

# **Promoting Performance Contracting: The SAVE Project “EnergyProNet” and the “Thermoprofit Programme in Austria**

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# *Team of the Graz Energy Agency*



# Main Areas of Work

## ■ Thermoprofit

- Consulting for third party financing projects
- Dissemination and marketing activities
- Impetus program "Thermoprofit"

## ■ Energy Consulting

- Energy audits and concepts
- Profitability analyses
- Grant application aid for energy-related contracts etc.

## ■ Solar Initiative

- Support and TPF models for solar collector installations

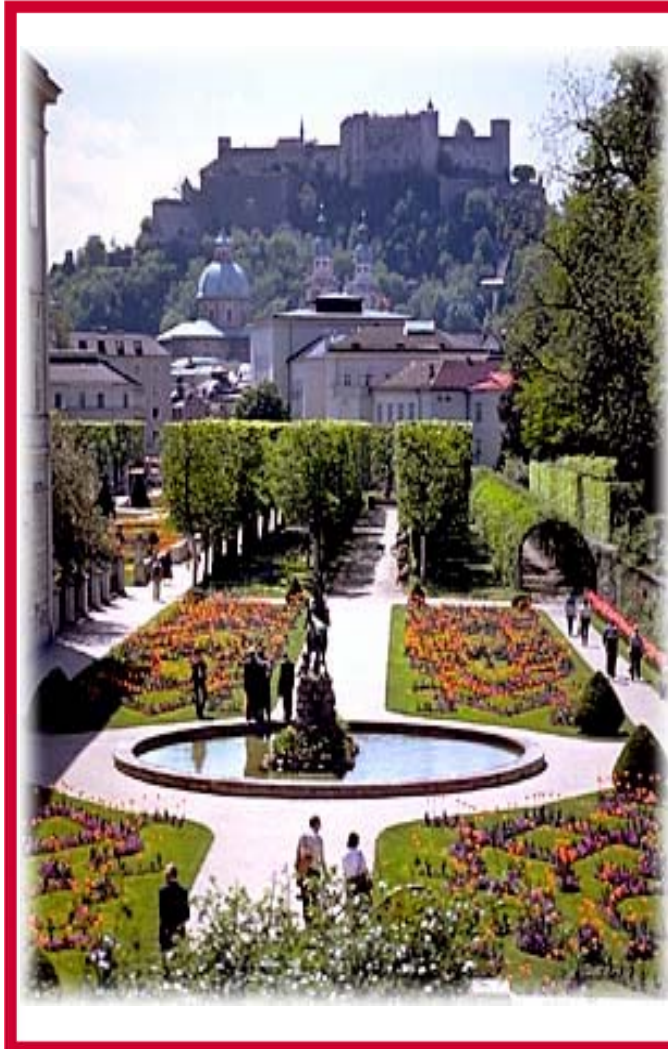
## ■ Energy Management

- Energy monitoring and energy controlling for owners of larger real properties

## ■ Analysis & Evaluation

- Evaluation of projects, feasibility studies, market analyses

# Pool 1 City of Salzburg



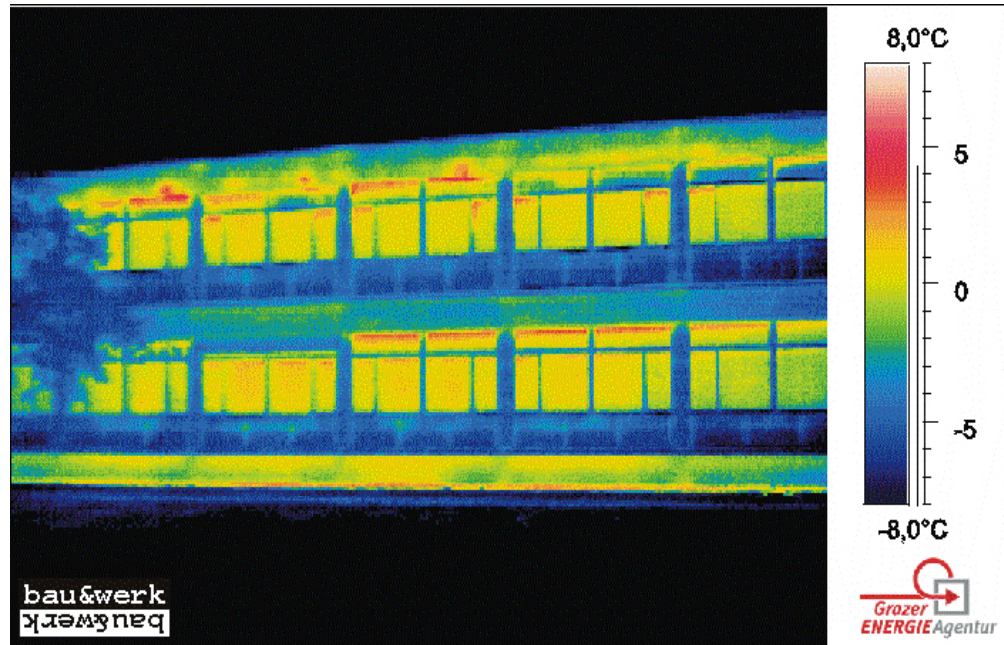
- Energy Performance Contracting Project
- Palace Mirabell, 1 school, 2 nursery schools, fire brigade
- Contractor: Siemens, Landis & Staefa, Vienna
- Investment volume: 181.682 Euro
- Contract period: 10 years
- Energy costs before: 341.562 Euro
- **Guaranteed saving/a = Contracting rate:**  
45.057 Euro or 15 %

# ***Advantages for the City of Salzburg***

- Reduction of energy costs and increase of comfort  
**without own resources** → measures covered by the savings
- Contractor bears the risks
- Total service package from a specialist
- **Thermoprofit-guarantees:** guaranteed savings, standards of comfort, high quality of measures, maturity of delivery of the facilities after expiration of the contract
- Contribution to environmental relief: CO<sub>2</sub> reduction -20%

## Primary School Jägergrund/Secondary School Webling

### Redevelopment of heating system and energetic optimisation



**Contracting-Award**  
**Energieprofi 2000**

## ***Primary school Jägergrund/Secondary School Webling***

- **Years of construction: 1975-1978**
- **Number of classes: 26**
- **Total surface: 6.006m<sup>2</sup>**
- **Annual energy costs: 80.000 Euro**
- **Concrete skelton with inlaying wall and window elements**
- **Measures**
  - **Conversion from electrical heating to water central heating**
  - **Installation of the substation and connection to the district heating**
  - **Controlling system and optimisation**
  - **Electric installations and light management**
  - **Changing windows, frames (incl. parapets and wall elements)**



# Results

- Investment: 1,17 Mio. Euro
- Guaranteed energy saving: 47%  
(40.000 Euro/a)
- CO<sub>2</sub>-reduction: 335t/year (-84%)
- Share for ESCO when saving more than guaranteed: 10%
- Duration of contract: 15 years



# Comprehensive renovation

**GGW (Graz housing company of public utility)**

**residential buildings Daungasse, Asperngasse, Wagner-Biro-Str.**

- **150 dwellings, 7485 m<sup>2</sup> space floor, years of construction 1961 - 64**
- **Measures**
  - **Installation of a central heating system (gas)**
  - **Installation of a central warm water system (Solar collector with 85m<sup>2</sup> collector surface)**
  - **Insulation of the external walls (8 cm insulation), cellar ceilings and top floors**
  - **Substitution of windows (exchange of the old wooden windows)**
  - **Installation of lift facilities**
  - **Energy management and controlling**

# Results and Advantages

- Investments: 2, 18 Mio Euro
- Energy costs:           old: 54.359 Euro  
                                  new: 29.868 Euro
- Energy savings: 24.490 Euro, - 45%
- Duration: 15 years
- Economical overall optimum (Investment, running and heating costs)
- Guaranteed upper limit of the heating costs
- No extra costs for the tenants
- Reductions of environmental pollution  
(single stoves → district heating)

# ***Thermoprofit Solar***

## ***Prochaskagasse Graz-Andritz***

- **New residential buildings in the north of Graz, 3 housing companies (about 75 dwellings each company)**
- **Building period: 2000 - 2002**
- **Central water heating system and floor heating (partly)**
- **Measures:**
  - **Planning and building of the whole solar system**
  - **Maintenance, servicing for the whole space heating and hot water system**

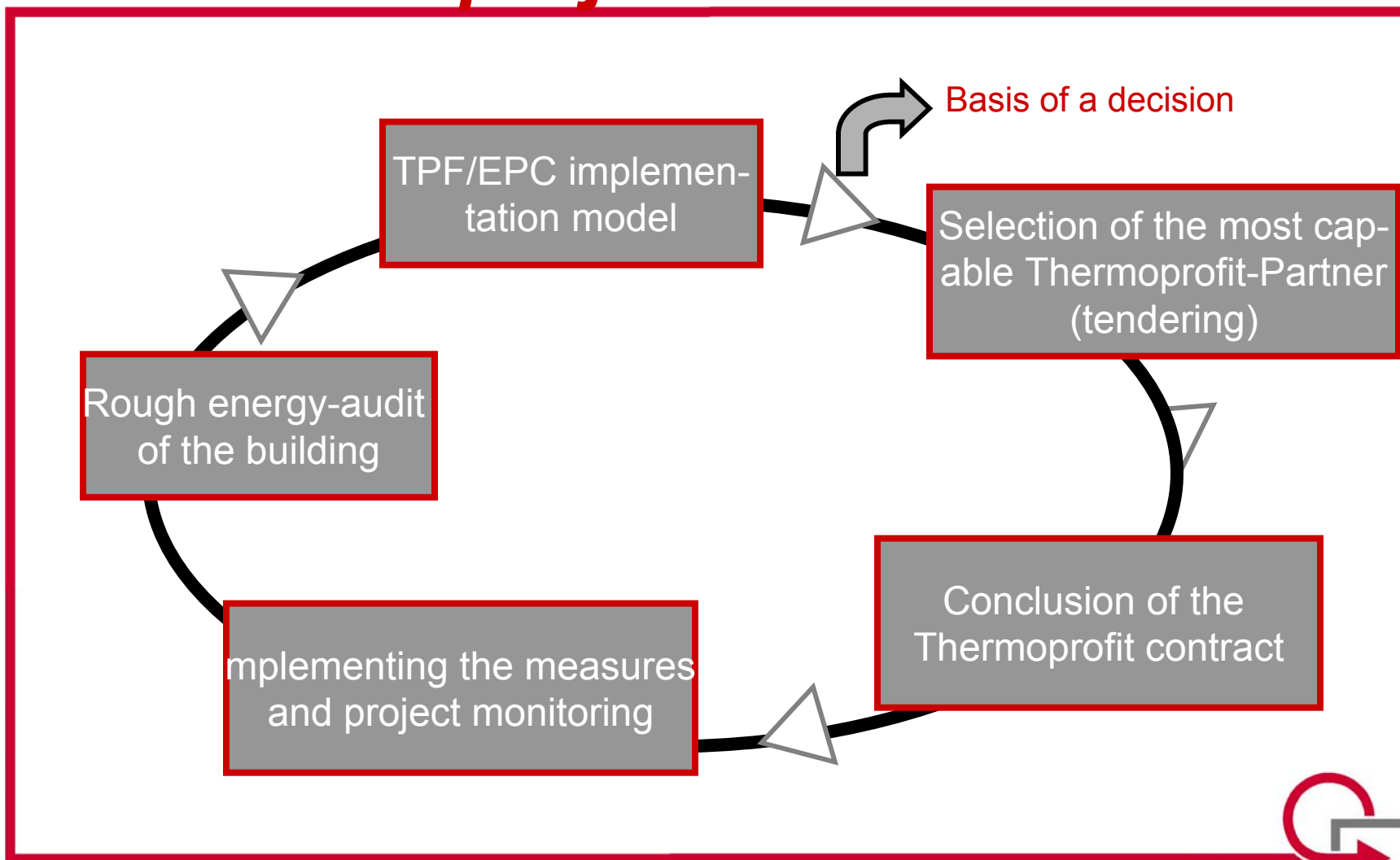
# Results

## ***Service of the contractor:***

- **Maintenance, service**
- **Accountancy with the tenants**
- **Service in case of disturbances**
- **Guarantees for:**
  - **Euro/flat for service of the contractor**
  - **Euro/kWh for space heating**
  - **Euro/m<sup>3</sup> warm water (60°C)**
  - **solar yield (kWh/m<sup>2</sup> collector field)**
  - **reaction time in the case of technical troubles**
  - **comfort standards**



# Course of a project



# *Thermoprofit*

## *Impulse Programme to stimulate the Market for Energy Services*



# ***Thermoprofit***

***A **trade mark** for total service packages to reduce energy consumption in buildings***

→ guaranteed benefits

→ proved quality



# Goal

## Wider dissemination of energy services through

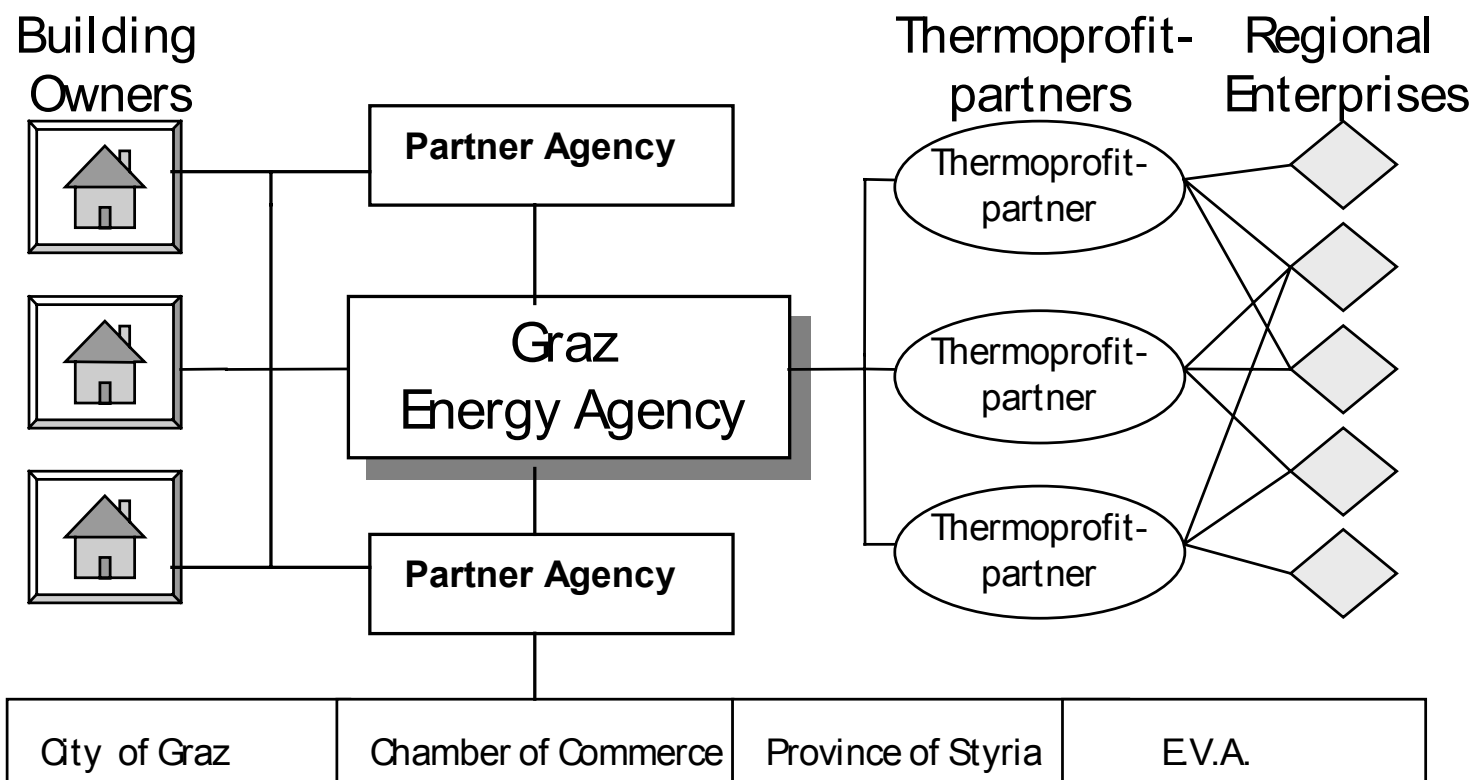
- **building confidence** (positive examples, information, independent support of users)
- **evoking demand** (information- and marketing activities, persuasion, dissemination of applicable solutions)
- **setting standards** (simplify realisation of projects, definition of qualified offers)



# Strategies

- 1. Gathering know-how and implementing & documenting pilot projects**
- 2. Establishing quality standards and awarding competent companies as Thermoprofit-Partners**
- 3. Information and marketing initiative; Creating and disseminating the trademark “Thermoprofit”**
- 4. Independent support and advice for building owners, by Graz Energy Agency**
- 5. Co-operation with partner agencies for a wider promotion of Thermoprofit**
- 6. Forming the Thermoprofit network as platform for the programme**

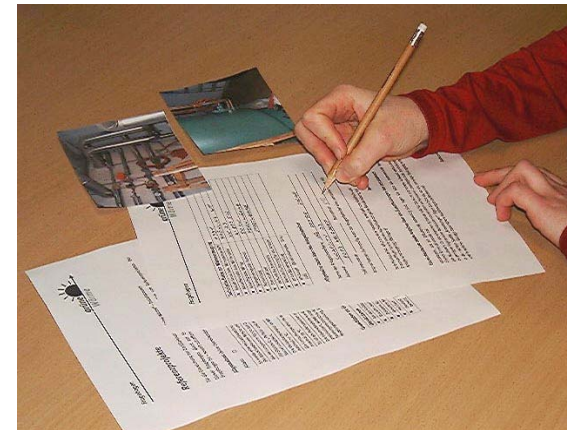
# The Thermoprofit-Network



# Results and Successes

## ■ Development of Thermoprofit

- Established contracts and tendering documents for public buildings and service buildings
- Innovative models for residential buildings
- Criteria and measures for ecological renovation of buildings



# Results & Successes

- Contracting award „Energieprofi 2001“ for 2 Thermoprofit projects
- 6 companies certified as Thermoprofit partners
- 3 Thermoprofit partner agencies
- 35 companies as partners in the network
- 13 Thermoprofit projects realised in the year 2002
- High publicity of "Thermoprofit" in the Styrian region and beyond:
  - Internet platform: [www.thermoprofit.at](http://www.thermoprofit.at)
  - International Thermoprofit-Congress, April 2002, Graz
  - information material, articles, direct mailings, presentations etc.



# **EnergyProNet**

## ***Best Practice of Energy Services in Public Buildings - from Pilot Projects to market penetration***

- **Aim: to stimulate the European market for energy services through dissemination activities and know-how transfer**
- **energy services considered:**
  - Third party financing
  - Energy accounting/ Energy Management
  - Benchmarking
  - Measures aiming at the improvement of user`s behaviour (e.g. 50/50 model)

# EnergyProNet

- **Duration: April 2001-April 2003**
- **supported by EU, SAVE-Programme**
- **Project partners:**
  - **Graz Energy Agency (Project co-ordinator)**
  - **Berlin Energy Agency**
  - **PWD-Construction management**
  - **C.R.E.S. - Center for Renewable Energy Sources**
  - **Ministry of Interior, Public Administration and Decentralisation  
Greece**
  - **E.V.A. (Austrian Energy Agency)**

# Results

- Analysis of legal, political, social and economic framework conditions and the ESCO market
- Brochure “European best practice of energy services - Documentation of selected projects”
- Documentation of tools and guidelines for energy services
- Dissemination package for market development
- EPC Manual: Preparation of an EPC project- from the first idea to realisation

# Results



## ■ Know-how transfer to and training of SAVE energy agencies

- Training seminar in Brussels (26th-27th Nov. 02) with 30 participants

## ■ Support of partner agencies

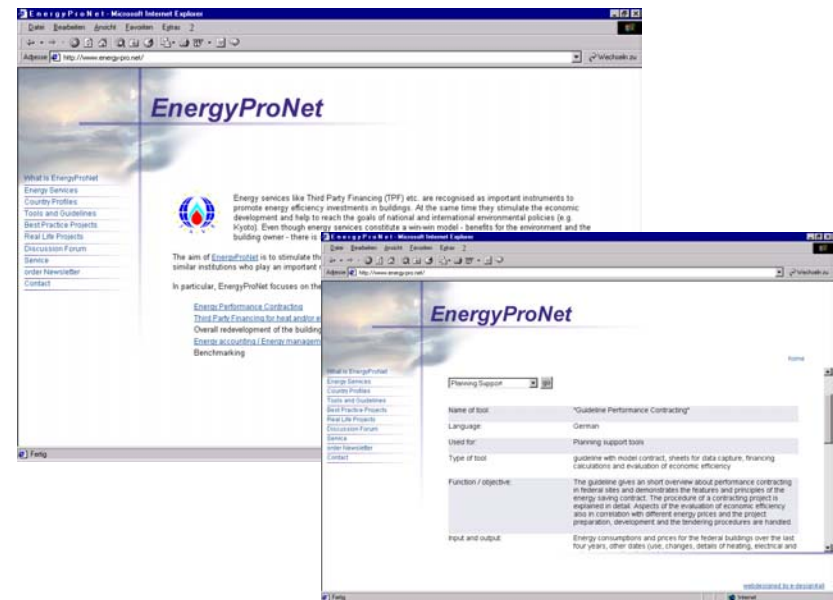
- support during project realisation, transferring the experiences with regional networking and the establishing of quality standards



# Results

## Website for know-how transfer

- Tools and guidelines
- Best practice projects
- Events, links, news, download
- Moderated discussion forum...



[www.energy-pro.net](http://www.energy-pro.net)

***Thank you!***