit!</p>

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Market characteristics & attributes	Financing Products Characteristics	Promotion Approach Characteristics	Comments
<p>Limited deployment of the RET and EET sector (i.e. all technologies available, energy specialized consultants, certification process, etc.).</p> <p>Existence of limited subsidy schemes.</p> <p>Existence of financing products from the private sector.</p> <p>Lack of cooperation between public and private sector and between national, regional and local government.</p> <p>Lack of awareness of investors.</p>	<p><u>Specialized</u> financing products with:</p> <ul style="list-style-type: none"> ▪ competitive interest rate, ▪ flexible terms, ▪ linkage between the level of instalment and the pay-back period with the pay-back of the investment and the expected benefits, ▪ easy application proceedings, ▪ correlation with available subsidies and incentives. 	<p>Promotion channels: direct with a lot of publicity, through technology providers.</p> <p>Message: should focus on the <u>benefits of the investment per se</u>, the <u>capacity it provides to capitalize better on the existing subsidies, grants and other incentives</u> that it is related to and the fact that <u>there is no hidden agenda</u> (create trust).</p> <p>Key campaign person: a representative of an <u>NGO</u> or an <u>energy related research organization</u> or an <u>association of consumers</u>.</p> <p>Promotion channels: direct with a lot of publicity, through technology providers.</p>	<p>It is very important that the financing institutions considering entering this market, focus initially on the development of an overall strategy that will provide a “holistic “green” strategy and will not give the impression of just occasional profit!</p>
<p>Limited deployment of the RET and EET sector (i.e. all technologies available, energy specialized</p>	<p><u>Specialized</u> financing products with:</p> <ul style="list-style-type: none"> ▪ competitive interest rate, 	<p>Message: should focus on the <u>benefits of the investment per se</u>,</p>	<p>It is very important that the financing</p>

FINANCING SMALL-SCALE RET & EET INVESTMENTS

Market characteristics & attributes	Financing Products Characteristics	Promotion Approach Characteristics	Comments
<p>consultants, certification process, etc.).</p> <p>Existence of subsidy schemes.</p> <p>Limited financing products available from the private sector.</p> <p>Lack of cooperation between public and private sector and between national, regional and local government.</p> <p>Lack of awareness of investors.</p>	<ul style="list-style-type: none"> ▪ flexible terms, ▪ linkage between the level of instalment and the pay-back period with the pay-back of the investment and the expected benefits, ▪ easy of application proceedings, ▪ correlation with available subsidies and incentives. 	<p>the <u>capacity it provides to capitalize better on the existing subsidies, grants and other incentives</u> that it is related to.</p> <p>Key campaign person: a representative of an <u>NGO</u> or an <u>energy related research organization</u> or an <u>association of consumers</u>.</p> <p>Promotion channels: direct with a lot of publicity, through technology providers.</p>	<p>institutions considering entering this market, focus initially on the development of an overall strategy that will provide a holistic “green” strategy and will not give the impression of just occasional profit!</p>

Further to the surveys on households and SMEs, qualitative surveys were performed in all five countries on construction industry, technologies industry and policy makers³. In these interviews the results of the previously performed surveys were discussed and enhanced with the thoughts and concerns of the interviewees.

Starting from the construction industry the major comment/concerns expressed in all countries is that for new constructions and especially dwellings, the introduction of RET and EET increase substantially the final value of the product and decrease the profit margins of the constructors, since high competition and the economic crisis do not allow for an increase in the price of the final product. In particular, in Italy it came out that construction industry is forced NOT to include any EET in their buildings, as the competition they are facing is exclusively set on price. Furthermore, it was explained by engineers that the implementation of technologies related to efficiency and energy savings requires the systematic involvement of different categories of installers. This emerging situation for construction industry is called systematic innovation that requires trained staff on new technologies and a different philosophy of constructing, to which construction industry has a rather laggard behaviour.

It could be interested and supportive in order to mobilize construction industry if:

1. the appropriate legislative and regulatory framework will be in place, and
2. the state will try to incentivize the adoption of EET by subsidizing not the final demand (as most of subsidies directly translate into price differentials for technologies), but the supply side (i.e. the constructors).

An issue raised by constructions is that the technologies' industry has not been very responsive to their request for training nor has it attempted systematically to inform them on technologies.

Technologies' industry actors expressed different concerns depending on the type of technology they are in and the characteristics of the market they are based. More specifically, a major issue raised by technology providers and installers in Greece and Cyprus was that:

³ With regards to construction and technologies industry around ten interviews per group has been performed in each consortium member- country through face to face interviews. The number of policy makers varies between countries since it is related to the structure of the market and the capacity of the consortium organization to access them. All market actors were interviewed based on the semi-structured interview method.

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- effort should be placed from the state to provide subsidies and awareness in a uniform way among different technologies so that the development of the market to be also uniform and sustainable.

Austrians expressed two more concerns that worth mentioning i.e.

- an enhancement and adjustment of the overall legislation governing the buildings should take place in order to make investments on their retrofitting meaningful.
- Public measures may have an adverb impact on market sustainable development.

Last but very important comment that is fully supported from all stakeholder groups interviewed is that the major problem with energy related technologies is the fragmentation of the legislative and regulatory framework that makes investors reluctant to invest and businesses reluctant to enter to Market.

With regards to the cooperation between market actors and the role of private financing in the development of RET and EET market, both industries expressed the necessity that banking sector enter the market. Living in a period that a lot of expectations have been reposed on “Green Development” it has been considered inconsistency by the interviewees on the overall discussion “climate” that banks hesitate to enter green development or have not been “convinced” by governments to enter the sector. With respect to that, it is worth studying the example of France, in the sense that government managed with “Grenelle de l’environnement” the problem of sustainability along with the problem of supporting economy to make it a problem of everybody.

Constructions and technologies foreseen an alliance with the banking sector that will lead to:

- 👉 A wider supply of financing products (regarding social houses for instance)
- 👉 Simplified borrowing procedures
- 👉 Financing products with flexible terms (i.e. floating rate linked to energy prices) and a direct relationship with the expected benefits of the investment.

Interviews to Policy makers confirmed several of the concerns and opinions expressed by potential investors and market actors and to a certain extent provided explanations on the current status of the surveyed markets.

Austrian policy makers explained that the government has viewed subsidies and incentives as a rewarding mechanism for those investing on RET and EET and not as the main motive to invest. To this respect their main concern was not to build synergies with other market actors but

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rather to aware the public and convince it to invest. The rest would be calibrated by the market's dynamics. Furthermore, given the culture and the socio-economic settings in Austria, emphasis was placed in implementing measures and incentives in cooperation with regional and local governments in order to ensure maximum recruitment and monitoring of investors.

In France policy makers focused on increasing trust to investors and to the market therefore they implemented policies that decrease risk of investments by sharing it between state, banks, market and investors and seek to involve private sector and market actors in order to ensure good design of acceptable financing products (public-private) and smooth implementation.

The importance of strengthening the legal framework through the enhancement of the building code to include energy related technologies and to establish and enforce monitoring and certification procedures considers being very important from the majority of policy makers in order to enhance the awareness on the necessity of the application of these technologies in buildings. Yet, there are several difficulties at the institutional level in implementing this process as well as in progressive implementation of EU directives.

Exemplification through the development of public buildings and high quality installations is also considered an effective mean of demonstrating the capacity of these technologies and in this way increase their acceptance and the size and number of investments on them.

Closing this section, a common statement expressed by all interviewees on policy level is that education of public should be the main way to RET and EET investment and that a successful market take-off requires a good mix of legislation (directives), grants, tax reduction and awareness raising.

6. Specifying Financing Products Supporting Small-Scale RET & EET Investments

The analysis of the characteristics and the environment within which small-scale investments on RET and EET take place, led to some meaningful conclusions with regards to the financing institutions involved in their financing [FINA-RET 2008A, FINA-RET 2008B, FINA-RET 2009C].

More specifically:

1. Substantial investment is required on behalf of a commercial financial institution in order to acquire the appropriate level of know-how to develop and cost-effectively promote loans addressing to small-scale investment on RET and EET applications.
2. The characteristics of a loan for small-scale RET and EET investments are highly depended on the socio-economic, political and cultural settings governing both the RET and EET market, as well as the financial sector market.
3. Considering the fact that in several EU countries RET and EET market is emerging, the characteristics of a loan addressing to these investments should be such as to create demand for these investments, in order to be successful.
4. The majority of success stories in RET and EET private financing are preferential loan-terms designed along the side of public measures, subsidies, grants and tax incentives.
5. The more specialized to a specific technology a loan is, the better linkage exists between the loan attributes and the costs and benefits deriving from the investment. However, when the market is not adequately developed the specialization of financing products is not feasible.

Considering the above and the information identified within the project, a structured methodological approach has been developed, the objective of which is to support the specification of financing products, and loans in particular, addressing to small-scale investments of RET and EET. It is actually a template, which can be field and used following the steps provided above:

1. All RET and EET technologies are considered appropriate for small-scale applications on SMEs and households. These technologies are identified with a unique code with each technology occupying a specific row in the template. Table 5 and Table 6 below give us an idea of how these technologies are identified. Each technology is first categorized as either EET or RET and, if as RET, then is further categorized as either Renewable Heat

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Generation or Renewable Electricity Generation. Other parameters that relate to each identified technology are the following:

- a. Target group (households (R), SMEs (C/I)).
 - b. Whether the technology is available in the country under consideration and whether maintenance support is available using the following designations: E = Easily available, M = Moderately available, N = Not easily available.
 - c. Range in Kw or m² of typical Average System Size respectively for solar thermal or surface of the building for insulation/windows for the minimum and maximum system configurations.
 - d. Range of initial investment (in euro) for the minimum and maximum system configurations.
 - e. Range of maintenance cost for the minimum and maximum system configurations.
 - f. Total Financial Incentives including subsidies & tax breaks (in € or in % of investment cost).
 - g. Feed-In Tariffs (for grid connected electricity only).
 - h. Initial Investment after Incentives (€) for the minimum configuration.
 - i. Pay-back Period (yrs) for the minimum configuration.
 - j. Initial Investment after Incentives (€) for the maximum configuration.
 - k. Pay-back Period (yrs) for the maximum configuration.
2. Technologies identified by a financial institution as N (not easily available) are then rejected for further analysis. Information on each technology for all countries participating in the FINARET consortium, (e.g. Austria, France, Cyprus, Greece and Italy) is available [FINA-RET 2008A].
3. The template is then expanded significantly to accommodate Financing Products Parameters. All possible parameters that could be used in devising generic financing products have been identified as follows:
- a. Loan Type (fixed term; revolving),
 - b. Collateral Type (mortgage; personal guarantees; fixed charge on equipment; floating charge on company assets; contract proceeds assignment),
 - c. Beneficiary (household; SME),
 - d. Currency (Euro; other currency),
 - e. Percentage of Investment to be Financed,
 - f. Minimum Loan Amount,
 - g. Maximum Loan Amount,

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- h. Interest Rate (Fixed vs Floating),
- i. Interest Rate Basis (Euribor vs ECB Refinancing Rate vs Bank Base Rate),
- j. Interest Rate Margin,
- k. Loan Repayment Schedule (Monthly or Quarterly or Semi-annual Repayment),
- l. Grace Period (Yes /No ; if yes, how long),
- m. Early Prepayment possibility (Full or partial early repayment allowed; whenever or after a specific period; with or without penalty),
- n. Repayment Type (Equal instalments or Annuity (if fixed interest rate)),
- o. Repayment Amount (Whether to be Linked to Savings and / or Grants)
- p. Tenor,
- q. Side Offers (e.g. pre-approved credit card facility etc).

Table 5 below (i.e.2/2 part of Table 5), displays the section of the template built upon the above financing product's generic properties.

4. To determine which financing product attributes would benefit the potential borrower the most, the importance allocated by the potential investors are input in the above section of the template [FINA-RET 2009B]. The identification of this piece of information requires a field research, however for the five consortium countries it is available within the respective report (i.e. FINA-RET 2009B). The table below (Table 7) demonstrates how this task was accomplished for the case of Cyprus.
5. Once the above information has been collated, the following step is to determine the specific financing product's characteristics. With respect to these, the user of the template can follow the guidelines below:
 - a. Apply Bank policy as per minimum and maximum loan amounts. Often banks would be unwilling to extend financing for very small amounts due to administrative burden. So technologies with very small investments would not be suited for financing through traditional financing schemes.
 - b. Apply Bank policy as regards to tenor of the proposed financing. For example, a bank may be unwilling to extend financing for technologies with very long payback periods, as these periods would exceed normal banking time limits for lending facilities. On the other hand, a bank could make a loan attractive if it were to provide such financing with a tenor that exceeds the estimated payback period.
 - c. Banks would be encouraging borrowers to apply for government grant to partially prepay loan and therefore shorten a loan's time to maturity. With this respect, Banks would be willing to offer borrowers incentives to partially prepay loans, once public grants are obtained.

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- d. An attractive financing scheme should most likely need to provide a grace period to enable borrowers to install the technology, go through the necessary motions with the appropriate authorities for applying for governmental guarantee or other incentives.
- e. Ignore all technologies for which little financial information is available and thus no net investment and payback periods could be estimated.
- f. Apply Bank policy with regards to collateral. It is likely that financing products for technologies that relate to the building itself rather than to the installation of systems would be more amenable to mortgage, while financing products for systems could be more suited to fixed charge on the installed system.

Further to the above guidance and the potential provided by this template to gather all required pieces of information in a systematic way (in order to ensure identification of all different alternative feasible loans and provide preferential loan-terms) banking institutions should capitalize in any possible way so as to share investment risk with the rest market actors. To achieve this, one of the following could take place: (i) use public subsidies and incentives as collateral to the loan, (ii) implementation of alliances with technology providers in a way that it will limit banks' risk, (iii) implement a broader green strategy that will allow synergies between different product lines, i.e. develop green investment funds, development of large energy projects, involvement in ESCOs scheme, provision of consultation to investors, etc.

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Table 5: Template for Financing Products (1/2) (Data Collection for the categorisation of the small scale RE and EE Technologies - Greece)

Config. ID	End user type (or scale of application); the system will support the energy needs of: R = Individual systems: single household use C = collective systems: large buildings, hotels, block of buildings, ... I = industrial / production sector	End User Type:	Availability of technology (and maintenance support) on the market: E = Easily available M = Moderately available N = Not easily available	Typical average System Size In Kw or m ² for solar thermal or surface of the building for insulation/windows	Average initial investment (€)		Average Maintenance Cost in €/year		Total Financial Incentives (including subsidy & tax break) (in € or in % of investment cost)	Feed in Tariff (For grid connected electricity only)	min configuration	
					From €	to €	From €	to €			Initial investment after incentives (€)	Payback Period (yrs)
	RE or EE Technology		E, M or N	from kW (m ²)	From €	to €	From €	to €	€ or %	€/kWh	Initial investment after incentives (€)	Payback Period (yrs)
	Individual Solar Thermal water heater	R	E	800Kw/year 1100Kw/year	1 000	1 700	20	20	20% tax exemption of the investment cost on the tax free income	/	0.8	15
	Collective Solar Thermal water heater	C/I	E		20 000	45 000*			subsidy equal to 30-40% of the investment cost	/	14	4
	Individual Geothermal Heat Pump (closed loop systems)	R	E	25Kw	40 000	40 000	100	200	20% tax exemption of the investment cost on the tax free income	/	32	12
	Collective Geothermal Heat Pump (closed loop systems)	C/I	E	300Kw	200 000	220 000	300	700	20% tax exemption of the investment cost on the tax free income	/	160	5
	Individual High Efficiency Air Heat Pump	R	E	25Kw	4 000	4 000	100	200	20% tax exemption of the investment cost on the tax free income	/	3.20	
	Collective High Efficiency Air Heat Pump	C/I	E	375Kw	20 000	20 000	200	700	20% tax exemption of the investment cost on the tax free income	/	16	
	Individual Biomass Boiler	R	E	25 000 Kcal/m	3 500	10 000			20% tax exemption of the investment cost on the tax free income	/	2.80	
	Collective Biomass Boiler	C/I	E	500 000 Kcal/m	20 170	40 000			20% tax exemption of the investment cost on the tax free income	/	16	
	Individual Condensation Boiler	R	E							/		
	Collective Condensation Boiler	C/I	E							/		
	Individual Grid Connected PV	R	E		8 000 €/kWh	10 000 €/kWh			20% tax exemption of the investment cost on the tax free income	0.45€/kWh (or 0.50€/kWh for green islands)	6.40	11
	Individual Stand Alone PV	R	E		7 000 €/kWh	8 000 €/kWh			20% tax exemption of the investment cost on the tax free income		5.60	20
	Collective Grid Connected PV	C/I	E	100 Kw	800 000	1 200 000			subsidy equal to 30-40% of the investment cost	0.45€/kWh (or 0.50€/kWh for green islands)	480.00	3
	Collective Micro Wind turbine	C/I	E		900 €/kWh	1 200 €/kWh	1 200	1 300	20% tax exemption of the investment cost on the tax free income	0.073 €/kWh (or 0.06245 €/kWh for green islands)	16.00	6
	Collective Cogeneration Gas	C/I	E									5

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Table 6: Template for Financing Products (2/2) (Product Design Characteristics for MillenniumBank, Greece)

FINARET																	
Product Design - Characteristics																	
Loan Product Category	Loan Type	Collateral Type	Beneficiary	Currency	Percentage of Investment to be Financed	Minimum Amount	Maximum Amount	Interest Rate	Interest Rate Basis	Interest Rate Margin	Payments Schedule	Grace Period	Early Prepayment	Repayment Type	Repayment Amount	Tenor	Side Offers
Renewable Energy Technologies	Renewable Heat Generation	Individual Solar Thermal water heater	Mortgage and / or Personal Guarantees and / or Contract Assignment	Individual or SMEs/Co-owners Currency	EUR and / or Other Currency	With or Without carriers' financial status	Depending on applicant's financial status	Fixed or Floating	Euribor or E.C.B. or Bank Base Rate	Euribor or E.C.B. or Bank Base Rate	Monthly or Quarterly or Semiannual or Installments	Yes or No	Full or partial early repayment allowed; Whenever or after a specific period; With or without penalty.	Equal installments or Annuity (if linked interest rate)	Linked to Savings and / or Grants	Number of Years	Pre-approved Visa of CA
		Collective Solar Thermal water heater															
		Individual Geothermal Heat Pump (closed loop systems)															
		Collective Geothermal Heat Pump (closed loop systems)															
		Individual High Efficiency Air Heat Pump															
		Collective High Efficiency Air Heat Pump															
		Individual Biomass Boiler															
		Collective Biomass Boiler															
		Individual Condensation Boiler															
		Collective Condensation Boiler															
Renewable Energy Technologies	Renewable Electricity Generation	Individual Grid Connected PV	The borrower assigns to the Bank the rights deriving from the contract the customer signs with the Hellenic Transmission System Operator (H.T.S.O.) or	SMEs	Euro	Case of Subordination to the Greek Law 3299/2004: 1) 20%-40% of the total investment cost as this is displayed in the Approved, by the Ministry of Economics. Application under the form of Public Subsidy. The ban settlement is achieved upon payment of the subsidy. 2) 35%-55% of the total investment cost as this is displayed in the Approved, by the Ministry of Economics. Application under the form of "Loan".	Floating rate	Euribor	Floating rate	3 months	monthly	3 months	lump-sum or partial disbursement	lump-sum or partial disbursement	15 years		
		Individual Stand Alone PV															
		Collective Grid Connected PV															
		Collective Micro - hydro															
		Collective Micro Wind turbine															
		Collective Cogeneration Gas															The borrower assigns to the Bank the rights deriving from the contract the customer signs with the Greek Public Power Corporation (P.P.C.)
		Single household insulation of envelop (walls and roof)															
		Single household efficient windows (double glazed & low-emissivity)															
		Collective building insulation of envelop (walls & roof)															
		Collective building efficient windows (double glazed & low-emissivity)															
Insulation of heating network																	
Fluorescent bulbs program collective																	
High efficiency electrical motors																	
Heat-recovery system for compressed air machine																	
Energy Efficient Technologies	Renewable Heat and Electricity	Single household insulation of envelop (walls and roof)	Individual or SMEs (if)	Euro	50% (given the fact that the Public Subsidy may reach up to 50% of the budgeted expenses - investment cost)	Floating rate	Euribor	Floating rate	3 months	monthly	3 months	lump-sum or partial disbursement	lump-sum or partial disbursement	10 years			
		Single household efficient windows (double glazed & low-emissivity)															
		Collective building insulation of envelop (walls & roof)															
		Collective building efficient windows (double glazed & low-emissivity)															
		Insulation of heating network															
		Fluorescent bulbs program collective															
		High efficiency electrical motors															
		Heat-recovery system for compressed air machine															

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Table 7: Technologies Investment Configuration (Completed for Cyprus)

Households

	Config. ID	RE or EE Technology	MIN configuration		MAX configuration	
			Initial Investment after Incentives (€)	Payback Period (yrs)	Initial Investment after Incentives (€)	Payback Period (yrs)
Renewable Heat Generation	5	Individual Geothermal heat pump (closed loop systems)	11.000,00	5	24.633,00	6
	9	Individual Biomass boiler 1	2.250,00	1	4.500,00	2
	13	Individual Grid connected PV	2.250,00	11	9.000,00	7
Renewable Electricity Generation	19	Single household insulation of envelop (walls and roof)	5.880,00	20	39.437,00	20
Thermal efficiency	21	Single household efficient windows (double glazed & low-emissivity)	1.645,00	20	9.187,00	20

Commercial – Industrial

	Config. ID	RE or EE Technology	MIN configuration		MAX configuration	
			Initial Investment after Incentives (€)	Payback Period (yrs)	Initial Investment after Incentives (€)	Payback Period (yrs)
Renewable Heat Generation	3	Collective Solar thermal water heater	1.750,00	3	17.500,00	5
	6	Collective Geothermal heat pump (closed loop systems)	28.000,00	12	700.000,00	12
	10	Collective Biomass boiler	9.000,00	0	22.500,00	0
Renewable Electricity Generation	17	Collective Micro Wind Turbine	1.080,00	20	32.400,00	4

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Table 8: Loan features for the Cyprus case

Interest rate	Interest Rate Basis	Interest rate margin	Payments' Schedule	Grace Period	Early Prepayment	Repayment Type	Repayment Amount	Tenor
Fixed or Floating	Euribor or E.C.B. or Bank Base Rate		Monthly or Quarterly or Semiannual Instalments	Yes or No	Full or partial early prepayment allowed; Whenever or after a specific period; With or without penalty.	Equal instalments or Annuity (if fixed interest rate)	Linked to Savings and / or Grants	Number of Years
	Bank base rate applying to personal loans would apply	There will be a step down margin to encourage early prepayment once grant is received. Normal high penalizing interest rates on payments in arrears.	Individuals need to have the discipline of monthly payments so that they can best manage personal finances.	Yes, to allow for implementation and receipt of grant	Partial early prepayment allowed w/o penalty despite normal banking practices that penalize it. Allows the reductions in the loan principal once grant is obtained. Amount allowed will be equal to the amount of grant received.	As per local current banking practice, individuals will be paying a fixed amount on each payment date, which will include principal repayment amount plus interest. Any deviations due to the floating nature of interest rates will be accounted for on the last payment.	1st Priority:	<div style="border: 1px solid black; padding: 2px;"> Implication is that loan tenor should be no less than the payback period which accounts for grants and / or savings. (lower limit). Upper limit will be bank's max tenor for similar type of loans. </div>
2nd Priority - (Interest Rate Level) Lower interest rate is the second most desirable feature. If this is adopted then perhaps repayment period will be shortened.								

7. Promoting Financing Products Addressing To Energy Technologies' Investment

7.1. STATE OF PRACTICE IN PROMOTING FINANCING PRODUCTS FOR SMALL-SCALE ENERGY RELATED INVESTMENTS: A REVIEW RESULT

Within FINA-RET [FINA-RET 2008B] over a 100 loans addressing to energy related investments, in seventeen European countries, have been reviewed. Among these financial products there are several success stories and a large number of less successful ones. It must be mentioned, before any further discussion, that the success of a financial product offered by a commercial bank is, to a great extent, subject to the degree of development of the RET and EET market and the ability provided by the existing subsidies, grants or other local or national financing programmes and initiatives in order for the financial product to capitalize on them.

In markets with a low degree of development, the banks have to undertake the task to increase awareness on RET and EET and through it promote the capacity they provide to potential investors for financing. This requires an extra investment cost for banks that have: (i) to enhance the know-how of their staff on technologies' issues (i.e. expected benefits and costs if investing on them) and (ii) to organize a more advanced promotion campaign. The difficulty in this case is that banks undertake the task with the rest of the market's actors to create the market!

Several attempts of banks in Greece, Italy and Cyprus to provide loans for RET and EET investments have failed for reasons other than the loan characteristics themselves or the cost-effectiveness of the investments. Some major ones are:

1. The message of the promotion strategy was mainly “..we sell a good loan” rather than “....to save energy cost invest on technology X, we can provide you financing...”, so people show little if at all interest.
2. There was no special training of the staff that sell these loans. They could only provide information regarding the loan terms without correlating them with the expectations from the investment. As mentioned in the literature review, one of the most important sales channels through which customers can build loyalty, when it comes to complex or “newly” developed products, are the sales people with whom they interact. As a result, the lack of well-trained and knowledgeable sales personnel capable of proposing customized solutions revealed to be one of the most important deterrent factors which may lead to the unsuccessful launch and promotion of “green” loans.

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3. There was a lack of cooperation with the rest of the market actors and mainly construction industry and RET and EET industry. Although they have tried to acquire knowledge they didn't actually digest it, leading to the development of technology specific loans that could be promoted appropriately through technology providers and technology intermediary users, channels.
4. Ignorance of institutional and technical barriers to invest.
5. Lack of correlation of the loans' promotion to the available governmental measures and initiatives, for the case of Italy and Cyprus.

A general comment that can be raised is that the majority of the reviewed banks besides designing specific loan products addressing to energy related investments, have not attempted to implement a more holistic approach while developing their green identity. Express it differently, they have not tried to implement the "green flavour" in the rest of their products, i.e. mortgages, investment funds, etc. that will create trust to the public. We should mention here that the degree of distrust to the banking system, as it derived from the surveys performed within FINA-RET, is very high.

In the case of markets that have been greatly supported by national programmes and initiatives and where the degree of awareness of the public is high, the business opportunity for the banking sector has been already created and, therefore, the effort required on its behalf is less than in the above described case. The loans reviewed in France, Switzerland, Austria, Germany and the Netherlands, demonstrated a high degree of success, partly due to the overall socio-economic activities and market development and partly due to the specific characteristics of the loans per se and of their promotion approach. More specifically, some success factors that derived from the review can be summarized as follows [FINA-RET 2008B]:

1. Loans highly specialized to the different technologies, in order to provide the opportunity for both the bank and the investor to capitalize the most from the expected benefits. This is part of the message used in the promotion campaign.
2. Alliances with actors (i.e. government, technologies, constructions, etc.) and implementation of a joint promotion campaign.
3. Most possible capitalization of any existing national or local measure or incentive supporting RET and EET technologies application. The available measures and incentives can be used either as a collateral, or can be even part of the whole product (i.e. subsidized interest rate), or even the loan can be the facilitator for an individual to take the opportunity provided by the measures and incentives, i.e. provision of matching funds. In

any case the correlation between the loan and the incentives should be clear in the promotion of the loan since, in most cases, it is the catalyst for its success.

4. Well trained staff, capable to answer to the majority of questions and issues raised by the customers.
5. Combine the loan, if possible, with for instance the provision of energy certifications rather than with other financial services.
6. Accessibility and easy application proceedings.
7. Networking and promotion through independent mechanisms and organizations coming from consumers or research groups in order to increase the publicity and acceptance of the loan.

Further to the above, it's worth mentioning the impact of competition both on loan characteristics, as well as on promotion strategy characteristics and on the available channels for communicating information about the loans. A success story is the initiative of Eco-Pret in France that provides the results of a benchmarking among available green loans that is performed by an independent consumers' organization named Testerpourvous.com.

As it becomes apparent in both cases described above, success of a green loan product is subject to several issues some of which are out of control of any promotional approach. However, an issue of no doubt is that the creation of synergies and the cooperation among actors can, to a great extent ensure the success of a loan.

7.2. INDIVIDUALS PERCEPTION ON SMALL-SCALE ENERGY RELATED INVESTMENTS AND THEIR FINANCING: A SURVEY RESULT

The surveys performed to households and SMEs in Austria, France, Cyprus, Greece and Italy consider also the identification of information on issues related to the promotion of financing products and loans in particular addressing to small-scale investments in renewables and energy efficiency technologies [FINA-RET 2009C]. Elaborating further this information, specific conclusions have been identified regarding the following issues:

1. The content of the promotional message;
2. The key person of the promotion campaign (who will transfer the promotional message to the public);

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3. The promotion channels that should be used (how the promotional message is best transmitted to the potential investors);
4. Special issues to be considered (i.e. investors' perception about financial products, effort needed in order to persuade for the necessity of the investments in RET/EET, etc.).

7.2.1. The promotional message

Regarding the content of the promotional message, it must be noted that special attention must be paid while deciding what exactly should be stressed and consequently with what would a financing institution manage to attract investors. As mentioned above, it is really crucial for the success of a promotion strategy but also for the general development of the financing product, to manage to add significance and tangibility to the product. In addition, it must be made clear that it is not enough just to name a financial product "Green" in order to add significance to it. Generally promotional appeals are broken into two categories: rational and emotional. Some examples are provided in the following table (Table 9).

Table 9: Uses of Appeals in Banking Services Advertising

Name of Bank	Broad Category	Marketing Approach	Theme / Punch Line
Union Bank of India	Emotional Appeal	Security and Future benefit	Because your dreams are not only yours.
Royal Bank of Scotland Group	Emotional Appeal	Differentiation	In years a player comes who changes the way the game is played.
HSBC	Rational	Customization of Service Offering	Not two people are the same
IDBI	Rational	Comprehensiveness of offering Services	Banking for All
State Bank of India	Emotional	Supporting the customers	With you all the way

In the case of loans for small-scale RET/EET investments, as it was pointed out from the surveys to households and SMEs in all five countries, an attractive loan for them would be a loan with: (a) characteristics that could be linked to the performance of their investment and (b) easy application and obtaining processes. Consequently, a promotional message should primarily

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focus on these -rational- attributes of the loan which can provoke the interest of the potential investors. Actually, the message used should be able to make the potential investors understand **why they need an investment in RET/EET** and how this investment **can easily, quickly and effectively be financed by applying for the proposed loan.**

7.2.2. The promoter

Another important issue while designing the promotion campaign of a “green” loan is to find the most suitable person to become the protagonist. The selected person should be considered reliable by the general public and capable to persuade the potential investors that the financing solution that he/she is promoting is the most suitable for their case. As it was indicated in the Synthesis of surveys’ results [FINA-RET 2009C], households and SMEs mostly trust scientists, the European Union, NGOs, Energy Management Services Consulting Companies and RET/EET Industry while they show great distrust towards political parties and journalists. Namely, it seems that there is a need for specific, unbiased and scientific valid information regarding the investments in RET/EET and not general information. Consequently, the promoter of the loan should be a person that his profession and general profile are linked to the above characteristics.

7.2.3. The promotion channel

“Green” loans can be promoted either through the Banks’ sales personnel or through alternative channels (i.e. technologies sellers, construction industry, consumers associations, etc.) or by using both ways. Despite the fact that the direct contact through the Banks’ own sales force might seem more convenient -since Banks are more familiar with this channel, which also gives them the control of the communication process- it demands great effort from the employees of the banks and an important amount of money to be invested on their training. This effort as discussed in section four becomes higher in less developed RET & EET markets. As revealed from loan products reviewed, in certain cases, the lack or limited investment on the development of the appropriate level of customer services acted as a failure factor of the promotion strategy.

The surveys’ results with regards to “whom” do the investors trust, as well as those performed to the construction industry, technologies’ industry and policy makers indicated:

- a. the need of collaboration among market actors;
- b. the positive attitude of investors towards the above mentioned collaboration;

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- c. banks need for technical assistance and the provision of performance guarantee, while validating investment proposals for financing, thus leading the technologies' industry to be the most promising promotion channel.

The technologies' industry, further to the above identified reasons and the common interest it has with banks, i.e. to sell technologies, it can further facilitate the process through an alliance with the construction industry and more particular with the installers. Construction industry can act as one more channel for the promotion of loans, especially in the cases of buildings retrofitting and refurbishing.

Both channels, i.e. constructors and technologies' providers are recommended in cases that the level of awareness in the market is relatively low and/or when there are no public measures and initiatives available to support a certain technology. In these cases, they form the main information points for those that consider investing in them.

Last but not least, given that in many cases the limited number of applications for "green" loans is because of the lack of awareness of the existence of such loans, an institutional organization that enjoys the general public's appreciation could become a channel of information regarding the available RET/EET solutions for each case and the suitable financing solutions. Consequently, the banks could cooperate with this kind of organizations in order to communicate their products to the households and SMEs.

7.2.4. Special issues

Some special issues that must be taken into consideration, while designing the promotion strategy of the financing products, are the following:

- General attitude of the households and SMEs towards financing institutions;
- General considerations about the financing products offered by the banks;
- Available measures offered by the state.

The synthesis of the surveys' results [FINA-RET 2009C] made obvious that an important number of households and SMEs are mistrustful towards the banks and face with scepticism any financial scheme offered by them. Thus, the reversal of this opinion is a bet that the banks should win in order to assure the success of their products.

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Furthermore, the majority of households and SMEs believe that the financing products offered by the banks are rather complex and time consuming. Consequently, the promotion strategy should make clear to the public that the promoted loan does not require any time-consuming or bureaucratic procedures, does not have any “secret” conditions and is easy to understand.

In addition, the financing institutions should always take into account the incentives and subsidies offered by the state for investments in RET/EET and capitalize on them. As it became obvious from the review made, fast and ongoing financing initiative [FINA-RET 2008B] as well as the exploitation of the programmes and schemes offered by the state, can contribute to the success of the products offered by the banks.

Summing up the above, as it becomes obvious, in order to have a successful promotion strategy for real “green” products, it is necessary to customize it to the needs and characteristics of each target group and help customers evaluate the service offered when addressing the bank. Last but not least, the banking institutions that will decide to offer this kind of products should adopt a holistic and generally sustainable way of working and be consistent to their commitments in order to persuade households and SMEs that they can really offer them the best solution for their investment.

7.3. GUIDELINES FOR PROMOTING FINANCING PRODUCTS ADDRESSING TO SMALL SCALE INVESTMENT IN RET & EET

Putting together the information provided above and the experience gained throughout FINA-RET one may identify three main categories of RET and EET markets in terms of their degree and pattern of development. More specifically:

LESS DEVELOPED MARKET: These markets are in their development phase since both private and public initiatives are limited, the general public has heard about the technologies but is not really aware of what are these about, what are the problems in their applications, how cost-effective they are. Furthermore, banking sector in these markets, although identifies the room and possibly the need for it to be involved in the development of the RET/EET market, has not yet understood how this can be achieved meaningfully. Within FINA-RET three markets of this type have been considered, i.e. Cypriot, Greek and Italian market.

DEVELOPED MARKET: These are markets where the Government has invested substantially in their development through the publishing of several financing measures and incentives, well

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designed awareness campaigns, exemplification and very efficient and effective legislative and regulatory frameworks. The target of the government was mainly the end users of these technologies, who given the high standards of living, the existence of an effective public mechanism and off course their mentality, have implemented small-scale RET and EET investments to a very great extent. However, this excessive offer of public initiatives has led to a limited private offer since private sector has made limited attempts to create synergies and provide “smart green” financing products. Austrian market can be included in this type of markets.

ACCELERATED MARKET: These are markets that have been developed based on an integrated approach that tries to mobilize all actors, to create synergies, to make everybody investing and then keep involved in order to secure its’ investments. In these markets both the public and private offer of financing products for small-scale investments are well developed, as well as the technologies’ industry is fully deployed providing for all range of technologies developers, consultants, wholesalers, retailers, trainers and installers. In these markets the involvement of institutional organizations is high and the concept of competition is working properly. Furthermore, there is an innovative legislative and regulatory framework supporting the development. A market with the above characteristics is currently the French market, which has been studied also within FINA-RET. In the Table 9 that follows an attempt has been made to identify the characteristics of the promotion strategy of a loan product launched in each of these markets [FINA-RET 2008B, FINA-RET 2009E].

It should be mentioned that the special characteristics of each market are subject to the socio-economic and cultural settings of the market and that those listed in the table below are some major lines to guide the development of an appropriate promotion strategy.

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Table 10: Promotion Strategy Characteristics according to the Market Conditions

Market Conditions	Promotion Strategy Characteristics
1. Less Developed Market	Promotion through Awareness - Supply Driven
<p>Limited level of awareness on technologies' characteristics, cost and benefits.</p> <p>Existence of limited number of national and local initiatives and measures supporting the development of investments in small-scale RET & EET.</p> <p>Scepticism on the Banking System.</p> <p>Lack of cooperation and alliances among market actors.</p> <p>Fragmented legislative and institutional framework.</p>	<ol style="list-style-type: none"> 1. The promotion message should stress the benefits from investing and then the relation of its features to the expected benefits. 2. The campaign person must be a researcher, a NGO, an energy related institution/organization. 3. Cooperation with technology providers must be developed. 4. The actual "green profile" of the bank should start being built and communicated to the public. 5. Promotion events with emphasis on awareness on technologies' issues are recommended – developed along with institutional organizations, construction industry or technology providers. 6. Any opportunity provided to link the loan product or the investment per se with national initiatives; legislation or coming certification must be exploited. 7. Develop in-house know-how and an appropriate level of customer service.
2. Developed Market	Aggressive Promotion – Demand Driven
<p>High level of awareness on technologies' characteristics, cost and benefits.</p> <p>Existence of several national and local initiatives and measures supporting the</p>	<ol style="list-style-type: none"> 1. The promotion message should stress the characteristics of the loan linked to the expected benefits from the investment as well as any relation of the loan with the available public measures and incentives. 2. The campaign person should be a

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Market Conditions	Promotion Strategy Characteristics
<p>implementation of small-scale investments in the majority of RETs & EETs.</p> <p>A fully deployed RET and EET market (i.e. trained installers, consultants, availability of all technologies, competitive prices, etc.).</p> <p>Consistent and coherent legislative and institutional framework.</p> <p>Limited private offer of “green” loans.</p> <p>Higher standards of living.</p>	<p>researcher, a NGO, an energy related institution/organization.</p> <ol style="list-style-type: none"> 3. A cooperation and, where possible, an alliance with technology providers, institutional organizations, consumers’ associations, etc. is recommended in order to communicate better the advantages provided by the loan. 4. The actual “green profile” of the bank should start being built and communicated to the public. 5. Identify ways to be promoted through institutional organizations. 6. Any opportunity provided to link the promotion of the loan product with national initiatives; legislation or coming certification must be exploited. 7. Develop in-house know-how and an appropriate level of customer service.
3. Accelerated Market	Innovative Promotion – Demand Driven
<p>High level of awareness on technologies’ characteristics, cost and benefits.</p> <p>Existence of several national and local initiatives and measures supporting the implementation of small-scale investments in the majority of RET & EET.</p> <p>A fully deployed RET and EET market (i.e. trained installers, consultants, availability of all technologies, competitive prices, etc.).</p>	<ol style="list-style-type: none"> 1. The promotion message should stress the competitive advantages of the loan, as well as any link with the available public measures and incentives. 2. The campaign person should be a researcher, a NGO, an energy related institution/organization. 3. A cooperation and where possible an alliance with technology providers, institutional organizations, consumers associations, etc. is recommended in order to communicate better the advantages provided by the loan. 4. The actual green “profile” of the bank

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Market Conditions	Promotion Strategy Characteristics
<p>High private offer of “green” loans.</p> <p>Coordination-cooperation between private and public offer.</p> <p>Innovative and integrated legislative and institutional framework.</p>	<p>should start being built, involving innovative investment funds and financing products. Publicize as much as possible the green id of the bank.</p> <p>5. Identify ways to be promoted through institutional organizations.</p> <p>6. Any opportunity provided to link the promotion of the loan product with national initiatives; legislation or coming certification must be exploited.</p> <p>7. Develop in-house know-how and an appropriate level of customer service – even if possible provision of customized information on the potential investments to the customers.</p>

In conclusion, with regards to the promotion of financing products related to small-scale RET and EET investment, one should keep in mind that:

- ☛ Cooperation with technologies’ industry will add value to the promotion of any “green” loan product, irrespectively to the degree of development of the market.
- ☛ On the contrary the message of the campaign is highly related to the degree of development of the RET and EET market and the available competition. Therefore, banks should pay special attention on the perception of their potential customers on RET and EET investments.
- ☛ To enter a specialized market like RET and EET investments requires an actual investment on know-how.

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8. Concluding Remarks

Within this report an overview of the work performed within FINA-RET project and of its major findings has been presented. Considering all information presented and discussed in the previous sections, the major project's findings can be summarized as follows:

- The implementation of the generic methodological approach developed within FINA-RET for the categorization of RET and EET technologies based on their investment requirements in the consortium countries (i.e. Austria, Cyprus, France, Italy and Greece) revealed that:
 - a. Beyond the large disparity between technologies, there are some very large differences between countries, in terms of payback time and initial investment cost of certain RET and EET investments. This is explained by the different: i) levels of subsidies provided by the states, either on the initial investment or on the exploitation (feed in tariffs), ii) initial price of gas and electricity in the different states, which impact the profitability of the investment, when considered as a substitution system to gas/electricity (solar thermal for instance), and iii) technology costs are not similar in the different countries studied;
 - b. The absence of real commonalities between the countries' results leads to the conclusion that a national approach must be followed for the development of financing products in order to meet the countries specificities.
- The review on existing financing mechanisms for investments on RET & EET applications (i.e. 261 measures, products and incentives) along with the synthesis of the surveys' results revealed that: (i) mature, sound and specialized financial markets reveal to be able to boost the diffusion of RET & EET by generating sophisticated financing products built on supporting initiatives and (ii) the actual take-up of a financing product depends not only on the appeal and quality of its features and mechanism, but also on its promotion strategy (combining advertising and awareness-raising) and the smoothness of its administrative and bureaucratic processes.
- The major results of the surveys on households and SMEs implemented in the States Members of the consortium revealed that: (i) there is a positive attitude towards investing on small-scale applications of RET & EET, (ii) awareness and promotion campaigns both on technologies as well as on the financing tools should be highly customized in order to embed on the cultural settings of each country and/or region, (iii) the majority of those that invest

on RET and EET need financing support; the greatest percentage of whom applied or are willing to apply for a loan, (iv) interest rate is the most important loan feature followed by the customization of the loan features to the investment's characteristics; ease of access and quick response revealed to be the second most important features by the interviewees, (v) there is a positive attitude in all surveyed countries towards the incorporation of RET and EET as a standard to residential and commercial buildings.

- Further to any systematic attempt to design a loan product addressing to small-scale investment in energy related technologies, the banking institutions should capitalize in any possible ways to share investment risk with the rest of the market actors. To achieve this, one of the following could take place: (i) use public subsidies and incentives as collateral to the loan, (ii) implementation of alliances with technology providers in a way that will limit risk for banks, (iii) implement a broader green strategy that will allow synergies between different product lines, i.e. develop green investment funds, development of large energy projects, involvement in ESCOs scheme, provision of consultation to investors, etc.

Closing this report and taking into account the overall work performed so far within FINA-RET, the following concluding remarks were deemed appropriate to be made with regards to the take-off of the RET and EET market:

- Need to generate trust on technologies (i.e. clear and transparent information on real costs and actual benefits, ensure technical guidance);
- Increase technologies acceptance (i.e. exemplification and develop decision making tools for identifying the appropriate technology);
- Stimulate the market thanks to the positive example of high quality installations (i.e. quality of products, trained installers, control (audits));
- Strengthen, integrate and rationalize the legal framework (i.e. revised building codes including RE and EE technologies, results control mandatory) ;
- Facilitate administrative concerns;
- Joint public - private effort development;
- Coordination between market actors (i.e. technologies industry, constructions industry and banks);
- Provision of integrated services with regards to architectural design, construction and energy performance of buildings, either through construction industry or specialized consultancy firms;
- Actions and incentives on regional and local level where a higher capacity to mobilize and control exists.

9. References

1. FINA-RET 2008A, "Project work plan" IEE 2006
2. FINA-RET 2008B, "Categorization of small-scale RE and EE technologies' investments", IEE 2006
3. FINA-RET 2008C, "Review on Financing Mechanisms for RE and EE Technologies Investments", IEE 2006
4. FINA-RET 2009A, "User Requirements Methodological Framework", IEE 2006
5. FINA-RET 2009B, "User Requirements Analysis", IEE 2006
6. FINA-RET 2009C, "Financing Products for Investments on Small-Scale RE and EE Technologies Applications: A User Requirements Report", IEE 2006
7. FINA-RET 2009D, "Developing and Introducing Financing Products for Investments on Small-Scale RE and EE Technologies' applications", IEE 2006
8. FINA-RET 2009E, "Critical Success and Failure Factors for the Effective Promotion of Financing Products for Investments on Small-Scale RE and EE Technologies' applications", IEE 2006

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