



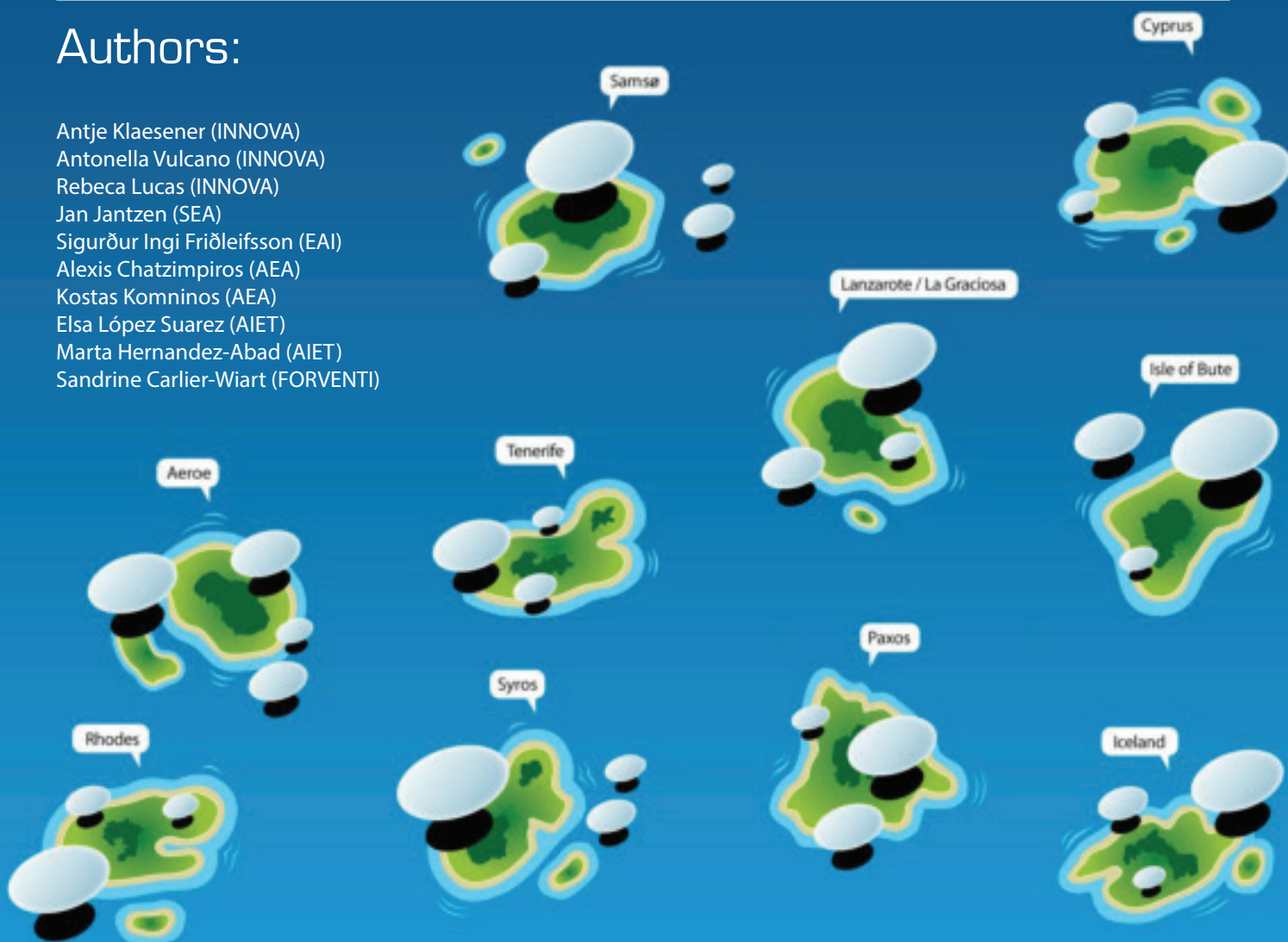
Promise
IEE Island Project

PROMISE – Promoting best practices
to support energy efficient consumer
behaviour on European islands

Final Publishable Report

Authors:

Antje Klaesener (INNOVA)
Antonella Vulcano (INNOVA)
Rebeca Lucas (INNOVA)
Jan Jantzen (SEA)
Sigurður Ingi Friðleifsson (EAI)
Alexis Chatzimpiros (AEA)
Kostas Komninos (AEA)
Elsa López Suarez (AIET)
Marta Hernandez-Abad (AIET)
Sandrine Carlier-Wiart (FORVENTI)



This publication was designed in the framework of the PROMISE project. PROMISE seeks to promote energy savings and awareness among households situated on European islands. The project started in June 2011 and has been successfully completed in November 2013. PROMISE succeeded in responding to the set goals by making local island communities become the key actors of the action. Visit our web site at <http://www.ieepromise.eu>

PROMISE Project Partners



INNOVA S.p.A | Samsø Energy Agency (SEA) | Energy Agency Iceland (EAI) | Aegean Energy Agency (AEA) | Tenerife Energy Agency (AIET) | Forventi Media

PROMISE is an action co-funded under the Intelligent Energy - Europe (IEE) programme of the European Commission. The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME (Executive Agency for Small Medium Enterprises) nor the European Commission are responsible for any use that may be made of the information contained therein.



Co-funded by the Intelligent Energy Europe Programme of the European Union

Table of contents

Foreword	4
Executive Summary	6
Background and introduction	11
Applied approach and methodology	15
The PROMISE Awareness Raising Action	16
The “PROMISE Approach”	17
Results and impact	25
What we achieved	26
Success Stories	26
The Promise Energy Saving Toolbox	28
Conclusions and recommendations	29

Foreword



Foreword



This publication presents the results of the European Project PROMISE – “Promoting best practices to support energy efficient consumer behaviour on European islands” co-funded by the Intelligent Energy - Europe (IEE) programme of the European Commission, with the goal to promote energy savings and awareness among households situated on some of Europe’s most beautiful and remote islands.

PROMISE was born as a response to the need of reducing residential energy consumption in European islands by changing household behaviour. In order to accomplish this ambitious goal, energy agencies from Samso (Denmark), Rhodes (Greece), Tenerife (Spain) and Iceland, coordinated by a consulting company specialised in innovation and assisted by a communications consultancy company, have developed and adopted innovative tried-and-tested methods for reducing energy use in households.

The project started in June 2011 and has been successfully completed in November 2013. During its lifetime, three EU islands (Iceland, Tenerife and Rhodes) located in different European geographic areas and representing a good sample of diverse climatic and geomorphologic conditions, have participated in a major awareness raising action, made up of awareness and capacity building campaigns for energy savings in households and pilot

actions using as main instruments home energy checks, energy efficiency calculators, direct interaction with the public and cooperation with other islands.

The current publication is directed to a broad public that encompasses citizens and households, consumer organisations, energy agencies, educational institutions, and policy and decision makers directly involved or interested in energy-related issues.

By illustrating what has been done, how it has been done and the main results achieved, PROMISE partners wish to convey a powerful message: it is possible to re-orient consumer behaviour towards energy saving patterns. PROMISE has found energy savings in the range of 5% to 20% per household and at least the first 5% of these savings is related to behaviour, meaning that these savings can be implemented at a low cost for the household. Although from a performance viewpoint, building regulations and renewable energy technologies can be considered as a more efficient means to reach the EU goals for the year 2020, PROMISE work has demonstrated that tailored and well-focused awareness campaigns with the objective to provoke a change in households’ energy behaviour can give fruitful results and induce change.

Last but not least, PROMISE partners wish to share their experience and knowledge and put at disposal the “PROMISE Energy Efficiency Toolbox”, a set of instruments freely available and user-friendly created to save energy and contribute to a better and more sustainable Europe.

Spread the word and ... Let's save energy now!

The PROMISE Team

January 2014

Executive Summary

utterstock
utterstock

Energy Audit





Executive Summary

Citizens and households are responsible for a large share of global energy and electricity consumption and the related greenhouse gas emissions into the atmosphere. At the same time, large energy savings and carbon reduction can only be achieved with a paradigmatic change in consumer behaviour in the context of low-energy consumption patterns.

The European Union (EU) aims to increase energy efficiency by 20% by the year 2020 and wishes to have a secure energy supply to be competitive and sustainable. Home energy savings are therefore congruent with EU policies and regulations for energy efficiency. Furthermore, the European directive for energy efficiency establishes a common framework of measures in order to achieve the 20% headline target on energy efficiency (Council of the European Union and European Parliament 2012).

Energy efficiency comprises technical and behavioural components. While the technical component regards higher efficiency equipment and design, the behavioural component is focused on learning and inducing less energy consuming practices. As part of the later, simple energy saving tips, which are costless or inexpensive, may save a fair amount of energy and money. While energy saving behaviours are an issue of concern across all EU

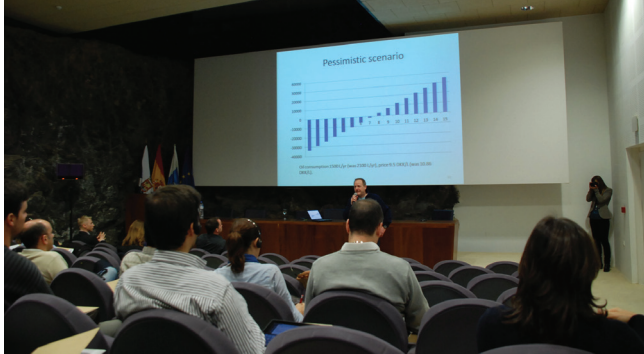
member states - energy used by consumers at home represents 28% of the EU final energy consumption and buildings account for 40% of total energy consumption in the EU - they are particularly important in EU islands and in peripheral regions since these territories often need to guarantee their energy supply on their own and, at the same time, energy efficiency is a vital part of their sustainable development.

In this context, PROMISE was born as a response to the need of reducing residential energy consumption in European islands by changing household behaviour. To accomplish this goal, energy agencies from Samso (Denmark), Rhodes (Greece), Tenerife (Spain) and Iceland, coordinated by a consulting company specialised in innovation and assisted by a communications consultancy company, have developed and adopted innovative tried-and-tested methods for reducing energy use in households.





Executive Summary



In order to change consumer behaviour PROMISE launched a major awareness action to raise awareness among island households and local stakeholders of the need to make energy consumption decisions that support energy sustainability on their territories.

The awareness-raising action followed a bottom-up approach and was articulated around the organisation of the following complementary activities:

- Capacity building workshops, to involve the local island communities in the action from the very beginning.
- EASW-like workshops, to find consensus-based action lines on energy efficient behaviours, supporting in this way the implementation of the local awareness campaigns.
- Local awareness raising campaigns, to implement the action lines on energy efficient behaviours that were selected and agreed during the capacity building actions/EASWs.
- A large scale European Awareness Campaign, to transfer experiences and lessons learnt to other European islands dealing with the energy saving challenge.



PROMISE interactive and tailor-made actions, which involved households, multiplier organisations, stakeholders and policy makers have revealed as an efficient tool for finding consensus-based action lines.

In particular, the involvement of policy makers has given the possibility to 'intervene' in the political sphere and suggest long-term solutions that support the energy sustainability of the islands. The approach followed by PROMISE to raise households' awareness was based on:

1. Home energy checks
2. Web-enabled calculators
3. Direct interaction and training
4. Cooperation with other islands

PROMISE has performed 206 home energy checks in the target islands¹ and has found energy savings in the range of 5% to 20% per household. The first 5% of these savings is related to behaviour, meaning that these savings can be implemented at a low cost for the household. Although from a performance viewpoint, building regulations and renewable energy technologies can be considered as a more efficient means to reach the EU goals for the year 2020, PROMISE work has demonstrated that tailored and well-focused awareness campaigns, with the objective to provoke a change in households' energy behaviour, can also give fruitful results and induce change.

1. This number increases to 238 when taking into account the home energy checks performed by PROMISE in other islands: Samso (20),

Chios (10) and Lanzarote/La Graciosa (2).



Executive Summary



In addition, PROMISE has developed the “PROMISE Energy Saving Toolbox”, a set of instruments used by the PROMISE partners to achieve energy efficiency in the islands participating in the project and that is now publicly and freely available. The Toolbox contains the following instruments:

- A full ready-to-use package to perform home energy checks in a simple and easy manner.
- A set of different web-based calculators to help consumers make more energy efficient decisions related to their home, car and transport and an “ECO-CALC” App for smart phones.
- Didactic material for schools, courses for educating school children and teachers to save energy.
- A number of communication tips on how to effectively use media to publish energy saving tips.

To conclude, the main lessons learnt from the PROMISE experience and the recommendations for future actions are summarised in the following points:

- **Direct involvement of households** is a key success factor in behavioural change initiatives.
- **Early involvement of stakeholders** in awareness raising campaigns **confers “ownership” of the problem and paves the way to future actions**. The direct involvement of public authorities and policy makers in awareness raising campaigns is a promising strategy for including new action lines in local, regional or even national energy action plans. By integrating such actions into the policy planning for energy efficiency and conservation, a positive change in consumers’ energy behaviour can be reached in the long term.
- **Collaboration with third-parties** such as municipality, a district heating company, a housing association, or a school **is highly recommended** because collaboration gives access to data and households. PROMISE has seen that whenever there is a mutual financial interest between the household and the third-party, the energy agency can initialise energy saving actions by means of tools and public meetings.
- There is **no “one-size-fits all” solution**; with a collection of tools, rather than using the same tools for all islands, local circumstances can be better met. In this context, the “PROMISE Energy Saving Toolbox” offers a set of instruments/methods to choose from. In addition, the developed tools are not limited to islands. On the contrary, they have a broader scope and the PROMISE approach can be applied to other communities as well.
- **Government subsidies** could be **converted into energy efficiency investments**; financial support for disadvantaged households to reduce their energy costs shall be redirected to investments for energy efficient appliances and construction. This will lower the households’ energy costs as well as the governmental subsidy burden in the long run.



Executive Summary

The impact of PROMISE will not get lost with the official end of the initiative. PROMISE partners intend to promote the framework for reaching the sustainability of the started action lines and multiplying effects even further into the future.

PROMISE has already had an impact in other EU islands and in particular on six new islands (Lanzarote/La Graciosa (Spain), Isle of Bute (UK), Aeroe (Denmark), Paxos (Greece), Syros (Greece) and Cyprus) which are replicating the PROMISE awareness campaigns and currently using the "PROMISE Energy Saving Toolbox".

Last but not least, PROMISE partners are confident that the efforts carried out to promote PROMISE's results to the Network of Sustainable Aegean Islands (DAFNI) in Greece, to the European Islands Network on Energy and Environment (ISLENET), and to the network of islands that have signed the Pact of Islands (ISLEPACT) will allow further islands, and any other geographic area interested in energy saving behaviour, to extract the measures which are most suitable for their own contexts.



Background and introduction





Background and introduction



We all require energy for heating our homes, cooking, lighting, washing or using electrical appliances. For the majority of the time, energy use in the home is not visible and the majority of the energy consuming behaviours that we undertake are based on routine and habit. We turn the lights on, leave televisions on standby and boil our kettles without having to think about how these actions are carried out or where the energy to power various household appliances comes from². In addition, domestic energy use is still largely invisible to the user³ and is rapidly increasing due to larger homes, new services and additional appliances.

The European Union (EU) aims to increase energy efficiency by 20% by the year 2020 and wishes to have a secure energy supply to be competitive and to be sustainable. Home energy savings are therefore congruent with EU policies and regulations for energy efficiency. Furthermore, the European directive for energy efficiency establishes a common framework of measures in order to achieve the 20% headline target on energy efficiency (Council of the European Union and European Parliament 2012).

Quoting from the directive, energy savings means ‘an amount of saved energy determined by measuring and/or estimating consumption before and after implementation of an energy efficiency improvement measure’⁴.

Energy efficiency comprehends technical and behavioural components. While the technical component regards higher efficiency equipment and design, the behavioural component is focused on learning and inducing less energy consuming practices. As part of the later, simple energy saving tips, which are costless or inexpensive, may save a fair amount of energy and money. As a matter of fact, behaviour-related savings are the cheapest and quickest to do. “Close the door!” is a typical energy saving advice in a cold climate and most people, even children, will abide by the advice.

Citizens and households have therefore a “dual” role: on the one hand, they are responsible for a large share of global energy and electricity consumption and the related greenhouse gas emissions into the atmosphere. On the other hand, large energy savings and carbon reduction can only be achieved with a paradigmatic change in their behaviour in the context of low-energy consumption patterns. However, not all households wish to save energy and those that do are often motivated for one or several of the following reasons: (i) saving energy saves expenses and taxes; (ii) the household saves energy for the next generation; and (iii) the household acts locally in the global endeavour to save energy.

2. Source: M. Martiskainen (2007): Affecting consumer behaviour on energy demand. Final report to EdF Energy.Sussex Energy Group, SPRU - Science and Technology Policy Research. University of Sussex. Brighton, East Sussex.

3. Energy use is not visible and people are often detached from their domestic gas and electricity use. Most domestic customers are trapped in the ‘direct debit’ dilemma - they only receive a monthly or a quarterly bill on their energy use for which payment goes directly from their bank account, hence not even having to open their bills. This can lead to little

knowledge about how much gas or electricity people actually use in their homes. If gas and electricity bills are indeed opened, they include information which is not always clearly presented and can be confusing to the customer. (Brandon & Lewis 1999; Darby 2006; Roberts & Baker 2003).

4.Source. Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:315:0001:0056:EN:PDF>)



Background and introduction

While energy saving behaviours are an issue of concern across all EU member states - energy used by consumers at home represents 28% of the EU final energy consumption and buildings account for 40% of total energy consumption in the EU - they are particularly important in EU islands and in peripheral regions since these territories often need to guarantee their energy supply on their own and, at the same time, energy efficiency is a vital part of their sustainable development. Although, as mentioned in the previous paragraph, not all households wish to save energy, there are some reasons to think that islanders would be more willing than their counterparts in the mainland as they feel more connected to their island. The greater identification with the island leads to a greater interest in safeguarding the territory and also to an increased willingness to adopt behaviours and make investment decisions that support energy efficiency and the rational use of resources.

In this context, PROMISE was born as a response to the need of reducing residential energy consumption in European islands by changing household behaviour. In order to accomplish this ambitious goal, energy agencies from Samso (Denmark), Rhodes (Greece), Tenerife (Spain) and Iceland, coordinated by a consulting company specialised in innovation and assisted by a communications consultancy company, have developed

and adopted innovative tried-and-tested methods for reducing energy use in households.

Three EU islands (Iceland, Tenerife and Rhodes) located in different European geographic areas and representing a good sample of diverse climatic and geomorphologic conditions, have participated in a major awareness raising action, made up of awareness and capacity building campaigns for energy savings in households and pilot actions using as main instruments home energy checks, energy efficiency calculators, direct interaction with the public, and cooperation with other islands.

PROMISE has concentrated its attention on behaviours as a means to reduce end-use which relate to households' direct energy requirements, including behaviours such as turning lights off, using electric appliances, adjusting thermostat settings as well as sustainable consumption behaviours, which are closely linked to purchasing decisions such as the buying of energy efficient appliances. In addition, also the replacement of equipment and changes to the building have been addressed⁵.

The approach followed, the tools used as well as the main achievements, success stories and lessons learnt together with a set of recommendations are described in the remaining pages of this document.



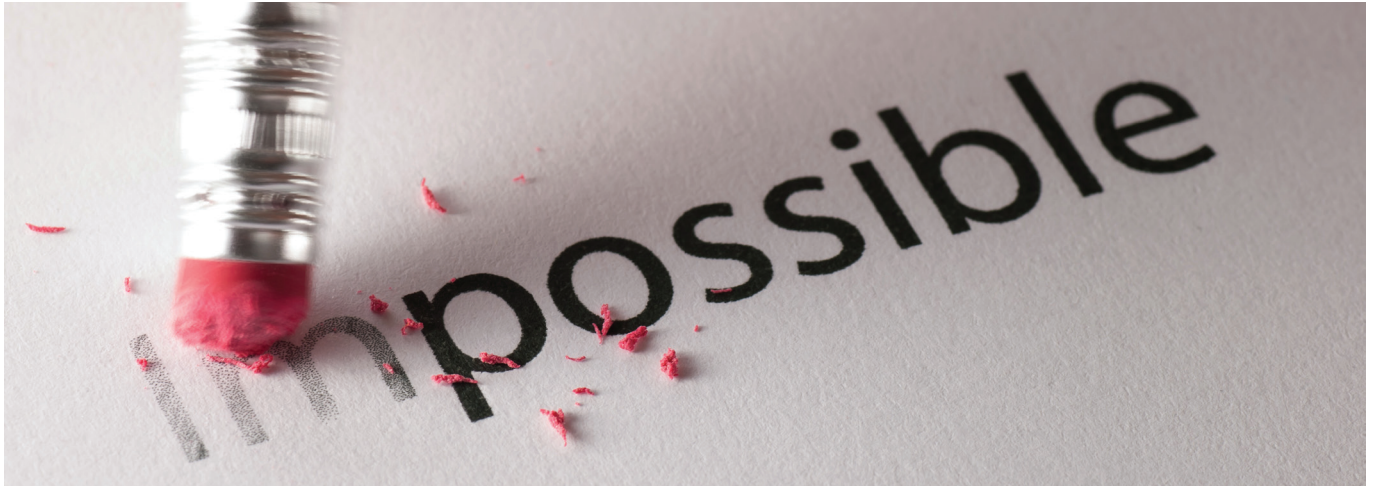
5. Changes to the building have been included because, even though these changes are expensive, it is a common topic of discussion and the



potential savings are large.



Background and introduction



Promise in a nutshell

Our objectives

To realise energy efficient behaviour among residential island households by:

- exchanging good practices on successfully adopted energy efficiency schemes among the partner islands;
- organising workshops and implementing local awareness raising campaigns in the target islands Iceland, Rhodes and Tenerife, aimed at motivating households to adopt energy efficient behaviour, both in their habits of purchasing and the use of energy consumption equipment;
- providing input to local policy makers for considering energy efficient consumer behaviour in local energy action plans;
- disseminating the project results to a wide range of European islands.

What have we done?

- Assessment of fully implemented techniques and tools for reducing the energy consumption of households in the partner islands.
- Transfer of knowledge and experiences through local capacity-building workshops addressed to private households and decision makers involved in energy concerns.
- Local awareness raising campaigns tailored to each specific island context, aimed to reach energy efficient behaviour among households in the short to medium term.
- Home energy checks in each target island showing people how energy can be easily saved.
- Integration of the lessons learnt into the islands' energy action plans.
- Implementation of a large scale European awareness campaign functioning as a demonstration window to further European islands.

Applied approach and methodology





Applied approach and methodology

The PROMISE Awareness-raising Action

PROMISE has launched a major awareness action to raise awareness among island households and local stakeholders of the need to make energy consumption decisions that support energy sustainability on their territories. The awareness-raising action was articulated around the following activities/sub-actions:

- Capacity building workshops, to involve the local island communities in the action from the very beginning.
- EASW⁶-like workshops, to find consensus-based action lines on energy efficient behaviours, supporting in this way the implementation of the local awareness campaigns.
- Local awareness raising campaigns, to implement the action lines on energy efficient behaviours that were selected and agreed during the capacity building actions/EASWs.
- Large scale European Awareness Campaign, to transfer experiences and lessons learnt to other European islands dealing with the energy saving challenge.

The PROMISE action followed a bottom-up approach, starting with the households and trying to change their behaviour. The capacity building workshops and the subsequently implemented EASW-like workshops perfectly suited the objective of finding consensus-based action lines, supporting in this way the implementation of the local awareness campaigns. In particular the participatory approach used during the EASWs was very efficient as it communicated to the local people that they are the real key actors of the activity and that the project team did not intend to impose anything.



6. The EASW-European Awareness Scenario Workshop is a participatory methodology developed by the European Commission to explore new possible actions and social experiments for the promotion of a social environment favoring innovation in Europe. In PROMISE, the EASW

methodology has been adapted to find consensus-based action lines for energy-saving behavior, supporting in this way the implementation of the local awareness campaigns in the islands.



PROMISE Awareness-raising action

Activity/ sub-action	Objective	Target group/Participants	Particularities
Capacity building workshops	To involve the local island communities in the action	Households and decision makers/ interest groups involved in energy-related concerns (local policy makers/ public authorities, multipliers such as consumer organisations, energy companies).	The workshops were split into two sessions, one addressed to the households and one, more technical, addressed to the energy-related key stakeholders.
EASW-like workshops	To find consensus-based action lines on energy efficient behaviour, supporting in this way the implementation of the local awareness campaigns.	Policy making bodies, technical experts and entrepreneurs, educational institutions, consumer and further multiplier organizations (energy and engineering companies).	Participants were split into four groups: A) Consumers B) Energy Sector C) Education Sector D) Public Sector.
Local awareness raising campaigns	To implement the action lines on energy efficient behaviour selected and agreed upon during the capacity building actions/ EASWs.	Selected target groups of households identified in each target island. Also decision makers/ policy makers involved in energy-related issues.	New action lines were added during the course of the awareness campaigns, based on experiences made and new feedback received from the local communities during the campaigns.
Large scale European Awareness Campaign	To transfer experiences and lessons learnt to other European islands dealing with the energy saving challenge.	EU islands and other interested stakeholders.	The "SAVE ENERGY NOW" event was a demonstration window to European islands which helped to consolidate greater in-depth cooperation among them, especially with 6 islands which have become «Island Buddies»

PROMISE interactive and tailor-made actions, which involved households, multiplier organisations and stakeholders have revealed as an efficient tool for finding consensus-based action lines. In addition, multiplier effects have been generated through the action lines implemented in the islands. Policy makers were involved in the workshop series and approached during the awareness campaigns. This has given the possibility to 'intervene' in the political sphere and suggest long-term solutions that support the energy sustainability of the islands.

The PROMISE Approach

PROMISE has used four main tools to raise households' awareness⁷:

1. Home energy checks
2. Web-enabled calculators
3. Direct interaction and training
4. Cooperation with other islands

7. The tools presented were selected by an evaluation panel identified in

each island and involving local stakeholders that make energy decisions.



The PROMISE Approach

Home energy checks

A home energy checks⁸ is an interview with the members of a household on their habits (their behaviour) regarding energy consumption¹. It lasts approximately 1 hour and follows 3 steps: [Find](#) – [Ask](#) – [Calculate](#).



The energy check provides the household with an estimate of the saved amount of energy and money. A spreadsheet program supports the energy check with a checklist of saving advices. The spreadsheet calculates the savings given the actual consumption of a household as well as information about the average outdoor temperature in a particular location of the world. The energy check thus allows for different climates, and it considers the actual energy consumption rather than a calculated energy demand of the building.

A total of 206 home energy checks have been performed by PROMISE energy experts in the target islands, by means of a portable computer and spreadsheet software (Excel). In a PROMISE home energy check, the household receives the result immediately in terms of foreseen annual savings of kilowatt-hours and saved costs in euro, or the local currency.

PROMISE 3- step Home Energy Checks: Find – Ask – Calculate

Find - The energy expert from the PROMISE team makes questions to the members of the households in order to identify the areas and appliances in the house where energy could be saved (without adding costs to the household).

Ask- For every sector where energy can be saved, the energy expert gives an energy saving advice, which in most of the cases has to do with the behaviour, and asks the members of the household whether they are willing to adopt it. The interview goes on and the energy expert and the household members agree on energy savings advices to be adopted, i.e. to a change of energy behaviour.

Calculate - For the energy saving measures that the household agrees to adopt, the energy expert calculates the energy savings both in kWh and in monetary terms (EUR or national currency).

8. An energy check is less detailed than an energy audit. The latter is 'a systematic procedure with the purpose of obtaining adequate knowledge of the existing energy consumption profile (...), identifying and quantifying cost-effective energy savings opportunities, and

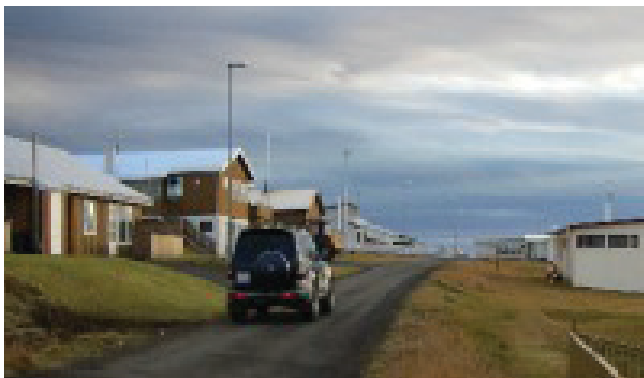
reporting the findings'. On the contrary, an energy check is performed in a few hours by an energy advisor, and the result is a rough estimate of the potential energy saved.



The PROMISE Approach

Based on 206 home energy checks PROMISE energy experts have found average energy savings ranging from 1300 kWh (Tenerife) to 8200 kWh (Grimsey, Iceland) per household which correspond to 5 – 20% savings of the household. Please note that actual savings are difficult to measure since it is not possible to know exactly what the household decides to do, or whether they were going to do it anyway. In the case of the island of Grimsey, however, the actual savings could be measured since Grimsey

decided to follow PROMISE advice after the visit of the energy experts and 24 houses were insulated. Granules of mineral insulation were sprayed into the loft from a truck that was ferried to the island from the main island. Furthermore, 19 houses got new, improved windows. This resulted in 210,000 kWh saved per year. On the island of Samsø, a collaboration with a district heating company in 2012 resulted in 13 homes making improvements that they reported on a paper-form signed by the house owner.



Web-enabled calculators

PROMISE has developed simple, user-friendly calculators, which are available in several languages:

- A [roof insulation calculator](#), based on the experience in Grimsey, finds the energy savings when extra roof insulation is added.
- Simple interactive [cash flow diagrams](#), which show the economic viability of energy efficiency or renewable energy investments.
- [Electricity price calculators](#), to explain and find the price of electricity (Greece, Iceland).
- [Transport calculators](#), to help households make more energy efficient decisions when buying or driving vehicles.
- A [light hour calculator](#), which helps consumers realize what a light hour really costs for different light bulbs.



The PROMISE Approach

The figure below is a screen copy of a web-enabled cash flow calculator developed by PROMISE energy experts for the households. The household enters basic information, such as the investment cost and the annual savings, upon which the calculator draws a simple cumulative cash flow diagram (disregarding inflation, interest and other, more advanced, financial influences).

The cash flow diagram provides four key pieces of information:

1. the initial investment in euro at the end of year zero
2. the payback period, which is the duration until the balance of the investment account becomes positive
3. the lifetime of the investment
4. the final profit gained

Using cash flow diagrams, PROMISE energy experts have found that replacing an incandescent light bulb with a compact fluorescent lamp (CFL) is paid back in 1-2 years depending on the local electricity prices. The marginal price of electricity varies from 0.08 EUR/kWh (Iceland) to 0.24 EUR/kWh (Samso). The variation in prices reflects the national subsidy and tax policies. Nevertheless, it is a good investment in all islands, to buy class A light bulbs, provided that they last as many hours as promised on the package. Changing from incandescent to CFL is no longer regarded as an official saving action in Denmark, because consumers will change anyway, now that the incandescent lamps are being phased out in the EU. However, investing in diode lamps (LED) instead of CFL is regarded as a saving action. The payback period of the incremental investment from CFL to LED is much longer, which we can demonstrate to the households given the local prices.

Feasibility of project

Energy price	<input type="text" value="0.10"/> €/kWh	Investment cost: Equipment, installation, cost of capital etc.	<input type="text" value="1600"/> €
Annual savings/production of heatpump, PV, insulation etc.	<input type="text" value="2000"/> kWh	Lifetime of equipment	<input type="text" value="20"/> years
		Maintenance cost as percentage of cost	<input type="text" value="0"/> %

Results

Energy savings per year 2.000 kWh / 200 €



Profit over equipment lifetime
Average annual return on
investment

2.400 €
7,50 %



The PROMISE Approach

The [transport calculators](#) can help households make more energy efficient decisions when buying or driving vehicles. The calculators are easy to use and provide important information about energy savings in transport, which is the most difficult energy sector and is often overlooked by households. The figure below shows a transport calculator that finds the price of a trip for various car models. The user enters the starting point, the destination, and selects the type of car. The calculator returns the cost as well as the CO2 emissions. The calculator contains a database of car types, and different cars can be compared. In the example, the web-calculator finds out the cost of driving from Puerto de la Cruz to the South Airport on Tenerife, and it compares three car models. There is a volcano in the middle of the island, which entails relatively long driving distances. The trip on the map is almost 100 km.



Orkusetur

Distancia

Desde: Puerto de la Cruz, tenerife

A: South Airport, tenerife

Búsqueda

Distancia: 92,9 km Duración: 1 heure 2 minuto

Seleccione el tipo de coche

Fabricante: Honda

Modelo: Accord

seleccionar el tipo de

Motor	Caja de cambios	cm3
Gasolina (4)	Automático (5)	1997
Diesel (4)	Manual (5)	2199
Gasolina (4)	Automático (5)	2354

Autos seleccionados

Auto	Motor	CO2	Costo
Honda Accord	Diesel (4)	13 kg	5 €

Precio de la gasolina: 1,3 Precio de la diesel: 1,1

Mapa de Tenerife mostrando la ruta desde Puerto de la Cruz hasta el Aeropuerto del Sur. La ruta es de aproximadamente 93 km.



The PROMISE Approach

Direct interaction and training

Direct interaction with the households has been a crucial activity during PROMISE awareness campaigns as shown

by the experiences in Tenerife and in Rodhes illustrated below.

TENERIFE

In addition to the home energy checks, households that wished to do so, received a small training on how to collect the information needed to perform an energy check by themselves. This idea came from Tenerife where the energy agency together with the local programme “Personas mas Sostenibles” signed an agreement in which they agreed to contact housing associations interested in energy savings.

The training procedure used in Tenerife by the PROMISE energy experts included the following phases. Once the housing association has been contacted — and has chosen a representative that signs a commitment to perform a given number of energy checks among the members of the association — the energy agency fixes a date to carry out the energy check. During the visit, the selected household, or a representative, receives a document which explains how to collect the information and gives space to fill in the requested information. The basic information contained in this document will be completed with the explanation given during the visit. During the training, the energy agency teaches what to look for and where to find the possible savings. Along with the document, the household receives a package with gadgets that will help to be more energy efficient. When the home energy check is completed, the household and energy agency exchange email addresses so that the energy agency can send back the results of the conducted home energy check, and, in addition, the household can send to the energy agency the information on energy savings that will be collected among the

member households of the association. The association also receives all the information related to the project including further tools made available, such as the web-enabled calculators and the Eco-Calc, which is a software application (app) for smart-phones that is downloadable for anyone who would like to do a self-check at home. During the whole process, the energy agency is in close contact with the representative of the association and the rest of the members, answering any questions that may arise and providing advice on anything related to energy saving and efficiency.





The PROMISE Approach

RHODES

In Rhodes, training was provided to school children through interactive activities and games that were developed in order to attract children's attention on the topic of energy efficient behaviour and to school teachers, in the form of seminars, in order to enable them to become multipliers.

The activities targeted to school children included the following games:

- "The energy pathway", where, in each step, a question related to energy behaviour is posed to the children and only the correct answer will allow them to advance;
- "The energy auditor", where children try to identify spots in the schools where energy can be saved;
- "The energy efficient shopping", where children become customers for choosing electric appliances;
- "The journalist", where children take the role of a journalist who interviews stakeholders on energy issues.

In addition, a small energy laboratory was created to familiarise children with the impact of house insulation and the basic features of wind turbines and solar panels. Seminars organised for school teachers had the objective to enable them to become multipliers. The seminar presented the methodology that addressed the children, as well as the first results, and then teachers were asked to organise on their own similar seminars and to transfer the knowledge on energy efficient behaviour to more children in their schools.



The PROMISE Approach



Cooperation with other islands

The strategies undertaken by each island have been illustrated and promoted at the European Awareness Conference “[Save Energy Now](#)”, which took place in Brussels in April 2013. The event was a demonstration window to European islands which helped consolidate greater in-depth cooperation among them. In terms of direct tangible impact it resulted in the implementation of a cooperation programme/scheme with six additional European islands, which have been called the “Island buddies”:

- Lanzarote/La Graciosa (Spain)
- Isle of Bute (UK)
- Aroe (Denmark)
- Paxos (Greece)
- Syros (Greece)
- Cyprus

The PROMISE ‘Island buddies’ are replicating the awareness campaigns addressing households in their own island territories and are using the “PROMISE Energy Saving Toolbox”. In addition to the six island buddies also the Network of Sustainable Aegean Islands (DAFNI) in Greece, the European Islands Network on Energy and Environment (ISLENET), and the network of islands that have signed the Pact of Islands (ISLEPACT) have spread the PROMISE experience throughout European islands and beyond.



Results and impact





What we achieved



What we achieved

PROMISE major highlights:

- 206 home energy checks performed in the target islands.
- 1.300 to 8.200 kWh of average calculated energy savings per household (5-20% per household).
- Development and promotion of the "PROMISE Energy Saving Toolbox".
- 3 success stories in Iceland, Greece and Tenerife .
- 6 new islands (Lanzarote/La Graciosa (Spain), Isle of Bute (UK), Aeroe (Denmark), Paxos (Greece), Syros (Greece) and Cyprus) replicating the PROMISE awareness campaigns and using the "PROMISE Energy Saving Toolbox".
- Direct impact in 14 islands and dissemination to European networks and initiatives involving over 200 islands (ISLENET, Pact of Islands, DAFNI, ESIN).
- Wide dissemination and local and national media involvement (radio, TV, press).
- Recommendations for actions lines to be included in local energy action plans.

Success stories

The following three success stories in Greece, Iceland and Tenerife are an example of the real impact of PROMISE in the islands.

Roof insulation in Iceland

In Iceland, home energy checks identified important saving potentials in the two target groups of households that are without geothermal heat, i.e. electric and oil heated households. One measure was pinpointed that could easily be improved, roof insulation. Meetings with the National Energy Authority have led to a change in the subsidy system by changing subsidies partly into energy efficient investments. The following are some of the comments received by the households in Iceland following PROMISE home energy checks:

"I never thought that so much money were leaving through the roof".

"The calculator (cash flow) saved me from taking a very stupid decision".

"Finally I understand the electricity price".



For more information <http://www.ieepromise.eu/en/publications>

Success stories



Interactive experiential seminars in schools on energy efficient behaviour in Greece

Capacity building activities in Greece revealed that the involvement of the education sector is very promising for adopting energy efficient behaviour. The interactive energy savings seminars included different sessions and targeted children of age 10-12. The feedback received by children, teachers, school administrations and the regional directorate for education was enthusiastic. The comment received by a 11-year old pupil in the primary school of Rhodes: *"Are you coming also tomorrow...?"* while saying goodbye to one of the trainers at the end of the day is a good example as well as the comments received by two of the teachers involved in the activities:

"I had never seen the 2nd graders so concentrated in an activity as during the PROMISE seminars; it was impressive."

"We need more of these trainings, to organize such seminars on energy on our own"



For more information <http://www.ieepromise.eu/en/publications>

All together for more sustainable homes in Tenerife

All together for more sustainable homes in Tenerife: Awareness actions in Tenerife disclosed that joining efforts and concerted actions would support the common goal of energy sustainability in the island. A cooperation with the programme 'More Sustainable People' started which increased the number of households reached during the awareness campaign and enhanced the interaction with local authorities, finally supporting the effective execution of activities. Some of the comments received by households are the following:

(...) We have started replacing all the non-efficient light bulbs by energy saving ones! We have even replaced some the efficient ones we had by LED light bulbs. They are a bit more expensive but it's worth the effort.

Thank you very much! It is a great surprise to learn about how much I can save! With the extra savings we can maybe replace our old washing machine and get an A+++ one!

It is interesting to observe that sometimes we do not think about the savings in the long term. Thank you again and I hope the PROMISE project is very successful, you deserve it!



For more information <http://www.ieepromise.eu/en/publications>








The PROMISE Energy Saving Toolbox

"The PROMISE Energy Saving Toolbox"

PROMISE has developed a toolbox ("The PROMISE Energy Saving Toolbox") made up of different instruments that have been used by the PROMISE partners to achieve

energy efficiency in the islands participating in the project and that is now publicly available and freely downloaded from the web site www.ieepromise.eu

 <p>Home Energy Checks</p>	<p>PROMISE offers the possibility to perform energy checks in a simple manner through: a self -study course, the "home energy checks report" and the "energy efficiency graph".</p>	<p>MADE FOR</p> <ul style="list-style-type: none"> • households • energy agencies • energy experts • anyone interested in saving energy 	<p>WHY USE IT</p> <ul style="list-style-type: none"> • user-friendly & easy access • free • uses observed energy consumption rather than a nominal calculated value • allows for local climate data
 <p>Web-based energy efficiency calculators</p>	<p>The web based calculators help consumers make more energy efficient decisions related to their home, car and transport.</p>	<p>MADE FOR</p> <ul style="list-style-type: none"> • households • energy agencies • energy experts • anyone interested in saving energy 	<p>WHY USE IT</p> <ul style="list-style-type: none"> • user-friendly & easy access • free
 <p>"Eco-Calc" App for smart phones</p>	<p>Harnessing the popularity of smart phones, an Android application called "Eco Calc" has been developed by the PROMISE experts and is available in Spanish and in English.</p>	<p>MADE FOR</p> <ul style="list-style-type: none"> • households smart phone owners • School teachers as supporting material • consumers 	<p>WHY USE IT</p> <ul style="list-style-type: none"> • user-friendly & easy access • free • portable application • updateable energy check • helps to save energy and money
 <p>Didactic material for Schools</p>	<p>Courses for educating school children and their teachers how to save energy: "Interactive Energy Saving Seminars in Schools" and "Train the teacher" course.</p>	<p>MADE FOR</p> <ul style="list-style-type: none"> • School children • School teachers 	<p>WHY USE IT</p> <ul style="list-style-type: none"> • free
 <p>Communication tips</p>	<p>"PROMISE Advices", how to effectively use media in order to publish energy saving tips.</p>	<p>MADE FOR</p> <ul style="list-style-type: none"> • energy agencies • Other bodies interested in promoting energy saving behaviour among consumers 	<p>WHY USE IT</p> <ul style="list-style-type: none"> • free • easy to understand and follow

Conclusions and recommendations





Conclusions and recommendations



PROMISE has found energy savings in the range of 5% to 20% per household. At least the first 5% of these savings is related to behaviour, meaning that these savings can be implemented at a low cost for the household. Although from a performance viewpoint, building regulations and renewable energy technologies can be considered as a more efficient means to reach the EU goals for the year 2020, PROMISE work has demonstrated that tailored and well-focused awareness campaigns, with the objective to provoke a change in households' energy behaviour, can also give fruitful results and induce change.

PROMISE experts have been directly engaged in dialogues with the households and, in this respect, the PROMISE bottom-up approach - starting with the households and trying to change their behaviour - can be considered more successful than, for example, imposing regulations or penalties by law. Moreover, the involvement of policy makers during the workshop series and awareness campaigns, has given PROMISE energy experts the possibility to 'intervene' in the political sphere and suggest long-term solutions that support the energy sustainability of the islands.

Read about the main lessons learnt from the PROMISE experience together with a set of recommendations for future actions.



Conclusions and recommendations

WHAT WE LEARNT

Direct involvement of households is a key success factor in behavioural change initiatives

PROMISE has actively involved households through different activities; firstly, through the workshops in the islands, where PROMISE experts received the feedback from the households regarding their energy needs both from a technical and political point of view (this activity also helped tailor the awareness campaigns to local needs). Secondly, through the home energy checks, which allowed for a closer and more direct interaction with each household and provided tailored solutions for achieving energy savings.

RECOMMENDATION(S) FOR FUTURE ACTIONS

Involve households from the very beginning in order to make them become part of the whole initiative, increasing their awareness, participation and involvement since higher awareness increases the willingness to adopt energy saving behaviours and to invest in energy efficient technology.

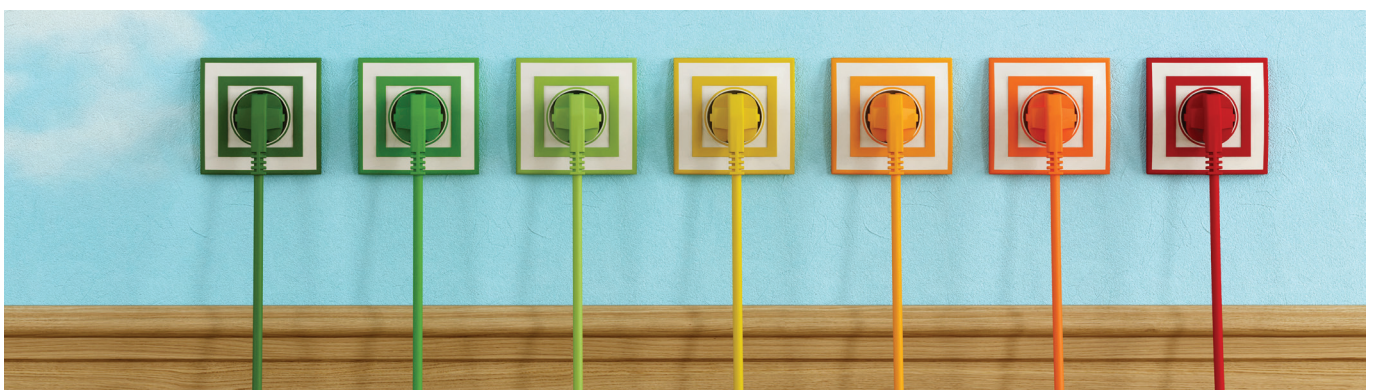
WHAT WE LEARNT

Early involvement of stakeholders in awareness raising campaigns confers “ownership” of the problem and paves the way to future actions

Approaching and involving the locals from the beginning of an awareness campaign significantly supports the acceptance of activities and therewith also the endeavour of reaching energy savings. In this context, interactive and tailor-made workshops accomplished prior to the start of the awareness campaign and involving households and multiplier organisations/stakeholders/ public authorities and policy makers that make energy decisions, have revealed as an efficient tool for finding consensus-based action lines. It is important to communicate that the local people are the key actors of the activity and that the energy agencies and externals do not intend to impose anything to the local community.

RECOMMENDATION(S) FOR FUTURE ACTIONS

The direct involvement of public authorities and policy makers in awareness raising campaigns is a promising strategy for including new action lines in local, regional or even national energy action plans. By integrating such actions into the policy planning for energy efficiency and conservation, a positive change in consumers’ energy behaviour can be reached in the long term.





Conclusions and recommendations

WHAT WE LEARNT

Collaboration with third-parties is highly recommended

Collaboration with a third-party such as a municipality, a district heating company, a housing association, or a school is highly recommended, because the collaboration gives access to data and households. PROMISE has seen that whenever there is a mutual financial interest between the household and the third-party, the energy agency can initialise energy saving actions by means of tools and public meetings.

RECOMMENDATION(S) FOR FUTURE ACTIONS

Team-up with a local partner.



WHAT WE LEARNT

There is no “one-size-fits all” solution

With a collection of tools, rather than using the same tools for all islands, local circumstances can be better met. In this context, the “PROMISE Energy Saving Toolbox” offers a set of instruments/methods to choose from. In addition, the developed tools are not limited to islands. On the contrary, they have a broader scope and the PROMISE approach can be applied to other communities as well.

Tools from the “PROMISE Energy Saving Toolbox”	Recommendation(s) for future actions
Home Energy checks	Home energy checks can be used to directly interact with the local communities and motivate their energy efficient decision making. These energy checks can be performed by, say, voluntary groups or local associations operating in the energy field.
Didactic material for schools	The organisation of interactive energy saving seminars for schools make students become ambassadors for raising awareness on energy efficiency and energy savings. A network of ‘sustainable energy schools’ exchanging knowledge and training teachers is the ultimate goal of such an action.
Web-based energy efficiency Calculators and Apps	The promotion of energy efficiency calculators and apps should be done through the web sites of recognised public and private institutions operating in the energy field. Energy agencies have to be the lead runners.



Conclusions and recommendations

WHAT WE LEARNT

Government subsidies could be converted into energy efficiency investments

In Iceland, thanks to the PROMISE energy expert efforts and continuous contacts with the National Energy Authority, the subsidy system is changing and part of it is being re-directed towards energy efficient investments.

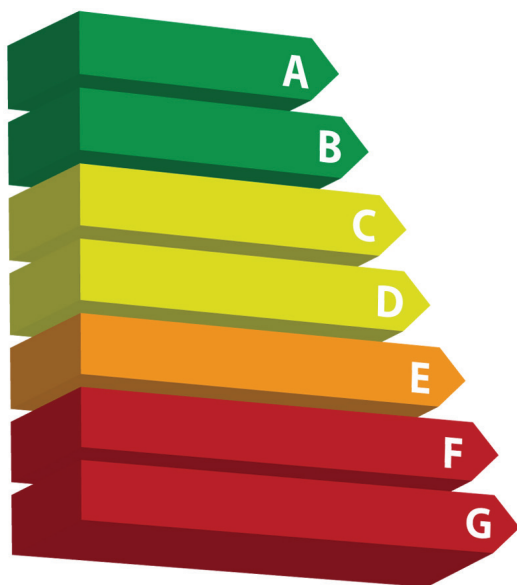
RECOMMENDATION(S) FOR FUTURE ACTIONS

Financial support for disadvantaged households to reduce their energy costs shall be redirected to investments for energy efficient appliances and construction. This will lower the households' energy costs as well as the governmental subsidy burden in the long run.

The impact of PROMISE will not get lost with the official end of the initiative. PROMISE partners intend to promote the framework for reaching sustainability of started action lines and multiplying effects even further into the future. Examples are the energy ambassador role of households in Tenerife, or the 'train the trainer' concept followed in Rhodes and addressed to school teachers. Also, the web-based energy efficiency calculators could be integrated into the daily work of the high number of energy agencies distributed throughout Europe.

PROMISE has already demonstrated the validity of its approach by attracting and including into its Network the "island buddies", six new EU islands that are replicating the awareness campaigns addressing households in their own territories and using the PROMISE energy saving toolbox. The active involvement of these islands has been a further main result which exceeded PROMISE initial expectations.

Last but not least, PROMISE partners are confident that the efforts carried out to promote PROMISE's results to the Network of Sustainable Aegean Islands (DAFNI) in Greece, to the European Islands Network on Energy and Environment (ISLENET), and to the network of islands that have signed the Pact of Islands (ISLEPACT) will allow further islands, and any other geographic area interested in energy saving behaviour, to extract the measures which are most suitable for their own contexts.



PROMISE partners



INNOVA (Coordinator)
Antje Klaesener
a.klaesener@innova-eu.net



Samsø Energy Agency
Jan Jantzen
jj@seagency.dk



Energy Agency Iceland
Sigurður Friðleifsson
sif@os.is



Aegean Energy Agency
Alexis Chatzimpiros
ac@aegean-energy.gr



Tenerife Energy Agency
Elsa López Suarez
promise@agenergia.org



Forventi
Sandrine Carlier-Wiart
sandrine@forventi.com



Co-funded by the Intelligent Energy
Europe Programme of the European Union

Legal disclaimer

The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.