

## **Process optimisation in industry and services: Support for projects**

September 2007

In the area of process optimisation in industry and services, the Swiss Federal Office of Energy (SFOE) has defined the following promotion priorities. The SFOE welcomes the submission of ideas and specific project applications (basic and applied research, support for implementation) from the industrial sector, universities and colleges of technology.

### **I. Heat transfer technologies**

Waste water and air resulting from industrial processes contain large quantities of thermal energy that remain unused because there is a lack of suitable and reliable heat transfer systems. This potential needs to be utilised in the future through the development of efficient technologies.

### **II. Optimisation and Integration of complex thermal processes**

Comprehensive process analyses are a prerequisite for mastering processes, and thus form the basis for successful process optimisation and the energy-related integration of complex processing systems. The focus lies on drying and separating processes. Energy reductions from 20% up to 50% can be achieved.

### **III. Use of waste heat at low temperatures**

The use of thermal processes (in the foodstuffs industry, foundries, the manufacture of paper and pulp, chemicals, ceramics, etc.) frequently results in the production of secondary process heat that cannot be readily utilised. In the Swiss processing industry, the energy potential of unused waste heat (e.g. for the production of electricity) is considerable, and this potential needs to be exploited in the future.

### **IV. Alternative systems for generating process heat and refrigeration**

Process heat (steam) is still mainly produced using conventional fuels such as oil and gas, while refrigeration is generally produced using machines powered by electric motors. It would be possible, however, to generate a significant proportion of such process energy using renewables (e.g. wood) or waste heat that cannot be utilised in other ways, but evidence needs to be produced that such alternative energy systems are able to fully meet the various processing requirements.

**The SFOE therefore supports projects** that focus on the development of heat exchange systems with reliable, environmentally compatible cleansing systems, or which conduct research into dirt-resistant surface materials for heat exchangers, including the associated risks. It also supports projects involving energy-related process analyses and optimisation of thermal processes (best available technologies), as well as feasibility studies, laboratory tests and measurement and optimisation programmes that set out to examine the suitability and economic viability of alternative energy production systems (renewable energy for process heat; non-avoidable process heat for refrigeration and the production of electricity) for the processing industry.

Decisions concerning financial support from the SFOE are based on the implementation potential of the project and its relevance in terms of energy optimisation, as well as on the availability of federal funding. Priority is given to projects with a high degree of participation on the part of industrial partners.

**For more detailed information, terms and conditions, etc., please consult:**

[www.bfe.admin.ch/energie](http://www.bfe.admin.ch/energie)

*companies – optimisation of processes in the industrial und services sectors*

contact: martin.stettler@bfe.admin.ch

**Swiss Federal Office of Energy SFOE**

Mühlestrasse 4, CH-3063 Ittigen • Postal address: CH-3003 Berne

Phone 031 322 56 11, Fax 031 323 25 00 • Media/Documentation: Phone 031 323 22 44, Fax 031 323 25 10

contact@bfe.admin.ch • [www.swiss-energy.ch](http://www.swiss-energy.ch)