setcom

Sustainable Energies in Tourism dominated Communities

Tourism Companies go Green

The European SETCOM Project – Leading the way in Energy Saving!

INTELLIGENT ENERGY EUROPE

IEE Project SETCOM

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Sustainable Use of Energy in Tourism Dominated Communities

The European SETCOM project, co-financed by the EU programme Intelligent Energy Europe (IEE), started in October of 2008 and ran until March of 2011. It aimed to raise awareness on energy related topics and encouraged the use of sustainable energy in tourism across Europe. SETCOM was developed in the framework of the Brandenburg Energy Technology Initiative (www.eti-brandenburg.de) and was coordinated by the Potsdam Chamber of Commerce and Industry. Within SETCOM, 11 partners from 10 European countries cooperated to reach the project targets. Each of these partners pioneered the way in sustainable energy use within their community´s tourism industry.

The target groups were comprised of stakeholders from tourism related businesses. These stakholders varied greatly and included administrators, employees and tourists themselves.

The Three Main Project Targets:

- Raise awareness of substantial energy topics among tourism companies, local administration and tourists in the participating communities.
- Raise awareness of 'sustainable energy tourism' throughout Europe.
- Set up energy action plans for the participating communities with realistic and clearly defined ways to improve energy efficiency and reduce GEG-emissions.

SETCOM supported companies in the tourism industry by providing ideas to reduce energy costs and region based best practice examples that show how energy efficiency can be successfully achieved. Together with energy experts, energy saving measures in selected companies have been achieved and acknowledged.

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Introduction

Responsible Travel as a Key to Protecting the Climate

Taking a vacation is a common yearly ritual for many Europeans. However, most holiday related activities contribute greatly to our carbon footprint. Fortunately, action can be taken to change our behavior and to lower the environmental impact of our travel plans. Many tourists have found ways to consume less energy during their holidays: They might choose eco-friendly accommodation and use local public transportation.

Tourism Companies for a Low Carbon Holiday

Tourism companies often depend on the awareness of tourists to save energy. However, they can be proactive by implementing sustainable strategies. This is a chance to strengthen their competitive edge in the market while also reducing their energy costs considerably. A commitment to the environment leads to notable economic benefits for companies. Moreover, by being sustainable, tourism companies address a new group of clients: The eco-conscious tourist.

Tourists are becoming more responsive to energy conscious hotels, a fact that has been highlighted by the United World Tourism Organisation (UNWTO) in a similar project about energy saving in hotels: **www.hotelenergysolutions.net**

Today, tourism companies have many options to support sustainable tourism: They can promote regional products, reduce their energy consumption through renewable energy supply, provide tourists with information about sustainable holidays and gentle tourism tours, train their own staff in energy saving and improve awareness of sustainable tourism.

The tourism industry is a major contributor to high CO_2 emissions.

The European SETCOM Project – Leading the way for Energy Saving in Tourism

The European SETCOM project, financed by IEE funding, shows the feasibility of innovative environmental strategies and energy saving within the tourism industry. This brochure will introduce some of the best practice projects that have been initiated during the lifespan of the project, demonstrating effective energy saving techniques.

SETCOM supports the EU action plan for sustainable tourism. By implementing the project activities, the first step towards sustainable energy use in the tourism industry in select European countries has been taken. The participating communities pioneered the way for sustainable tourism.

The ten participating countries presented on the following pages have worked together under the leadership of the Potsdam Chamber of Commerce and Industry to reach the project goals and foster the use of renewable energy in the tourism industry.

Energy Saving and Tourism

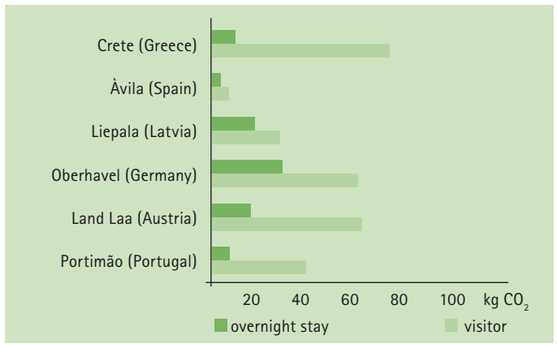
Energy Saving in Tourism – A Key Challenge in the Near Future

Tourism is one of the fastest growing industries in Europe, being one of the most popular destinations for both cultural and natural attractions. A rising number of tourists visit Europe every year, bringing sustaining income to companies in the tourism industry. This increase in tourists has been positive in terms of economic growth. However, the effects are also negative for the environment and climate. A high number of tourists equals high energy consumption:
During their holiday stay, tourists tend to consume more energy, water and produce more waste than they normally would in their own home. This is a big problem for the respective countries because tourism is often concentrated in smaller regions during a short, seasonal period. This makes dealing with environmental problems increasingly difficult.

Strategies must be found to protect the climate and lower the energy consumption across the tourism industry – strategies that make tourism facilities more sustainable. This is what the project SETCOM advocates.

Regional CO_2 Emission Caused by Tourism – Results of the SETCOM Project

One of the main goals of SETCOM is the reduction of the energy use and the green house gas emissions caused by the tourism industry. The following graphic shows that the impact of tourism varies from country to country. Regarding the regional CO_2 emission caused by tourists use of electricity, one can see that the CO_2 emitted per visitor is between 7 kg (Spain) and 76 kg (Crete) and between 4,3 kg (Spain) and 31,4 kg (Germany) for an overnight stay.



Tailor-made Energy Saving Solutions for SME Tourism Facilities

As a result of a survey performed by the European SETCOM project – Sustainable Energy in Tourism dominated Communities – it was determined that hotels consume the greatest amount of energy in the tourism industry, but only a small number of them already use renewable energy sources. Small and medium sized tourism facilities such as smaller hotels, campgrounds and spas are interested in reducing their energy costs. However, interest is not enough, they need to be informed of existing possibilities. There is still a clear lack of knowledge, awareness and trained staff.

There is still great potential to save energy and reduce the CO_2 emissions in SME tourism facilities.

These small and medium sized accommodation facilities should focus on energy saving. Tailor-made solutions are the key for these type of facilities because most of the existing energy efficient measures address larger hotels. However, the small and medium sized tourism facility sector is expected to grow in the upcoming years, so this may change. Addressing these tourism companies will be a remarkable step towards a better climate.

There is a Need to Act and Mobilize the Tourism Industry to Save Energy

SME tourism facilities need specialized support from energy experts regarding:

We should act now to keep our environment clean for our future.

- Energy Management Systems
- Energy saving measures
- New energy saving technologies
- Existing subsidies to finance energy saving measures
- Trends and customer preferences in tourism

Change is possible, but the industry must be informed in order to succeed. Tailor-made energy saving solutions should be developed to meet the varying technological requirements of each tourism facility.

SETCOM in Greece

Region Crete

Best Practice Example

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Project Partner INEC

INEC is a state non profit organization based in Chania, Crete, Greece. Its main aim is to support new innovative companies. It also currently hosts nine enterprises across various sectors. Apart from supporting enterprises, Chania actively participates in various EU funded projects.

Region Crete

Crete is one of the most popular tourist destinations in Greece for foreigners and locals alike. Clearly, tourism remains a critical economic industry for the island, providing significant potential for economic growth and regional development. The last few decades witnessed the development of a diverse tourist infrastructure thus increasing the capacity to accommodate more tourists in the four prefectures.

There are many opportunities for the use of energy saving technologies in tourism companies!

Important establishments such as museums, archaeological sites, monasteries, churches and other monuments have also recently been reconstructed or renewed. Crete received 21.8 % of tourist-related investment for Greece, leading to the generation of 30.499 beds (23.2 % of the national). The island's' hospitality businesses vary in scale from small family run operations to large international chains.

Main Results

- *Implementation of various energy audits in local hotels.*
- *Implementation of awareness raising campaigns and various seminars for staff and owners of tourist enterprises.*
- *Implementation of an energy action plan in the municipality of New Kydonia in the prefecture of Chania.*
- *Implementation of a case study in a 5 star summer hotel in Chania and in an agritourism facility.*
- *Implementation of a sustainable traffic plan in the local municipality.*
- *Creation of various energy tours in the prefecture of Chania.*
- *Publication of various leaflets and articles in local newspapers.*

Hotel Panorama

Hotel Panorama is a mid-sized summer hotel, built more than 30 years ago. The hotel offers 360 beds, 3 swimming pools, 2 bars and 2 restaurants. All of its rooms are fully air conditioned.

Approximately 10 years ago the hotel was fully renovated in order to reduce energy consumption. The energy saving renovations included:

- Roof insulation.
- Application of energy control in the rooms.
- Installation of energy efficient bulbs.

During a 2009 energy audit carried out under the SETCOM project, it was analysed that there was still room to improve the existing energy saving technology and applications. Renewable energy can be used in the Hotel Panorama to reduce its dependency on fossil fuels and thus reduce CO_2 emissions due to energy use. Recommendations were made to the hotel management. The proposed measures focused on higher energy efficiency. The estimated effects of the suggested measures for energy performance improvements for Hotel Panorama included:

- Up to 90 % decrease in oil consumption due to installation of a solar thermal system.
- 30 % decrease in lighting energy due to use of energy efficient bulbs.
- 10 % decrease in cooling energy due to ceiling fans.
- 15 % decrease in the energy consumed in the kitchen due to heat recovery from various energy efficient appliances.

Benefits of the Project – The Introduction of the SETCOM Team

The Hotel Panorama cooperated closely with the SETCOM project managers in order to make the needed improvements. As a result, the hotel became home to the 4th SETCOM steering committee meeting, where participants were introduced to the newly planned solar thermal system by the leading engineer.

Measures in Short

- Use of solar thermal system for hot water production.
- Installation of ceiling fans in the hotel rooms and throughout the common areas.
- Use of more efficient lighting everywhere.
- Use of a photovoltaic system for covering part of its power needs.
- Heat recovery from various refrigerators in the kitchen to reuse for heating purposes.
- Recycling of used vegetable oil from the kitchen for biodiesel production.
- Improvement of building insulation.

SETCOM in Spain

Province of Àvila

Best Practice Example

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Project Partner APEA

APEA is an energy efficiency agency in the province of Ávila created by the Deputy County Council of Ávila within the framework of the SAVE program of the European Commission. APEA encourages renewable energy use and works to raise the energy efficiency in rural and urban areas.

The agency provides a specialized service by improving rational energy use and environmental development. Its aim is to disseminate an energy efficient culture and the use of renewable energy sources. To achieve these objectives, the agency has developed provincial activities.

Province of Àvila

At 1126 m above sea level, Ávila sits at the highest elevation of all provincial capitals in Spain. To the north, it shares a border with Valladolid, to the east with Segovia and Madrid, to the west with Salamanca, and to the south with Cáceres and Toledo. The economy of the province is based on agriculture and livestock. Moreover, primarily being an area focused on rural tourism, the nature of tourism in this area is often in line with environmental care.

According to the Spanish National Institute of Statistics, Ávila received 533.918 travelers and 988.091 overnight stays during the year of 2009. In the province of Ávila, there are 113 hotels, 7 spas, 14 campgrounds, 724 facilities belonging to the agritourism (rural houses) and 475 restaurants. The main types of energy used in the region are for electricity and oil. The electricity is mainly needed for lighting and kitchen equipment. It is however quite remarkable that a high percentage of tourism facilities are already utilizing renewable energy such as wood biomass and solar energy.

Awareness building is the best tool to increase the energy efficiency in Rural Tourism!

Main Results

- *Energy Action Plan aimed at Rural Tourism.*
- *Identification of main focus areas of energy profitability in the tourist facilities.*
- *Increased awareness in energy saving for all stakeholders involved: Employees, entrepreneurs and tourists.*
- *Specific solutions to reduce energy consumption and CO_2 emissions in the tourism facilities.*

Centro de Turismo Rural Fábrica Cabrera, Hoyocasero

The Fabrica Cabrera Rural Tourism Centre was the first tourist accommodation in Spain and the peninsula that was heated by renewable energy. Its promoters, Raquel Rodriguez Otero and Alberto Jimenez „Revolware", began to shape the project in 1998. The final inauguration took place in 2001.

The house was designed and built following the basic principles of bioclimatic architecture, inspired by the work of bio-building developed in the Ladakh Ecological Development Group in Leh (India) (1989).

Use of Solar Energy:

- The rooms were built with the correct orientation to the south.
- In order to maximize solar catchments: All rooms have large windows.
- Dark colors were used in the catchments' areas.
- Other passive catchment systems were used such as: 64 m² of photo thermal panels, "Trombe" wall, etc.

Heat Accumulation:

- Through building elements such as slate floors, solid brick rather than concrete block, concrete in "Trombe" walls.
- Water as the heat storage in two tanks storing 1000 (HSW) and 2000 liters (heating).
- Optimization of insulation in walls and windows, especially on the north side of the building.

Construction Materials:

- The use of polluting materials such as PVC, polypropylene and polyethylene lattice, were minimized.
- Mineral and open pore paints and varnishes were used.
- A chamber for removal of radon gas was created.

The Rural Tourism Center Fabrica Cabrera is currently implementing some of the measures recommended in the framework of the SETCOM energy audit.

Measures in Short

- Use of thermal solar power plant for the generation of hot water.
- Use of automatic control of the solar power system to improve performance.
- Installation of lighting activated by motion sensors in the corridors.
- Replacement of a pellet stoves no longer in use with a system built fireplace with a coil.
- Installation of a high performance condensing boiler. Temperature is lowered through a boiler room with ceiling height twice that of the kitchen.
- Installation of a heat pump with ACS generation.

11,3 t
CO_2 could be saved per year!

SETCOM in Italy

Region Marche

Best Practice Example

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Project Partner SVIM

SVIM – Sviluppo Marche SpA is a development agency in the Marche Region, established by Regional Law in 1999. SVIM operates with the Marche Region and plays an important role in the implementation of regional development policies. Its aim is to develop regional, European and international projects on the basis of the objectives defined within the regional operative programmes and the strategic lines derived from consulting concerned organizations.

In particular, SVIM in accordance with the Regional Public Authority, implemented a strategy in 2006 to develop initiatives and processes aimed to make the local communities aware of the importance to use energy sources efficiently, and to foster the adoption of renewable energy sources by local stakeholders and key actors.

Region Marche

Marche region is characterized by a seasonal tourism flow. In the first nine months of 2007, 2.175.003 tourists arrived in the Marche region which means 45.229 more units than the previous year in the Ascoli Piceno province, where the SETCOM pilot area is located. In 2007, the major number of overnight stays was recorded at 533.005 (source: Regional Touristic Promotional Programme 2009).

Energy efficiency in tourism contributes to sustainable living in changing economies!

The Marche pilot area ranges from the hinterland (mountainous chains of Laga and Sibillini Mountains) to the coast of Adriatic sea (San Benedetto del Tronto – Grottammare). Due to the differing landscapes, the touristic sectors vary accordingly. Most vacation at the seaside, while less vacation at the artistic/historical localities for city trips. The fewest number of tourists head to the mountains and hill localities for the numerous agritourism businesses and country houses for skiing and farm holidays.

Main Results

- *Awareness raising of energy themes of the municipalities involved in the pilot area.*
- *Increasing interest and knowledge of the pilot area within the tourism industry on energy saving measures and renewable energy production.*
- *Increasing the interest of local policy makers in the implementation of measures to reduce traffic through the sustainable traffic concept.*
- *Implementing energy audits, feasibility studies and case studies for tourism facilities.*
- *Increasing renewable energy production in the tourism sector within the region.*
- *Raising awareness of tourists through the implementation of the behavior campaign.*

Agritourism Casa Rosa

The „Casa Rosa" sits in the soft hills of Marche Region high-country, standing out at the foot of the Sibillini Mountains. It hosts a panoramic view at 400 metres above sea level. It is typical for a farm of the region's countryside from the XVII century. This particular farm has been renewed with complete respect to the environment. Using only natural materials, the farm was renewed with techniques of bio-building and bio-ecological architecture.

The owners put particular attention to the quality of the systems, using renewable resources in order to save on energy costs and to remain respectful to the earth and atmosphere.

The renovations have maintained historical and geographic characteristics of the farmhouse, in order to remain true to the natural surroundings. The business is a member of the ecolabel Legambiente Turismo. They have also made a commitment to adopt simple, yet effective behaviour to reduce environmental impacts and improve the comfort of guests.

In agritourism, a three-phase 9,80 kW photovoltaic system has been installed made up of 56 single-crystal siliceous panels of 175 W each. The PV panels cover the roof of a 70 square meter parking lot. Special attention has been given to selecting the right materials with the main structure made of fir wood, tying in with the materials used in the main building of this agritourism business.

Additionally, in 2008 they installed a solar thermal system made up of two modules, one for the production of sanitary hot water and the other for the swimming pool heating. The agritourism business also planned a geothermal power system for the heating of new buildings. The geothermal drill has already been placed on the property and the plant will recover the heat stored by the swimming pool in the summer season and utilize it during colder seasons.

The photovoltaic panels, the solar heating and the geothermal drills will make the whole building self-sufficient; the energy producing geothermal pump will heat the new rooms.

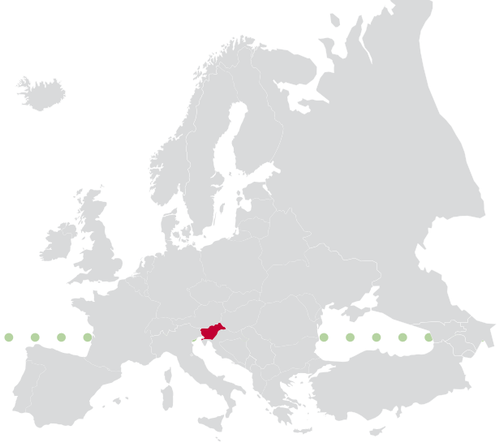
Measures in Short

- Monitoring energy and water consumption: Timer used for rooms heating systems, water flow reducers for taps, energy saving light bulbs, renewable energy systems installation.
- Separating collection of waste: Plastic, glass, paper.
- Refilling and ecological washing powders, use of steel and porcelain tableware.
- Offering free bicycles.
- Use of organic and GMO-free food from local producers.
- Staff training under ecological criteria.

11,97 t
CO_2 could be saved per year!

SETCOM in Slovenia

Region Pomurje



Best Practice Example

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Project Partner International Tourism Institute

International Tourism Institute is an economic institute and scientific research organization, founded to meet the need for professional research work in the field of tourism in Slovenia. Today, International Tourism Institute develops research methods, implements programs on tourism statistics, analyses economic and social problems and brings scientific approaches to treating problems in tourism.

The institute offers consultation services, develops educational and training programs in tourism field data and strengthens international scientific and professional cooperation in tourism.

Region Pomurje

Pomurje is considered to be an agricultural region with a well developed food and beverage industry. Tourism plays an important economic role in the region and provides a chance to improve its development. There are around 5.500 tourist designated beds in the region, of which the majority lay in spa hotels. Natural and thermal spas are scattered throughout the region, representing the core of high-quality tourism. These spas attract up to 40% foreigners.

Efficient energy management is of critical importance for the business success of thermal spa centres!

Electricity boasts the main energy type used in the region. However, natural gas and oil are also important energy sources for tourism facilities. Fortunately, the use of renewable energy sources is growing in present day. Among renewable energy sources, wood biomass, geothermal and water energy, biogas and solar energy are being used.

Main Results

- *Implementing awareness raising campaigns for tourists: Energy workshop for children in Moravske Spa & Wellness Resort.*
- *Successful workshops with representatives from tourism businessess, professionals in the field of energetics and public fund (providing co-funding information), training and promotional activities for energy efficiency and renewable energy.*
- *Designing 3 energy tours in Grenjska, Savinjska and Pomurje region – creation of innovative products as a supplement to spa tourism and as an offer for „educational tours" for high schools and universities.*

Moravske Spa & Wellness Resort

Moravske toplice is the biggest health and spa resort in Slovenia, situated in the heart of Pomurje region. The whole complex consists of a wellness area, 5.000 m^2 of water areas, conference facilities, golf course and accommodation facilities: three high-category hotels, a bungalow, apartments and a camping site. The resort is a part of Sava Resorts & Hotels Company, which actively cooperated with International Tourism Institute during the SETCOM project.

Like in other thermal spas, water heating represents a crucial part of energy consumption. With this in mind, five energy wells were drilled in Moravske toplice. With efficient use of geothermal energy sanitary and pool water is heated. Apart from that, the company is systematically efficiently reducing consumption of energy and uses it wisely in order to decrease the energy costs and emissions harmful to our environment. One of the strategic goals was also the reduction of sanitary water.

Recently the wellness resort sets up the computer system for controlling and regulating energy consumption for the whole complex. The system automatizes the heating of buildings and pool water, lighting, distribution and separation of thermal water, chemical water and wastewater treatment, ventilation and cooling of the resort. Furthermore on, the system is enabling efficient use and pumping of geothermal water out of five energy wells. With other smart solutions, the resort is moving towards becoming an environmentally-friendly hotel.

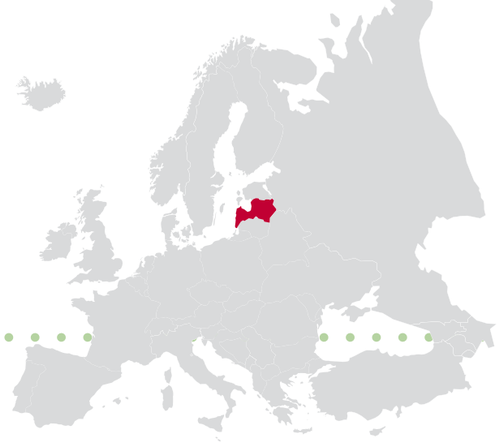
Measures in Short

- Use of geothermal energy as a renewable source.
- Energy monitoring and controlling.
- Systematic reduction of sanitary water.
- Computer guided high technology supported devices and machines used in rooms for reducing energy waste.

32,0 t
CO_2 could be saved per year!

SETCOM in Latvia

Region Liepaja



Best Practice Example

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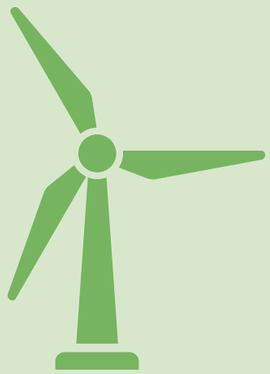


Project Partner Vides Projekti

State Ltd Vides Projekti is the supervised institution of the Ministry of Environmental Protection and Regional Development. It manages the implementation of economically and ecologically responsible investment projects attracting national and EU financial funds in Latvia.

Region Liepaja

The region of Liepaja is a free standing administrative territory and has been chosen as the pilot region for the SETCOM project. The region has a unique geographical location, as well as historical heritage. These two main aspects have strongly influenced the regional development of the tourism sector. To promote the development of sustainable energy use in regional tourism, the following objectives have been brought forward:

1. Make tourists, owners and employees of tourism facilities aware of energy saving issues.
2. Inform owners of tourism facilities about energy saving, energy management systems and practical tools that can be used to reduce energy costs easily.
3. Promote the development and the implementation of a Green Certificate in tourism facilities supported by the Ministry of Environmental Protection and Regional Development. The certificate ensures the development of an energy management system and the reduction of the energy consumption in the companies.
4. Spread knowledge about best practices and energy saving tools that are the most available for tourism facilities, organize informative seminars in cooperation with tourism information centers, develop information campaigns and involve tourism facilities in different competitions.
5. Promote information about subsidies to finance energy saving measures in tourism businesses.
6. Promote the idea of alternative energy systems and their implementation.

Specified information about energy efficiency solutions is needed in tourism.

Main Results

- *Energy action plan for the Embute Nature Park in Liepaja.*
- *Tourism route: Energy tour in Liepaja district focusing on knowledge and experience exchange about best practice in sustainable energy management and solutions in the tourism sector in the district.*
- *Informative campaign for tourists and employees regarding energy saving.*
- *Brochure: Sustainable energy use in tourism sector giving practical advice on how to improve energy efficiency in different types of tourism facilities.*
- *Educational film: Alternative energy management solutions in tourism facilities.*
- *Specific seminars: For owners of hotels, campgrounds, restaurants, spas and baths and for sustainable transport planners.*

Recreation Center Libava

The Recreation Center Libava is in an unbeatable location by the Liepaja Trade Canal in the centre of Liepaja between the Baltic Sea and Liepaja Lake. The history of the recreation centre Libava goes back to the year 1772. The building where Libava is situated was first used as two guard pavilions connected by a bridge. During the world economic crisis that took place from 1928 until 1933, the building was used as a soup kitchen for the unemployed and a place for working labor. After 1967 it was transformed into a bureau, then library and later an exhibition hall. In 2005, renovation work was carried out on the structures and the recreation center was established.

Visitors now have the possibility to:

- Chose one of seven double rooms for overnight stays.
- Rent a banquet room, conference hall or an open-fire room.
- Enjoy the bath complex and visit a café.

The use of the building was completely changed after completion of the renovation work and establishment of the recreation center Libava. With the change of use came the need for improving energy efficiency. These changes were implemented while taking into account the historical structure. In 2009, after four years of work on the recreation center, they decided to use alternative resources to produce hot water. A solar panel on the building's roof was installed. Now the amount of energy produced by the new system ensures the reduction of natural gas consumption in the summer period.

According to an additional energy audit carried out within the SETCOM project, several measures were suggested to improve the efficiency of electricity, gas use, water use and reduce the amount of CO_2 emissions. The recommendations were discussed with the business owners who decided to invest and use existing subsidies to improve their energy efficiency.

Economical Effects:

- Reduction of the energy costs.
- Increase of the economic competitiveness.

Effects on Tourism:

- The solar panels on the structures roof promote alternative energy use in the tourism sector.
- The Recreation Center Libava is one of the structures along the Energy Route, fostering the dissemination of knowledge on renewable energy use and sustainable solutions in the tourism sector.

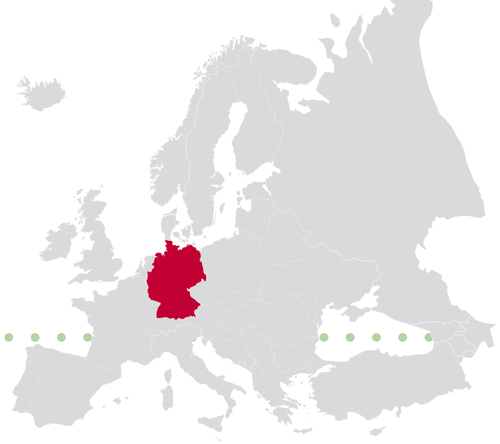
Measures in Short

- All fluorescent and halogen bulbs have been replaced by LED.
- Improvements of the ventilation and heating control system.
- Planned installation of energy meters to improve efficiency of the solar hot water system.
- Planned installation of a central system to switch off the stand-by of electric devices.

0,56 t
CO_2 could be saved per year!

SETCOM in Germany

Region Oberhavel



Best Practice Example

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Project Partner WInTO

Economy, Innovation and Tourism Development Board Oberhavel Region Ltd. works as a service provider for the domestic economy, particularly for small and medium-sized companies, founders of new businesses, local authorities and investors. WInTO is committed to educating the region and providing a wide range of consulting services. They offer business development education and provide region specific economic know-how, aiming to promote themselves as a strong, and progressive region. They work vigorously to develop future-oriented projects. In an effort to put these skills into motion, WInTO GmbH takes action in all towns and local communities located within the Oberhavel District.

Region Oberhavel

There is a need for energy experts in the tourism industry!

The Oberhavel region lies in the state of Brandenburg, just to the north of Berlin and spans to the Mecklenburg-Vorpommern Bundesland boarder. With its 1.800 square kilometers and 202, 141 inhabitants (as of 31.03.2009), the Oberhavel is part of the Berlin environs with a strong south-north divide. One characteristic of the region is its thinly populated rural area, mainly suited for tourism and agriculture. Oberhavel offers holiday and relaxation opportunities. The countryside region Ruppin, which is part of the Oberhavel, is superbly suited for water sports, with more than 170 lakes and nearly 100 kilometers of sailable rivers. As Berlin's "Green Lung", the Oberhavel's expansive waterways provide the perfect place for leisure, relaxation and holiday. Whether you are interested in riding, hiking, water sports, golf or bicycling – this touristic region offers everything you need. A part of the well-known Berlin-Copenhagen bicycle path runs along the Havel as well, from which this lovely region has derived its name.

Main Results

- *More than 250 participants from target groups, mainly tourism companies and energy experts, have taken part in seminars on energy efficiency topics for tourism companies.*
- *Energy audits in ten touristic facilities have started which focus on implementing energy saving measures.*
- *"Energy Tourist Tour Map" in the region Oberhavel has been printed.*
- *Completion of a case study for "Brickyard Park Mildenberg".*
- *Implementing behaviour campaigns for tourists and employees – Several thousand tourists have been exposed.*
- *Interest has been widely sparked for energy saving and renewable energy in tourism companies.*
- *Completion of energy action plan for the region Oberhavel focusing on tourism facilities.*

Hotel Havelschloss Zehdenick

The Havel castle Zehdenick is a small hotel providing 17 individual holiday-flats. The hotel sits on an idyllic peninsula on the Havel River and proves to be widely popular amongst holidaymakers, business travelers and weekend guests alike. It is equipped with a restaurant and a rustic castle vault that coincidentally doubles as the registration office.

The hotel offers many amenities to create an ideal and comfortable stay for the water sportsman. There is plenty of room to accommodate bicyclists touring the famous European bicycle path "Berlin-Kopenhagen". The hotel offers these cyclists a relaxing short stop to rest and rejuvenate. The castle sits only 5 minutes away from the city centre, nevertheless its immediate surroundings boast a primitive and unspoiled environment.

Between 2003 and 2004, the castle's proprietors took extreme care to modernize the building with special attention to energy efficiency and conservation restrictions. These efforts resulted in reduced gas and sewer consumption.

According to the latest analysis of this hotel, the responsible people were considering the application of renewable energy. The company received expert consultation and decided to install the recommended devices. Due to the hotels progressive plans, the project was selected to be subsidized. Installation is planned for a geothermal pump and a solar photovoltaic (PV)-system, capable of providing up to 30 kWp of power. This should cover the power needs of the hotel in its entirety. The reorganization process for the use of renewable energy in the Havelschloss has been initiated under the framework of SETCOM and will be revisited after the project ends.

Economic Effects:

- Sustainable financial security by reducing dependency on fossil fuels.
- Recovery of financial liquidity.
- Long-term security for the existing company and employees.

Touristic Effects:

- Newly acquired know-how will be carefully incorporated into the preexisting high efficiency and well conserved setup.
- The advertising concept of a natural recreation area will be integrated with the new know-how.
- The sustainable practices and conservation efforts will enhance the reputation of the hotel.

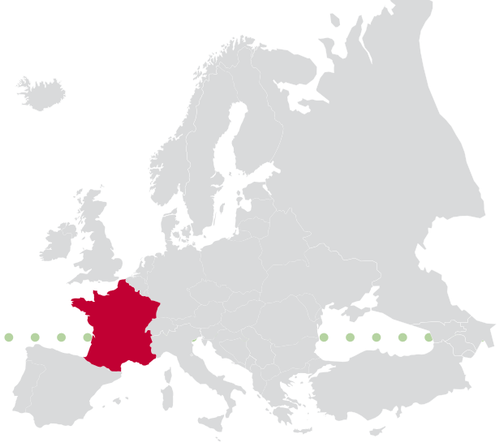
Measures in Short

- The entire hotels heating needs will be satisfied by geothermal heat.
- At least 50 % of the energy requisite will be generated by solar photvoltaics (PV).
- The remaining requirements will be provided by the public electricity supply system.
- Sustainable decrease in energy costs to below 5 % (started at 10 %).
- CO_2-free technology – marking the building profile environmentally friendly.

30,0 t
CO_2 could be saved per year!

SETCOM in France

Region Rhone-Alps



Best Practice Example

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Project Partner RAEE

Rhônalpénergie - Environnement (RAEE) is the regional agency for energy and environment in the Rhone-Alps Region. The main aim of RAEE is to promote the rational use of renewable energy and sustainable development within the regional municipalities.

Region Rhone-Alps

The Rhone-Alps Region ranks second among French regions (after PACAregion) for the level of tourism, representing more than 9% of the nights spent in tourist accommodations annually. A major draw to the region is the plentiful ski resorts in the eastern part of the region. These resorts bring frequent winter tourists.

Small actions in tourism facilities can generate big changes!

The pilot area chosen for the SETCOM project is located in South Ardèche. The département of Ardèche is not the most visited in the Rhone-Alps in terms of annual nights, but the tourism activity can be notably high. This location mainly brings summer tourists from May to October. The accommodations in this area are comprised mostly of campsites.

A very popular tourist location rests just to the south of Ardèche. There are several famous natural sites in this area, the most important one being the beautiful canyon "Les Gorges de l'Ardèche". The tourism activity is expected to continue increasing in South Ardèche. Due to the expected increase, a major tourism project is planned for the coming years: The construction of a Chauvet cave replica, which shelters the oldest known cave paintings in the world.

Main Results

- *Launch pilot operations in specific areas.*
- *Develop web tool to follow-up on energy consumption for sites.*
- *Develop energy tours integrated into the offerings at the local tourism office.*
- *Provide leaflets offering information on new and rarely seen topics, most often relating to restaurants and kitchen appliances.*
- *Give support to best practice projects.*
- *Perform energy audits on applicable facilities.*

Reception Centre Domaine Du Taille

The Domaine du Taillé is a large reception centre located in southern Ardèche. This facility welcomes a variety of people including:

- Families who primarily stay in the B&B house, often coming to discover the region (classical tourism).
- Groups who come for training courses on martial arts.
- Groups who come for wellness activities or personal development courses.

The Domaine consists of 5 main buildings, which were built in the 70's. The main building was erected from the ruins of an old farm. The owners are closely concerned with environmental issues and sustainable development. The atmosphere of the centre clearly takes inspiration from the "Zen" philosophy, based on the respect of nature. Respectively, the owners used ecological materials in their construction project. Local wood and solar panels are also already in use for heating rooms and water.

The owners of the facility clearly want to reduce the environmental impacts linked to the centre's activities. Under the guidance of SETCOM, an audit was performed to help identify the most critically needed improvements and will also help them keep the European Eco-label standard during the next years. Actually, the facility started to follow the procedures to obtain the European Eco-label established for tourism facilities during the summer of 2010. At the end of November, 2010, they obtained that label.

Several suggestions were listed in the energy audit, which were successfully carried out. However, not all of them could be accomplished at the same time due to the significant costs involved. Instead, the measures were classified and carried out according to their priority. The implementation of the suggested measures began in November of 2010, beginning with simple changes such as the removal of incandescent lights. In parallel with the energy audit, infrared thermography was used to determine the particular places where restoration work was required.

Measures in Short

- **Measures to be Taken Immediately:**
  Balance the electric circuits and change the electricity standing charge. Finalize the replacement of incandescent lighting with low consumption bulbs.
- **Measures to be Done in Priority:**
  Improve the electrical heating regulation in the rooms by installing solar panels for heating water.
- **Other Measures for the Future:**
  Update the windows in the restaurant and close the terrace during winter time to improve insulation.

3,54 t
CO_2 could be saved per year!

SETCOM in Austria

Region Kleinregion Alpen

Best Practice Example

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Project Partner AGRAR PLUS

AGRAR PLUS is a consulting company located in St. Pölten, Lower Austria, Austria. The company was founded by an initiative of the Lower Austrian Council responsible for agricultural affairs in the year of 1985. Its main focus lies in the field of project development in rural areas. The main tasks of AGRAR PLUS are:

- Development and realization of concepts for the market.
- Development of new or alternative agricultural products.
- Coordination of planning, management, financing and supplying different forms of sustainable energy projects like bio district heating systems, biogas plants, cogeneration, solar heat and photovoltaic systems.
- Coordinator between energy research & development consultants and communities, small companies and private households.

Region Kleinregion Alpen

Kleinregion Alpen is a region located southwest of Lower Austria. The landscape of Kleinregion Alpen is characterized by many hills and the first mountains of the northern alps Hochkar and Dürnstein.
The protected natural areas of the mountains are very popular destinations. In general, over the last few years the Kleinregion Alpen has proved to be one of the leading regions in the field of tourism. To name a few, the ski area, modern thermal spa and the various local events are just some of the top attractions for national and international visitors of the area.

Energy saving awareness needs assistance in the field of tourism!

Main Results

- *Implementation of various energy audits in local tourism companies.*
- *Developing an energy action plan for the region „Land um Laa".*
- *Developing energy-saving behavioral rules for employees in tourism and guests alike.*
- *Creating a training program for tour guides in the field of sustainable energy.*
- *Informative events for owners of tourism businesses such as hotels, restaurants, spas and campgrounds.*

Alpenhotel Ensmann

The Alpenhotel Ensmann is located at the foot of the skiing region Hochkar, on the edge of the Alps, 166 km from Vienna and 100 km from St. Pölten. The Hochkar is one of the snowiest areas in Austria, making winter tourism greatly important in this region. Furthermore, during the summer months the hotel offers a starting point for hiking tours. It has been a family business for more than 30 years and is listed in Austria as a 3* hotel.

The hotel has a gross floor space of 1.679 m² and a gross volume of 5.577 m³ providing space for 17 rooms with 42 beds and a restaurant that accommodates 70 guests. In addition, a sauna, indoor swimming pool and bowling alley are also available.

Existing Energy Systems in the Hotel:

- Fuel oil system: Heating the rooms, water and the indoor swimming pool.
- Power: Cooling system, ventilation, kitchen, light and sauna.

Due to its age, renovations of the hotel complex have already been planned. The heating and building services will be totally renewed and the hotel will be expanded by adding a floor area of 200 m². Furthermore, the building systems, the sauna and the indoor swimming pool will undergo upgrades. While making these necessary changes, the owners also plan to begin using renewable energy sources for heating.

Planned Energy Saving Measures and their Corresponding Investment Costs:

- Biomass heating system for room heating, warm water and the indoor swimming pool: 150 kW, costs: 119.500 EUR – between 8 and 16 years of pay-back time.
- Solar system to support heat production: 25 m², 10.000 EUR producing 10 MWh – Within 8 years it will have paid for itself.

Measures in Short

- Renovating the hotel complex: Improve insulation, replace windows, install biomass heating system and renewal of the hydraulic system.
- Energy management system with a central control.
- Load management system.
- Passive solar technology.
- Energy recovery systems.
- Restaurants serving locally grown food.

73,0 t
CO_2 could be saved per year!

SETCOM in Finland

Region North Karelia

Best Practice Example

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Project Partner NKUAS

North Karelia University of Applied Sciences (NKUAS), located in the eastern most province of Finland, focuses its work on three main tasks: Education, research and regional development. NKUAS offers education leading to a polytechnic degree for young and mature students and actively takes part in regional development work and research and development activity.

A down-to-earth cooperation extends from the region's business life up to the active networks of international institutions of higher education and different organizations. Renewable energy is one of the core research areas of NKUAS.

Region North Karelia

The main draw of tourists in North Karelia is connected to nature: Hiking, canoeing and skiing. The region is also a unique destination for Orthodox Christians. Finland is a Lutheran country but the majority of the Orthodox people are situated in Eastern Finland.

In 2008, the total number of overnight stays in North Karelia was 375.971 (of which 54.270 were foreigners). The percentage of foreign overnight stays has risen from app. 11 % in 2006 to app. 14 % in 2008. The largest foreign tourist group is comprised of Russians, followed by Germans, The Swedish and the British.

Most hotels in North Karelia are connected to district heating. The district heating is mostly powered by renewable energy sources. However, there are many small cottage rentals and other facilities which are not within the reach of district heating networks. Some of the facilities are used seasonally. These facilities are sometimes left unheated during the winter altogether, or they are only kept at the minimum temperature. The facilities that are outside the district heating network are most commonly heated with oil or electricity.

More awareness of heating costs and applications in the tourism industry are needed.

Main Results

- *Development of energy tours to describe the wood energy chain from procurement to final use of wood energy.*
- *Five small seminars and one large seminar were implemented to inform the regional tourism businesses of energy saving practices.*
- *Provide easily accessible information for tourism businesses on energy saving practices.*

Gasthaus Puukarin Pysäkki

Gasthaus Puukarin Pysäkki is situated in upper Karelia in the municipality of Valtimo. In addition to a main building made of logs, there are two other buildings providing accommodation: Pihapirtti and Vierastalo Rinteelä. The Gasthaus was built in 1991 and Rinteelä was refurbished in 2005 in order to expand accommodations.

The family business Puukarin Pysäkki has shared Karelian traditions and offered organic products and clean ingredients to its guests for 20 years now. The soul of the Gasthaus is its keepers who chat with the guests and prepare food from organically produced ingredients grown on their own farm. The Gasthaus has 26 beds and 40 seats in the restaurant. The B & B is the most popular booking of the Gasthaus. 15 % of the customers come from outside Finland. The annual turnover is app. 200.000 Euro, of which most is generated during the summer months.

The environmental impacts of the Gasthaus have been thoroughly considered and the impact on the surrounding nature has been conscientiously minimized. The fields on the property are organically farmed, and heat is generated from wood chips. The sheep also take care of the cultural landscape by grazing down the grass and weeds. Traditional working methods are used on the farm and the waste from the Gasthaus is even recycled.

The Gasthaus employs 3 people all year round. During the summer months, there are 2-3 additional people hired to work on the farm and in the Gasthaus.

The Gasthaus only uses eco electricity.

Sustainable Development in the Gasthaus

The Gasthaus uses organically produced goods, most of which are grown right on the farm. The farm produces its own meat, root vegetables, potatoes and rye. The use of automobiles is kept to a minimum and everyone is encouraged to carpool.

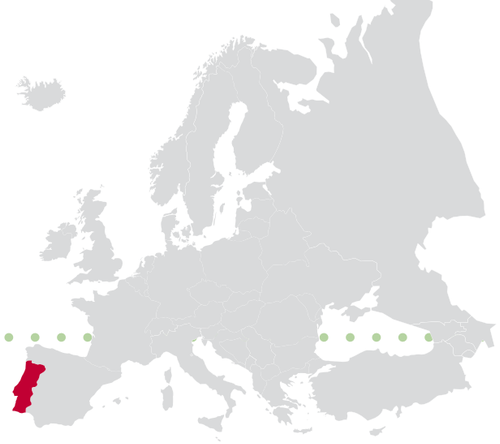
Measures in Short

- Environmental-friendly economic activity.
- Own food production.
- Recycling of waste.
- Use of eco electricity.
- Generation of heat from wood chips - wood mostly from own forests: Boiler power 50 kW each (one on the farm and one in the Gasthaus), water container of the boiler 3000 l, 250 loose cm^3 of chips / year installed in the farm house in 1983, in the Gasthaus in 1991 and renewed in 2009.

40–50 t
CO_2 could be saved per year!

SETCOM in Portugal

Region Portimão



Best Practice Example

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Project Partner ADENE

ADENE is a private institution in which the Portuguese Ministry of Economy, Innovation and Development participates and promotes public interest activities in the energy policy domain.

ADENE gives priority to activities of public interest in the energy policy domain. They also give priority to responsible or licensed public services within the energy sector. At a lower priority they can lobby for other relevant policies, so long as they are related to the energy policy.

Region Portimão

Portimão is located in the south of Portugal in the region of Algarve on the Atlantic Ocean. This is one of Europe's favorite holiday destinations and is well known for its numerous sandy beaches, golden cliffs and stunning rock formations.

Tourism is based mainly on sun & sea services in this region, however a broad range of tourist activities are available covering numerous prestigious festivals, concerts and exhibitions, leisure / sport activities namely golf, proving Portimão to be more than just a beach destination.

There is need for more awareness and behavioral changes for those working in tourism!

Main Results

- *Identification of energy efficiency opportunities in the tourism sector*
- *Promotion of energy efficiency among tourists and employees.*
- *Drafting of an Action Plan for the Portimão Region, covering efficient energy measures for public lighting, solar power systems, sustainable transport and more.*
- *Planning and promotion of a national conference on "Tourism and Sustainable Energy".*

Luxury Resort Marina de Portimão

The Marina de Portimão is located in the safest harbour in Portugal at the Arade River estuary. The resort is comprised of over 25-hectares of luxury condominiums with exclusive beaches, ocean view restaurants, shops, beach front bars and a swimming pool facing the sea. Surrounded by some of the most beautiful beaches in Europe, the Marina de Portimão has assumed the position as Portugal's premier yacht destination.

The Marina de Portimão is engaged in environmentally friendly practices, namely through the efficient use of energy and water. However, with room for improvement, a wide range of measures have been set to ensure more efficient use of energy. The project has even been approved for funding by the National Strategic Reference Framework (QREN) Incentive Scheme for Small and Medium Size Enterprises – „Energy Diversification and Efficiency" – Solar Thermal incentive system.

Planned Energy Saving Measures:

- Solar Power: A total area of 67,6 m^2 of solar thermal collectors will be installed on the rooftops of two service buildings in order to meet energy needs. This is an excellent example of how one can take advantage of local climatic and natural conditions.
- Glass Coating: As a retrofit measure, about 45 m^2 of the windows oriented to the south will be coated with a heat control film that can reduce the heat during the summer by as much as 60 %. and prevent heat loss by up to 40 % during the winter months.
- Thermal Insulation: A total perimeter of 210 m of south facing windows and 74,6 m of doors will be sealed with weather stripping.
- Energy Audit and Energy Certification: A detailed energy site survey and audit will be conducted in order to identify cost effective ways to improve energy efficiency of the building.

Total investment costs: 89.051 EUR

Measures in Short

- Use of solar energy for hot water production: About 60 % of the annual heating costs can be saved.
- Glass coating to avoid heat loss through windows.
- Thermal insulation of windows: Use of weather strips prevent air and temperature leaks.
- Performance of an energy audit certification with the aim to gain the Energy Performance Certificate (EPC).

35,0 t
CO_2 could be saved per year!

Energy Saving Advice

Simple Energy Saving Advice for Tourism Businesses

Energy costs are rising all over Europe. This is a big challenge to overcome for tourism facilities like hotels, thermal baths and spas and campgrounds. Tourism businesses in Europe pay up to 10% of their operational costs for energy.

Guests are not the only ones responsible for high energy consumption. Poorly informed employees of tourism facilities also have a significant impact on consumption and processes must be carried out quickly with little time to think about how much electricity or water could be saved through different behaviour.

With this in mind, the SETCOM project would like to give you some simple advice on how to start energy saving in your company with little action required:

- Involve your employees in energy saving and make them feel part of the changes and successes regarding energy cost reductions, e.g. with bonus-payments.
- Choose one employee as central contact person for energy issues in your company.
- Carry out your first energy check through an energy expert. This gives you an overview of your energy situation and your actual energy consumption.
- Check your energy consumption regularly! Energy Management Systems are affordable software solutions that control and regulate the energy consumption in your facility and help to reduce energy costs substantially.
- Switch off all electrical devices in rooms that are not occupied.
- Ventilate only with switched off heating and well closed windows.
- Open the water-tap only if you really need it. Through water-saving appliances, low-flow shower heads and water-taps in the guest rooms, standard water consumption can be reduced up to 50%.
- Make sure that heaters in the guest rooms are not covered by curtains, furniture or other obstructions. This will ensure the thermal heat distribution will be maximized in the room.
- Switch-off the air condition in empty rooms.

SETCOM Leaflets

SETCOM Professional Leaflets

Does your company also suffer from high energy costs?
Take a look at our SETCOM professional leaflets developed for each of our partner countries. The professional leaflets are intended to inform target groups of methods to raise energy efficiency in different tourism facilities. You can find helpful expert advice and contact information that can lead you on your way to energy efficiency and sustainability.

... and the SETCOM leaflets provide you with valuable insight into the aims of the project. Please do not hesitate to contact our network of partners for more details or visit our website: www.setcom-project.eu

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IEE - Programme

The Intelligent Energy Europe Programme, as a part of the EU's Competitiveness and Innovation Framework Programme (CIP), is a European Commission Initiative promoting innovative projects most particularly in the field of renewable energy, energy efficiency, traffic and transport. The intention of the programme is to strengthen the use of renewable energy across Europe and to reduce energy consumption and green house gas emissions in general.

www.ec.europa.eu/energy/intelligent