



Energy

National Research Programmes 70 and 71

Project

Determinants of energy-efficiency Investments





Energy Efficiency in Companies - a Hot Topic

The savings potential in many Swiss companies with high energy consumption is considerable, and energy management is indicated. In Switzerland, however, very few companies entrust such tasks to specially qualified experts.



In industry, for example in the metal processing business, enormous amounts of energy are sometimes required - but to date very few companies in Switzerland concern themselves with energy efficiency. *Source: undefined*





At a glance

- At the present time, very few companies believe energy efficiency is an important issue and hardly any attention is paid to energy management.
- Energy management in companies is an essential element when it comes to settling on efficiency measures. However, monitoring processes and quantitative data are still lacking.
- Cantonal and national laws could create incentives.

In many companies, there is considerable potential for reducing energy consumption. Yet measures to increase energy efficiency are often not introduced, even when highly profitable. This is the conclusion reached within the scope of this project, in which researchers from the Infrac and Impact Energy consulting firms as well as the University of Neuchâtel investigated how companies in energy-intensive lines of business are trying to save energy. The researchers conducted a survey of 3670 so-called large-scale energy consumers (LSECs). These include companies in the cement and metal industries, but also paper mills and construction companies. More than 300 concerns completed the online questionnaire. The researchers then selected 26 of these companies for personal interviews, in order to confirm or reject their previous assumptions. In a last stage, the results of these two surveys were enhanced by means of five case studies in individual companies. Among other things, the researchers investigated the energy consumption and the energy efficiency measures already implemented by these businesses.

Energy management in companies

Prior to their investigations, the researchers hypothesised that better energy management would contribute to the company's view that energy efficiency is strategically important. However, the empirical analysis revealed the exact opposite mechanism: a company that considers energy efficiency an important matter has better energy management at its disposal. This should provide decision-makers with data on energy consumption, costs and potential for savings. On the whole, however, the level of energy management in Switzerland is still low: on a 23-point scale, local companies only score an average of 10.3 points. For example, many companies are hard put to quantify their investments in energy efficiency. Often, concerns do not even have a budget category for energy-saving measures. Based on these observations, the researchers conclude that in many companies energy issues are not high priority. They pinpoint the low cost of energy, typically in the range of one to three percent of annual sales, as the reason for this situation. Though 60 % of the companies that have implemented efficiency measures say their energy consumption has decreased, these are qualitative assessments and hard figures are rarely available because many companies do not implement appropriate monitoring. The case studies have also shown that the savings potential is not being fully exploited. For instance, electrical appliances such as pumps or compressors are outdated or facilities are oversized.



Even in energy-intensive sectors such as the metal industry, a budget category for energy-saving measures is often not available. undefined



Politicians are called upon to take action

Legal regulations have a significant influence on whether energy-intensive companies attempt to take energy-saving measures. The most important regulations at present are the federal government's CO₂ targets. Most companies do not anticipate the setting of further targets or a possible rise in energy prices. Their decisions are often based on current prices, with no thought for potential increases.

Precisely because requirements specified by the Confederation and the cantons can lead to a more economical use of energy, the researchers believe that federal and cantonal policy should be further strengthened in this respect: firstly, by drawing up target agreements with companies to demand greater progress in terms of efficiency, as a sine qua non for CO₂ exemption; secondly, by contributing to raising the corporate energy management profile and equipping it with better arguments and tools by means of accompanying measures in the areas of information, training and professional guidance; and thirdly, by pursuing in an objective and committed manner the debate on higher energy taxes and more far-reaching regulations, such as a compulsory energy audit for large-scale consumers.



Produkte aus diesem Projekt

- Management as a Key Driver of Energy Performance, Management Summary
Date of publication: 01.01.18
- Management as a Key Driver of Energy Performance, Final Report
Date of publication: 01.01.18
- Energy management & training for industrial energy optimization
Date of publication: 01.01.18
- Schweizer Programme zur Steigerung der Effizienz von Antriebssystemen, slides 16 - 21
Date of publication: 01.01.18
- Energy management and training for industrial energy optimization
Date of publication: 01.01.18
- Energy management: a key driver of energy-efficiency investment?
Date of publication: 01.01.18
- Management de l'énergie: un déterminant des investissements en efficacité énergétique?
Date of publication: 01.01.18
- Energy management: a key driver of energy-efficiency investment?
Date of publication: 01.01.18
- Energy-Efficiency Investment: Why Do Firms Apply Such Restrictive Financial Methods and Selection Criteria?
Date of publication: 01.01.18
- M_key – Management as a key driver of energy performance
Date of publication: 01.01.18



Contact & Team

Rolf Iten
INFRAS
Binzstrasse 23
8045 Zürich
[+41 44 205 95 95rolf.iten@infras.ch](mailto:rolf.iten@infras.ch)



Rolf Iten
Projektleiter



Conrad U. Brunner



Catherine Cooremans



Stephan Hammer



Bernhard Oettli



Moez Ouni



Alain Schönenberger



Rita Werle



Alexander Wunderlich

Associated projects



Environmental tax reform and endogenous growth

An Environmental Tax for More Innovation



Energy-related innovations

How to motivate companies to adopt green innovation

All information provided on these pages corresponds to the status of knowledge as of 18.06.2019.