

# Transition Island Communities: Empowering Localities to Act (TrIsCo)



# The Partnership



## the Environment Centre (tEC)

An environmental charity from South East England, UK



## ACER Reggio Emilia

A Social housing operator representing 45 municipalities and the Province of Reggio Emilia, Italy



## Universidad de Sevilla

The University of Seville, Andalucía, Spain



## Stichting Brabantse Milieufederatie

A not for profit organisation from North Brabant, the Netherlands



## Gotlands Kommun

The Municipality of Gotland, Sweden



## Viimsi Vallavalitsus

The rural Municipality of Viimsi, Estonia

# TrIsCo Aims

- To enable different 'islands' of communities (households, businesses and public bodies) to reduce their Carbon Dioxide (CO<sub>2</sub>) emissions by changing their attitudes and behaviour towards resource use
- Embed sustainability (social, economic and environmental) into behaviour change drivers;
- Overcome barriers to implementing low carbon communities.

TrIsCo is part financed through the POWER programme from EU Interreg IVC.



Project part-financed by the European Union



# Key Outcomes

The 'Empowering CO<sub>2</sub> Reduction' catalogue will contain instruments, initiatives or local authority action plans with quantifiable measurement tools including a simple Energy Assessment Tool.

This tool allows the calculation of a buildings CO<sub>2</sub> emissions and can demonstrate areas for potential improvement.

The catalogue will provide a framework for public bodies, commerce and communities to take action and assess their own success. Through the collective experiences of the partnership, the catalogue will be useful to communities and organisations across Europe, whatever their current involvement in the climate change debate.

The project will evaluate and advertise the CO<sub>2</sub> savings of the communities, and the consequences of these savings, so they can see that they are making a real difference, thus encouraging further behaviour change.



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# Communities

- Affluent city streets
- Fuel poverty districts
- Council-owned blocks
- Social housing estates and associations
- Rural communities
- Island communities
- Businesses



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# Project Activities & Timeline

Project activities include:

- Study Tours and Interregional Events
- Simple Energy Assessment Tool
- Business Workshops and Seminars
- Schools education programmes
- Community events
- Action packs for residents

Project timeline: July 2009 - September 2011



Solar & Biomass Heating Fair,  
Gotland, Sweden



PSG Meeting, Gotland, Sweden



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# The activities of ACER

The ACER activities in the TrIsCo project include:

- The creation of 6 networks for disseminate information on the TrIsCo activities (newsletters, events, materials, products, etc.)
- The organization of an interregional event
- The identification and dissemination of good practices
- The evaluation of the carbon footprint in some apartment buildings managed by ACER (project "Condomini Virtuosi")
- The organization of neighborhood fairs on themes of climate change and energy conservation ("Festa del Vicino 2011")
- The organization of an in-depth technical seminar for SMEs



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# THE ROLE OF ACER (SHO)

SHO involved in the management of buildings and also in the “management of tenants”

Changing needs: new style of life, integrated sustainability (social, economic and environmental sustainability)

It will be necessary promote new activities and action for sustainability.

New roles for policy and technology research, promoting a new sense of responsibility and ethical behavior

Promote research and experimentation

To promote new business models

To promote "best practices"

Samples and concrete actions

Find new financial instruments



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# WORKING TOOLS

## WORKING TOOLS:

1. ECOABITA LABEL
2. ENERGY RETROFIT OF THE BUILDINGS
3. LOCAL PROJECTS: ABC Energia
4. COMUNICATION TOOLS



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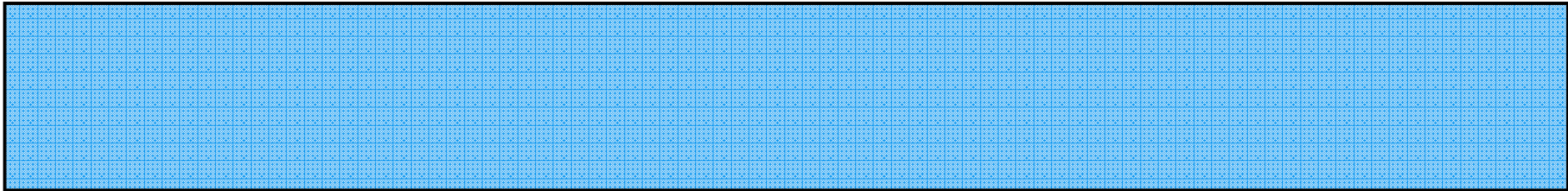


# ACER BEST PRACTICES



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# ECOABITA



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# ECOABITA

ECOABITA is a set of administrative measures, incentives, technical specifications, communication campaigns and training at all levels, which for the first allowed the launch of Directive 2002/91/EC (Energy Performance of Buildings) on a large scale in Emilia Romagna region

 Regione Emilia-Romagna



The Emilia Romagna Region, the Province and the Municipality of Reggio Emilia, and ACER Reggio Emilia, have reached an agreement in November 2005 to set up and test on the territory all the measures for the implementation of Directive 2002/91 / EC.

In particular, to test the promotion of:

- Standard for high performance buildings
- Plans for dissemination and communication
- Incentive systems
- Training courses for technical and business operators



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# ECOABITA - COMMUNICATION

Communication campaigns have been carried out on major magazines, radio, TV and newspapers, information kits for schools, citizens and technicians.



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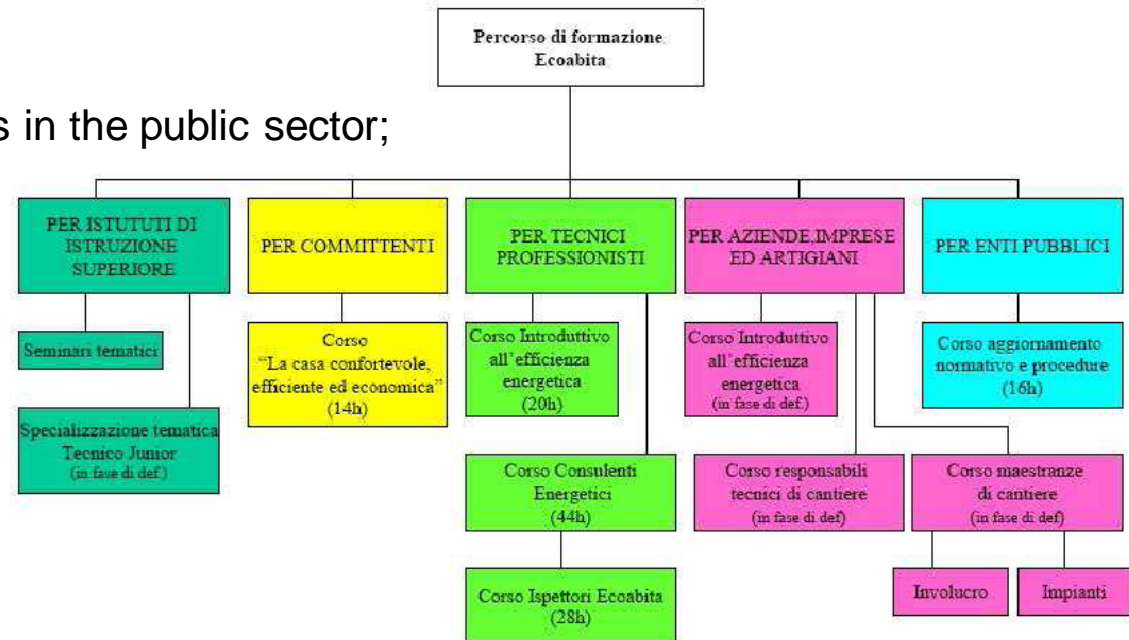


# ECOABITA - TRAINING

Different types of courses for:

- Students
- Architects, engineers and workers in the public sector;
- Small and medium enterprises;

Specific courses for:  
energy consultants  
certifiers



ECOABITA is a voluntary certification system  
In agreement with the regional rules.



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# ECOABITA - PROMOTION

- Public exhibitions, participation in fairs
- Information Point
- Conference on Ecoabita System



**ecocasa & impresa**

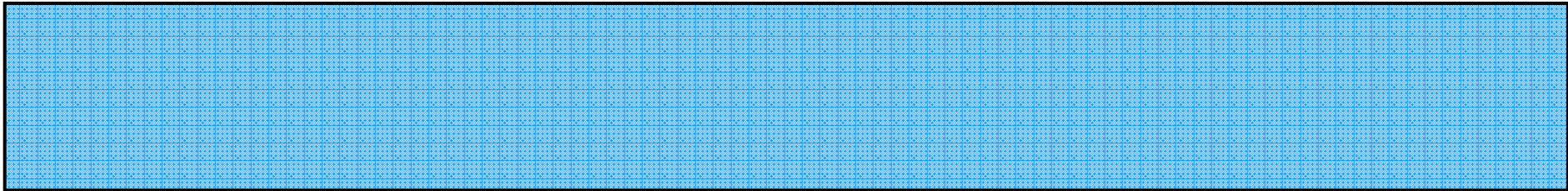
26 Febbraio - 1 Marzo 2009

HOME STAMPA INFO VISITATORI INFO ESPOSITORI CONVEGNI ECOCASA 2008

The banner features a collage of eco-friendly images: a wind turbine, a sunflower, a ladybug, and a green house. Below the main image is a navigation bar with six buttons: HOME, STAMPA, INFO VISITATORI, INFO ESPOSITORI, CONVEGNI, and ECOCASA 2008. Each button has a small icon representing its function.



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# ENERGY RETROFIT OF THE BUILDINGS



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# ENERGY RETROFIT

## Study case: Sant'Ilario Via Matteotti

- Analysis of buildings and plants
- Analysis of the state of the art
- Visit for observations and photographs
- Analysis of building structures and windows
- Systems and plants check-up
- Consumption check-up



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# ENERGY RETROFIT

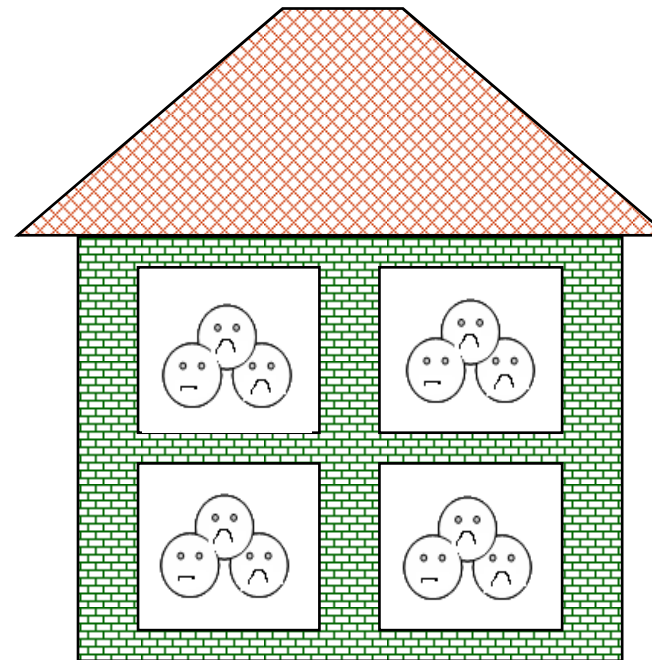
## Study case: Sant'ilario Via Matteotti

From the interview of tenants:

Problems with sanitary hot water

High energy costs

Indoor comfort problems



**Social starting point**



# ENERGY RETROFIT

## Analysis of building and plant: final report

VIA MARAMOTTI 25 - REGGIO EMILIA

### INTERVENTI DI ENERGY RETROFIT SULL'IMPIANTO

PROGRESSIVA RIDUZIONE DI CONSUMO DI COMBUSTIBILE E DELLA SUA SPESA GRAZIE AGLI INTERVENTI:

INTERVENTI SUI CORPI SCALDANTI

Valvole termostatiche



mc di combustibile  
mq anno

7,8



Spesa annuale  
climatizzazione  
Euro/anno

5,50



pannello riflettente dietro  
ai radiatori

CALDAIA A CONDENSAZIONE



mc di combustibile  
mq anno

6,2



Spesa annuale  
climatizzazione  
Euro/anno

4,40



SISTEMA DI CONTABILIZZAZIONE



mc di combustibile  
mq anno

5,6



Spesa annuale  
climatizzazione  
Euro/mq anno

3,96



### RIDUZIONE EMISSIONI INQUINANTI

Sostanza  
inquinante

g\*kWhmq anno



CO<sub>2</sub>

57.904



SO<sub>2</sub>

5



NO<sub>X</sub>

44



Particolato

1



Idrocarburi

29



CO

9

### PRESTAZIONE ENERGETICA DOPO GLI INTERVENTI DI ENERGY RETROFIT SUL SISTEMA IMPIANTISTICO



Fabbisogno energetico/mq  
kWh mq/anno

54



Rapporto di forma

S/V = 0,36



Classe  
energetica F

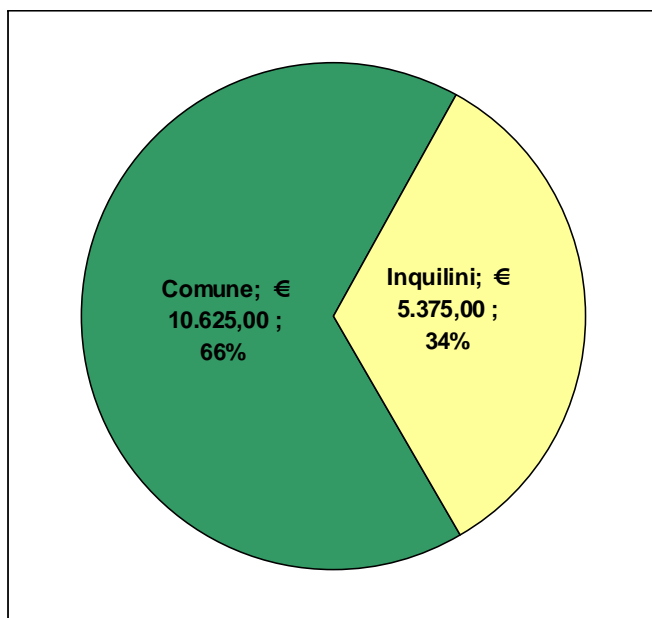
# ENERGY RETROFIT

## Study case: the agreement with tenants

How to finance the operation?



COMUNE DI  
SANT'ILARIO D'ENZA



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# ENERGY RETROFIT

## Study case: Sant'ilario Via Matteotti – Our Results

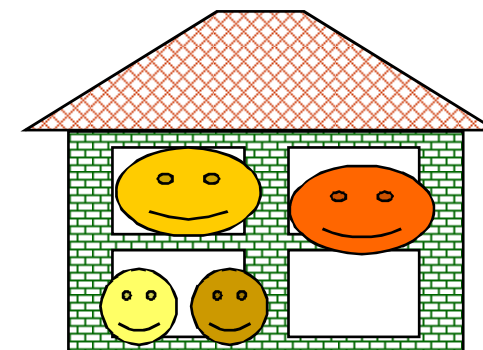
	(m <sup>3</sup> ) pre	€ pre	(m <sup>3</sup> ) post	€ post	Saving (m <sup>3</sup> )	Money saving €
Edificio 16-18	20.716	20.836	13.411	11.000	<b><u>7.305</u></b> <b>(35%)</b>	<b><u>9.836</u></b> <b>(47%)</b>
Edificio 20-22	18.057	22.269	12.234	10.050	<b><u>5.823</u></b> <b>(32.2%)</b>	<b><u>12.219</u></b> <b>(55%)</b>

### Financial results

Solved the problem with sanitary hot water, reduced fuel consumption with the new generation system, optimized thermal comfort indoors.

The accounting system has helped to empower users in the use of heating.

During the audit it has been observed a reduction in consumption cost about 50%



### Social results



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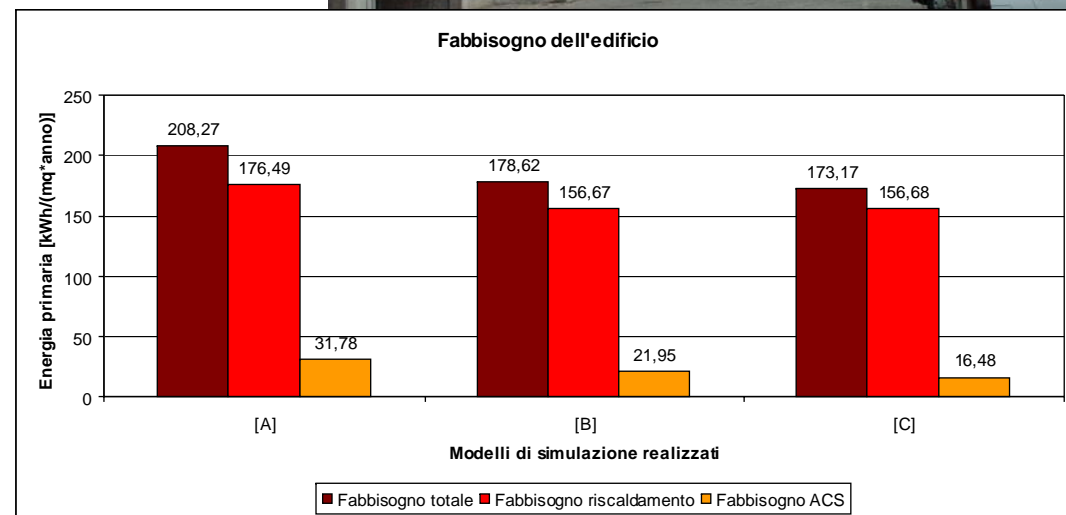


# THE NEXT STEP: Scandiano, via Matteotti

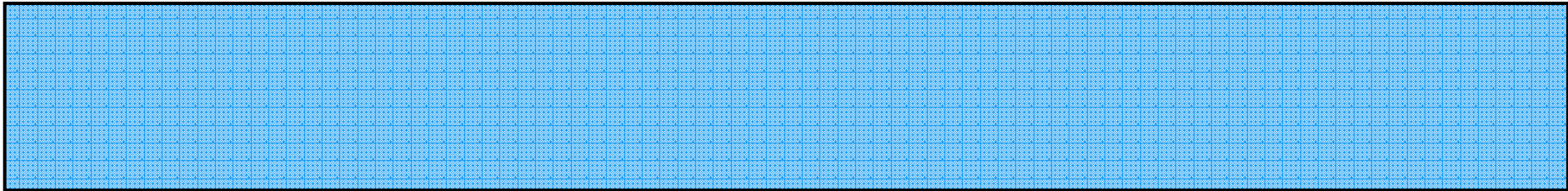
48 dwellings

Energy retrofit

Ecological footprint system before and after the energy refurbishment



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## ABC Energia

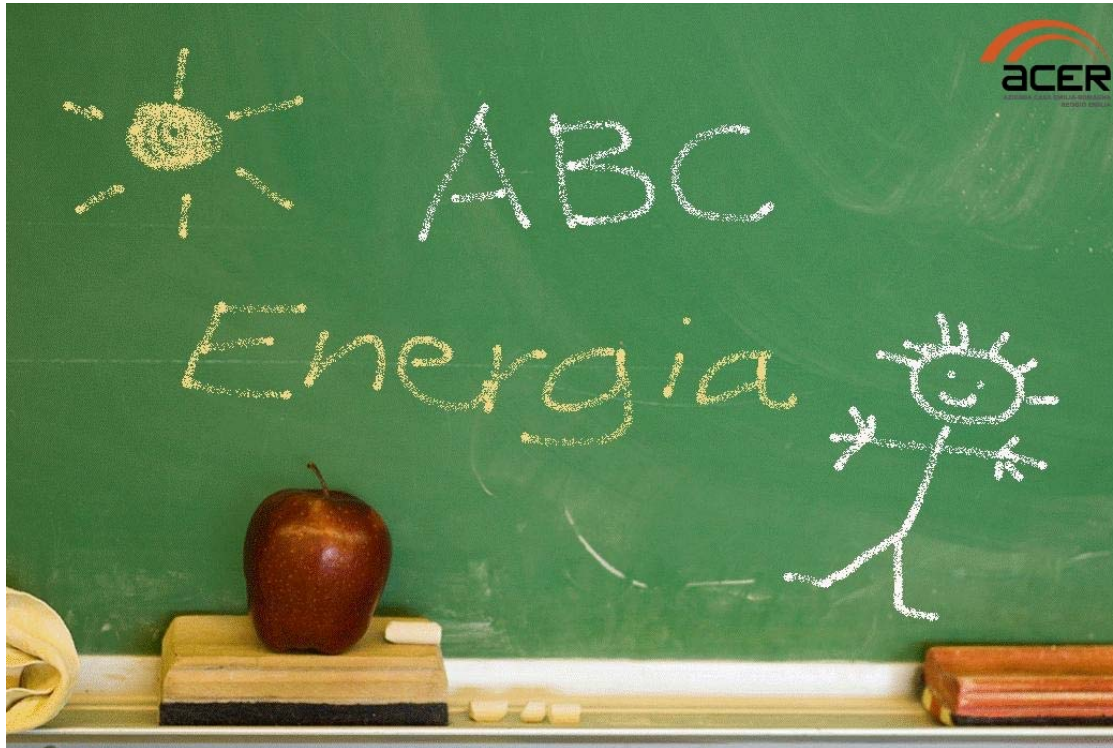


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# ABC Energia

Green economy as driver of growth for public buildings



- Provincia di Reggio Emilia
- Acer Reggio Emilia
- 20% of funding coming from Regione Emilia Romagna
- Minimum performance level **500 TEP** of energy saving



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# ABC Energia

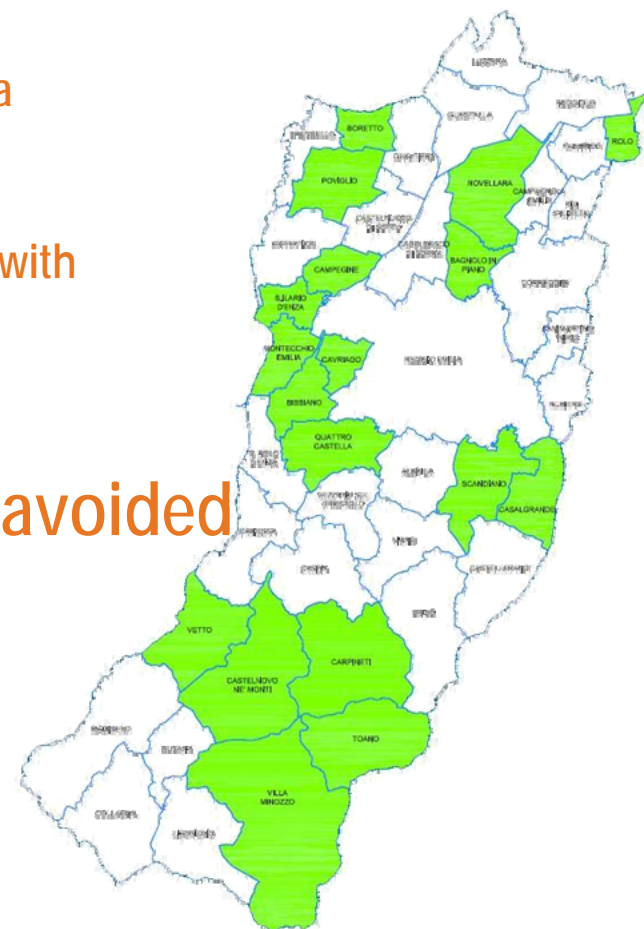
- Provincia di Reggio Emilia – owner of the project
- Comune di Bagnolo in Piano
- Comune di Boretto
- Comune di Campegine
- Comune di Cavriago
- Comune di Sant’Ilario d’Enza
- Comune di Scandiano
- Comune di Toano
- Comune di Vetto
- Comune di Villa Minozzo
- Comune di Castelnovo ne’ Monti
- Comune di Carpineti
- Comune di Quattro Castella
- Comune di Gattatico

Province Reggio Emilia  
and 13 Municipalities

Avoided consumption with  
global intervention:

**872 TEP**

**2.500 ton CO2 avoided**



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# ABC Energia

## Energetical certification of the public buildings

- Initial screening
- Simulation and analysis
- Final Report, possible interventions, costs, environmental results and new energy performance after refurbishment.

It is necessary to show to the citizens the energy performance of public buildings.

Every public building will have energy certification.

## MONITORING SYSTEM

- Acer Reggio Emilia will be responsible for monitoring system for next 3 years:
- Energy production and consumption
- Performance of the plants and malfunctioning
- Maintenance interventions

The municipalities will be in condition to know the energy performance of their buildings according to environmental certification.



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# ABC Energia

Global cost of the project € 13.391.000

Regional fund about € 1.200.000

Avoided expenses € 600.000/anno

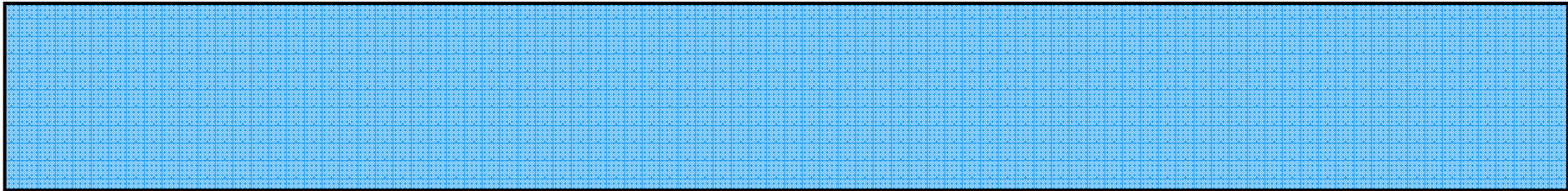
TEP avoided: 872

Cost/tep €15.356



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## COMUNICACION TOOLS



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# ENERGY INFO POINTS



## Education and information

- Sportello "Info Energia"
- Environmental education of citizens

- Students training
- Training for workers of public companies



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# NEW COMMUNICATION SYSTEMS

**TELEREGGIO**

martedì, 02 novembre 2010, ore 14:31

Home

Oggi in tv

Stazione Meteorologica

Telereggio in Digitale



Media Center

TG REGGIO

Meteo

Programmi

Buongiorno Reggio

Habitat

Dare & Avere

Il medico e il cittadino

Felice di giorno

Carosello

Programmi > Buongiorno Reggio



- BUONGIORNO REGGIO
- Once a week for 12 weeks of local TV program about Social House problems



Communication of consumptions from monitoring system to mobilephone or message to the tenants by new digital tvsystem

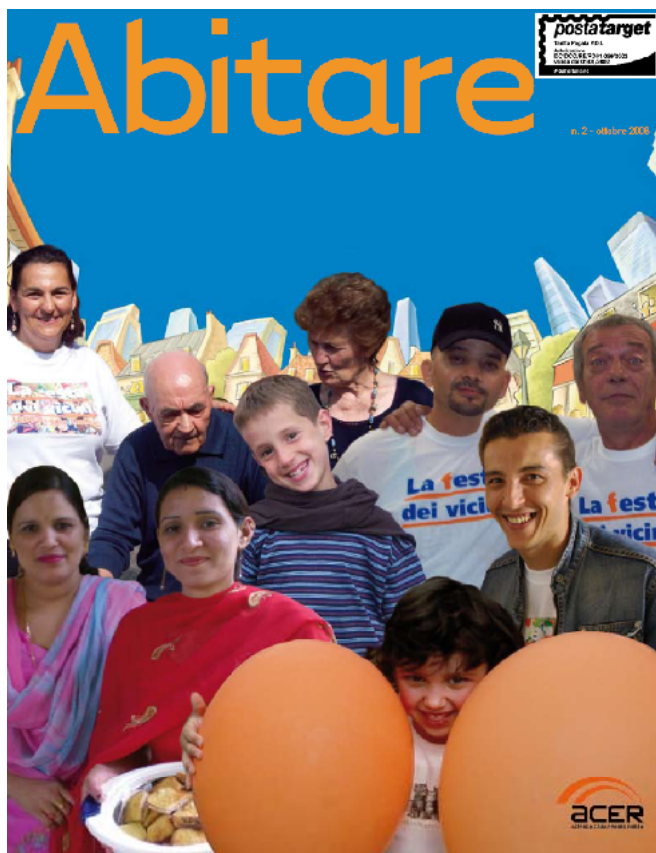


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# MAGAZINES



Communication to tenants using ABITARE magazine and depliant



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# GUIDELINES

During the contract signature the tenants receive documents, keys and brochures about:

- How to read the bills
- Simplified Regulation: how to use your flat
- Energy and water saving (lamps, washing machine, domestic tools, correct timing....)

The Guidelines are available on ACER website



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# STREET PARTIES



In 2011 the street parties will point out the energy improvement and behaviour changes.



- In the last 2010 ACER organized more than 40 different street parties



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# EUROPEAN PARTNER BEST PRACTICES



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atstraatfeest: •••• 1. Peter Corneliusstraat, Waalwijk •••• 2. Boterbloemweg, Alphen aan den Rijn •••• 3. Koster

HOME  
MIJN STRAAT  
MIJN GEMEENTE  
MIJN PROVINGIE

# KLIMAATSTRAATFEEST

ZO DOE  
OVER H  
SPECI  
ENER  
SAMEN  
CONTACT



**DOE MEE!**

maanden feest in alle klimaatstraten  
Nederland! MEEDOEN? Druk op de knop!

**DOET JOUW STRAAT MEE?  
CHECK HET HIER!**

Vul hier je straat- en plaatsnaam in

**GO!**



**TOP 500**

1. Peter Cornel..., Waalwijk
2. Boterbloemweg, Alphen aan
3. Kosterij, Venhuizen
4. Fruithof, Biddinghuizen
5. Langendijk, Tilburg
6. Overhagenseweg, Velp
7. Vrouwjutenhof, Utrecht
8. Tourslaan, Eindhoven
9. Prins Bernha..., Hoogerheide
10. Reigerskamp, Maarssen
11. Heirweg, Balinge



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# Best Practice: Climate Street Party Competition

## Climate Street Party Website

Individuals make a personal account

Points are awarded for:

- Taking energy saving actions their house

- Taking energy saving actions with their neighbors

- Recruit new participants

## The Party

The 500 best streets win a party package

- Each participating address receives €25 in food coupons

- The best street wins a fully organized party including BBQ and a performance by

- famous artist



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# Best Practice: Energy Monitor Loan Scheme

**Location:** Hampshire, UK

**Duration:** 6 months

**Aim:**

To increase homeowners' awareness of energy use in the home  
To reduce electricity 'waste', CO<sub>2</sub> emissions and utility bills

- To allow homeowners to see which appliances and devices use the most energy and see the effects of switching these off

**Baselining electricity use:**

- through assessing previous bills
- A period where participants install the monitor but maintain their usual behaviour
- This is recorded on the monitor and provides a secondary baseline

OWL Electricity Monitor



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# Best Practice: Energy Monitor Loan Scheme

## Support:

*Short information session* - focussing on how to read bills, understanding and installing the monitors

*An information pack including:* an easy installation guide, step-by-step guide (what residents should be doing), and a data recording sheet

*A feedback session* at the end of the scheme to discuss experience, find out how much energy, CO<sub>2</sub> and money was saved

## Communications:

- A free phone advice line for tips about energy saving in the home
- TrIsCo web pages- participants can send tEC their meter readings and post comments about their experiences.
- E-shots with useful tips, reminders etc.

### Understanding Your Energy Bills

What is this bill for? → Electricity

Is this a real meter reading, or has it been estimated? (E, C, A) → Customer's Meter read on 31.01.2010

Are there any other charges? → Standing charge (£) from 01.02.2010 to 28.02.2010

For what period am I being charged? → 01.02.2010 to 28.02.2010

How many units have I used? → 155

How much does each unit cost? → £12.28

How much do I need to pay? → £12.28

Supply details			
Property address			
Electricity reference number			
Supply number			
Tariff			
Customer's Meter read on	31.01.2010	76758	
Customer's Meter read on	28.02.2010	76913	
Units		155	
Rate per kWh		155	
Rate per kWh		16.90	
Total cost of electricity used (excluding VAT) £		£2.62	
Standing charge (£) from 01.02.2010 to 28.02.2010		£2.50	
Keeping track of your budget plan			
	Before this month	This month	Total
Cost of electricity you have used	£178.52	£19.40	£197.92
Your payments	£198.00	£12.00	£210.00
Balance		£12.28	
Your monthly Electricity payment			
Net budget plan		£12.00	
VAT @ Energy Rate		£0.60	
Total		£12.60	



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# Best Practice: Public Campaigns to promote Domestic Solar and Biomass Heating

**Location:** Gotland, Sweden

**Aims:**

To promote the transition from fossil fuel heating systems to Renewable Energy solutions

To encourage increased up take by residents

To inspire local businesses to take advantage of potential market growth

The municipality contacted businesses within the solar and biomass heating supply chain and encouraged them to become actively involved in developing a programme for the fair. This resulted in the formation of a local entrepreneurs network.

The fair was partly funded by the Municipality through the TrIsCo project, with a small fee for the participating businesses.



Project part-financed by the European Union







Solar heat- and bio fuel fair 2010 May 7- 8



Project part-financed by the European Union

# Best Practice: Public Campaigns to promote Domestic Solar and Biomass Heating

A recognised expert in the field of solar and biofuel heating systems was invited to attend the fair to deliver a training seminar for the businesses and also to promote the technologies to the wider public.

The Fair was held in the grounds of a hotel with a state of the art renewable energy system, combining solar PV and biomass heating.

A total of 23 businesses exhibited their products: 10 mainland suppliers, 13 local bio-energy and solar energy entrepreneurs. Feedback from the participating businesses was extremely positive.

Figures for successful installations resulting from this fair are being recorded, in order to calculate CO<sub>2</sub> savings.

A total of 29 best practices will be identified throughout the project and form the backbone of the Empowering CO<sub>2</sub> Reduction Catalogue.



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# TrisCo. Transition Island Communities: Empowering Localities to Act



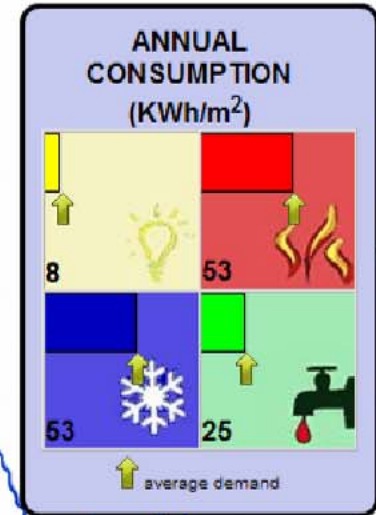
Welcome | CANCEL THE ASSESSMENT TOOL

**ANNUAL EMISSIONS (KgCO<sub>2</sub>)**  
**14195**  
 It would take an area of forest equivalent to 2.7 football fields to absorb CO<sub>2</sub> emissions of your home

Your house is here



This results should not be considered conclusive. The questionnaire is not an energy certification tool but a guide on energy consumption. Thank you for your help.



Agenzia Andaluza de la Energía  
 CONSEJERIA DE ECONOMIA, INNOVACION Y CIENCIA





# Find out more

For more information about the project including upcoming events, reports and newsletters visit the TrIsCo web pages: [www.environmentcentre.com/trisco](http://www.environmentcentre.com/trisco)

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# Energy efficiency is everybody's business. Grazie dell'attenzione



[www.federcasa.it](http://www.federcasa.it)



[www.acer.re.it](http://www.acer.re.it)

[www.ecoabita.it](http://www.ecoabita.it)



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