Promoting Industrial Energy Efficiency

PINE

PnE aims to increase energy efficiency in industrial SMEs by means of auditing schemes and subsequent provision of professional technical advice for the implementation of customized measures, with the long-term goal to create a self-sustaining model capable of expanding project-specific measures. The system comprises four main stages: creation of a shared model for auditing procedures, training for scouts and auditors, scouting, auditing. A common model will be defined for a successful auditing phase including a set of benchmarks and checklists structured in such a way to be easily replicable also in other countries. Scouting will identify potential for action and willing to implement the system on their premises through preliminary audits in 280 SMEs, out of which 140 enterprises will be selected for the following in-depth auditing phase, which includes detailed field analysis, identification of technical solutions readily available on the market, advice on financing tools. PnE will outline a business plan for the establishment of a self-sustaining system based upon a saving-sharing model to continue and expand project-specific activities beyond the project’s lifetime.

Results

Achieved results

- **Common definition of a guide on energy audits** presenting methodology and tools to guide the work of auditors and scouts suitable also in other European countries.
- **280 preliminary audits** in selected SMEs (out of 1.400 SMEs contacts). SMEs’ selection criteria concerned energy savings potential and willingness to implement the system on their premises. Companies have been selected also with a focus on sectors not covered in previous IEE and/or national projects. Scouting is addressed to identify the energy use of SMEs, define the areas of significant consumptions and point out the need in depth auditing.
- **140 full audits** in selected SMEs (out of 280 SMEs with preliminary audits). Energy audits were conducted onsite and at the desk to provide a better understanding of major energy consuming systems and to gain insight into short and long-term energy consumption patterns in processes and infrastructure. Auditors supported companies in overcoming technical, economical, organizational and legal issues that could impede the implementation of the measures suggested.
- **Cumulative investments** auditing in energy efficient equipment and other energy savings devices made by industrial SMEs benefitting from PnE exceeded the target of € 700.000, raising up to € 1.614.000. PnE’s actions lead to 1.668 toe in energy savings in SMEs benefitting from PnE’s full audits, equivalent to 2.224 toe in primary energy savings and 4.949 t CO2 reduction of greenhouse gas emissions. The expected results to be achieved within 3 years after the end of the project are the following: € 10.753.000 of cumulative investments in energy efficient equipment and other energy-saving devices; 4.498 toe in energy savings, equivalent to 6.511 toe in primary energy savings and 13.506 t CO2 reduction of greenhouse gas emissions.
- The project set up the “PINE network for the Promotion of Energy Efficiency”, to promote
and increase energy efficiency in companies through energy audits, promotion of innovative technologies, improvement of company management, training and any other services that could contribute to manage energy in a more effective way. The funding members of the Network are the 15 project partners, plus two energy agencies from countries not directly involved in the project: the Regional Energy Agency of the Kvarner – REAK (Croatia) and the Goriška local energy agency – GOLEA (Slovenia).

**Lesson learned**

- **Lesson 1 - “We don’t need an energy audit”**. The decision to start an energy audit is based on the perceived value of the audit, often underestimated due to several “soft barriers”: key decision makers don't believe in external consultant; excessively high or low expectations; energy audit may be biased due to previous experiences focused on a single commercial solution; SMEs fear that energy efficiency measures may adversely affect product quality. The key factor to successful energy auditing campaigns is a good communication. It is crucial to inform companies about the actual potential of energy efficiency measures, in order to set a realistic perception and encourage rational decisions.

- **Lesson 2 - Support beyond energy audit.** An energy audit campaign aiming at long term success, needs to provide long term support to companies well beyond delivering the report. The key support activities include: presenting and explaining the audit results to key decision makers; training staff; identifying any misunderstandings and provide further information. Furthermore the supporting activities should include assistance in pricing and evaluation of proposals.

- **Lessons 3 - No data, no savings.** The available data - or the lack of it - affects the level of analysis that can be performed. A common recommendation for all SMEs is to install an energy monitoring system.

**Partners and coordinator**

| Consorzio per l'AREA di ricerca scientifica e tecnologica di Trieste [1] | Italy |
| STENUM GmbH [2] | Austria |
| STRATAGEM Ltd [4] | Cyprus |
| CONFAPI - Confederazione italiana della piccola e media industria privata [5] | Italy |
| Fundación CIRCE - Centro de Investigación de Recursos y Consumos Energéticos [6] | Spain |
| ARAGON BUSINESSMEN CONFEDERATION [7] | Spain |
| Styrian Chamber of Commerce [8] | Austria |
| Association NEST - Association for economic development of trade, business [9] | Bulgaria |
| TECHNICAL UNIVERSITY KOSICE [10] | Slovakia |
| SC IPA SA [12] | Romania |
| Association of the Constructions Materials Producers from Romania [13] | Romania |
| LIMASSOL CHAMBER OF COMMERCE [14] | Cyprus |
| Energieagentur Obersteiermark [15] | Austria |
Contact

Consorzio per l'AREA di ricerca scientifica e tecnologica di Trieste
Italy

Contact point

Name: Fabio Tomasi
E-mail: fiesta@area.trieste.it
Tel: +39 040 375 5268

Budget

Overall budget: 1.288.061,00 € (EU contribution: 75,00 %)

Key documents

- Fact Sheet [16]
  PPT 990 KB
- Project leaflet [17]
  PDF 2.51 MB

In brief

Sector: Industry
Duration: 17/03/2012 to 16/03/2015
Contract number: IEE/11/885/SI2.615936
Website: http://www.pineaudit.eu/eng/resources.aspx

Tags:
financing
SME

Media coverage

- Buscan 40 pymes aragonesas que quieran una auditoría energética gratuita (PINE) [18]
  EFE - 08/02/2013

Related projects

• [BESS] [20] Benchmarking and Energy Management Schemes in SMEs
• [CHANGE] [21] Chambers promoting intelligent energy for SMEs
• [EFFI] [22] Efficient Implementation of Energy Services in SME
• [ENGINE] [23] Energy Efficiency in Small and Medium-sized Enterprises
• [EEEI] [24] European Energy Efficiency Improvement in the Graphic Media Industry
• [EU LTA UPTAKE] [25] European uptake of successful implementations of Industrial LTA's as...
• [EXBESS] [26] Expanding the Benchmarking and Energy management Schemes in SMEs to more...
• [E-CHECK IN CRAFT SME] [27] From Colleague to Colleague: Energy Checks in Small and Medium Craft...
• [IEC-SME] [28] Improving Energy on Competence SME level
• [PROMETHEUS] [29] PRoviding users with Organised and Monitored Energy services by...
• [REGCEP] [30] Regional clusters in energy planning
• [GREENFOODS] [31] Towards zero-fossil CO2 emission in the European food & beverage...
• [CARE +] [32] TRAINING CHEMICAL SMES IN RESPONSIBLE USE OF ENERGY


Links