

Partnership for a better climate

SwissEnergy 3rd Annual Report 2003/04



This report focuses on the programme's main results in 2003; it also describes some of the most important activities up to the middle of 2004.

■ refers to a document included on the accompanying CD-ROM.

Published by

Federal Department of Environment, Transport,
Energy and Communications (DETEC)
SwissEnergy Programme Management
Swiss Federal Office of Energy, CH-3003 Bern

Concept, contents and layout

naturaqua pbk, Bern / upArt, Bern

Available in German, French, Italian and English

Distribution

Federal Office for Buildings and Logistics (BBL),
Federal Publications, CH 3003 Bern
www.bbl.admin.ch/bundespublikationen
Order no. 805.950.03 e

Bern, September 2004





Foreword

SwissEnergy 3rd Annual Report 2

Part 1

The SwissEnergy programme

Mandate and objectives: Implementation of Switzerland's energy and climate policy 3

Strategy: Energy efficiency and renewable forms of energy 3

Measures: Focus on voluntary efforts and partnerships 4

Organisation: The four sectors 4

Part 2

Activities in 2003/04

General economic and political conditions 6

Programme management 8

Public sector and buildings 9

Trade and industry 13

Mobility 15

Renewable energies 17

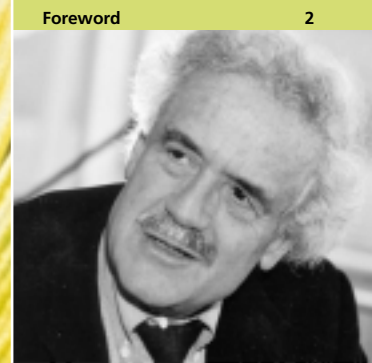
Impacts in 2003 20

Conclusions and outlook 27

Summary 29

Information

More about SwissEnergy 32



Foreword

SwissEnergy 3rd Annual Report

The third SwissEnergy Annual Report describes the programme's mandate, objectives and strategy, and outlines the most important activities carried out during the period under review, along with the quantified impacts of the programme in 2003. The enclosed CD-ROM contains the annual reports of the various sectors and partners, as well as detailed impact analyses.

SwissEnergy co-operates closely with a broad variety of partners. In 2003 the general economic and political conditions were distinctly unfavourable: the decision taken by the Federal Council in February 2003 to cut the SwissEnergy budget within the scope of the federal government's relief programme gave rise to a great deal of uncertainty, to postponements and cancellations of activities, but also to a clearer positioning of the programme, and to support actions on the part of our partners, in particular the cantons. The increasing effectiveness of the meanwhile firmly established partnerships with cantons, local authorities and the industry was underscored by their stronger financial commitment, as well as by a variety of highlights, such as the target agreement between the federal government and the Energy Agency for Industry involving more than 600 companies, the award of the 100th "Energy City" label to the local authority of Schwyz, comprehensive cantonal promotion programmes and the new, more effective cantonal regulations governing energy efficiency in buildings. The decision taken on 21 June 2004 to strengthen the SwissEnergy Strategy Committee in its efforts to further develop the programme is another clear indication that our partners are willing to reinforce their commitment to Swiss Energy.

This third Annual Report signals the end of my term of office as head of the SwissEnergy programme. I would like to take this opportunity to express my sincerest thanks to all partners and colleagues for their valuable efforts to promote energy efficiency and the use of renewable forms of energy, and thus for their contribution towards securing a sustainable energy supply in Switzerland. I wish my successor, Michael Kaufmann, and the SwissEnergy programme every success. The forthcoming decision by the Federal Council in favour of a CO₂ fee and/or "climate centime" ("Klimarappen") should provide a basis for significantly enhancing the impacts of SwissEnergy and helping it achieve its objectives.

Hans-Luzius Schmid, Head of the SwissEnergy programme (until June 2004)

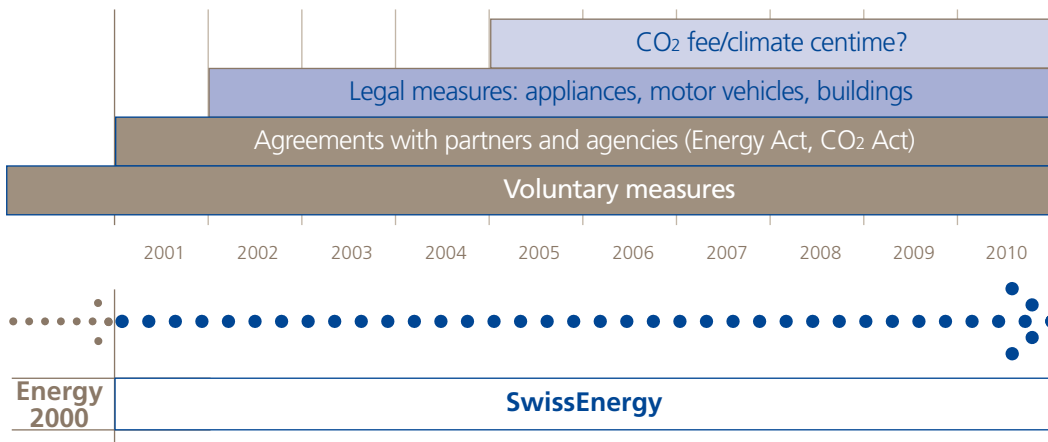


Fig. 1
SwissEnergy strategy: priorities in accordance with the Energy Act and CO₂ Act

Part 1

The SwissEnergy programme

Mandate and objectives:

Implementation of Switzerland's energy and climate policy

Switzerland is pursuing a clearly defined objective in line with its declarations within the scope of the Kyoto Treaty and in accordance with the provisions of the CO₂ Act: to reduce CO₂ emissions by 10% by 2010 versus the 1990 level. The practical implementation of this objective is the principal focus of SwissEnergy as the successor to the Energy 2000 programme. Other goals include limiting the growth of electricity consumption, maintaining the production of hydropower and promoting the production of electricity and heat from other forms of renewable energy such as wood, biomass, sewage gas, solar power, geothermal heat, environmental heat and wind. SwissEnergy is intended to pave the way for securing a sustainable energy supply through efficient energy use and the utilisation of renewable forms of energy (cf. Fig. 17, page 30).

Strategy:

Energy efficiency and renewable forms of energy

The strategy for reducing CO₂ emissions by 10% is primarily based on the promotion of efficient energy use. There is significant potential for this in all areas. For example, a house that is constructed on the basis of the "MINERGIE" standard requires between 50 and 70% less energy than the average existing building.

By promoting the use of domestic renewable forms of energy, the programme can contribute towards climate protection as well as reduce the country's dependence on imported fossil fuels. Hydropower has been the backbone of Switzerland's electricity supply for many decades, and certain other forms of renewable energy also indicate high growth rates as well as significant potential over the medium term.



Fig. 2
SwissEnergy
organisational chart



Measures:

Focus on voluntary action and partnership

SwissEnergy uses three kinds of measures that complement one another: first and foremost, in accordance with the provisions of the Energy Act and CO₂ Act it supports voluntary measures based on performance mandates awarded to specific agencies, and concludes target agreements with companies and sectors, in which binding targets are specified for each partner concerned.

SwissEnergy actively promotes the implementation of voluntary measures by providing information and advice as well as training and further education.

Alongside voluntary measures, the provisions of energy and building legislation call for more comprehensive promotional and mandatory measures. These include regulations governing the energy consumption of motor vehicles, appliances and buildings. If the various voluntary and legislative measures do not lead to the targeted results, then the Federal Council will introduce a CO₂ fee in accordance with the provisions of the CO₂ Act.

Organisation:

The four sectors

SwissEnergy is a federal government programme that involves the cantons and local authorities, industrial, consumer and environmental associations, and public and private-sector agencies.

The Strategy Committee, which comprises representatives of the federal government, the cantons, and industry and environmental organisations, is responsible for defining the programme's strategies, the Swiss Federal Office of Energy (SFOE) is responsible for management and co-ordination, and the programme's partners are responsible for the practical implementation of the defined measures.

SwissEnergy is divided into four sectors that encompass all areas of relevance to energy: Public sector and buildings, Trade and industry, Mobility, Renewable energies.

In 2003, the ordinary SwissEnergy budget amounted to 55 million Swiss francs. In addition the programme was granted two special credits, namely 6.9 million Swiss francs left from the hurricane "Lothar" credit for the promotion of

Useful links:

Public sector and buildings

Cantonal energy policy:
www.swiss-energy.ch
Energy in my canton

Minergie: www.minergie.ch

"energho": www.energho.ch

"Energy City" label:
www.energiestadt.ch

Swiss Contracting:
www.swisscontracting.ch

Infrastructure systems (sewage/water supply/waste incineration plants):
www.infrastrukturanlagen.ch

Trade and industry

Energy Agency for Industry (EnAW):
www.energie-agentur.ch

Energy Agency for Electrical Appliances (eae):
www.eae-geraete.ch,
www.energybrain.ch

Swiss Agency for Energy Efficiency (S.A.F.E.):
www.energieeffizienz.ch

Information concerning the Energy Label:
www.energieetikette.ch

Topten: www.topten.ch

wood energy and 2 million for the promotion of renewable forms of energy. These amounts were increased to 137 million Swiss francs (i.e. more than doubled) through contributions from the cantons and third parties.

Pubic sector and buildings

Buildings account for approximately 45% of Switzerland's overall energy consumption, and this means there is considerable potential for reducing the level of CO₂ emissions.

The cantons are SwissEnergy's most important partners: they are responsible for the buildings sector and thus implement the programme's objectives through building regulations, promotion programmes and voluntary measures.

SwissEnergy supports the "Energy City" label, the "MINERGIE" building standard ("MINERGIE" Association) and optimisation of heating and cooling systems in public buildings ("energho" Association). Energy optimisation measures also apply to sewage plants, water supply systems and waste incineration plants. For these purposes SwissEnergy uses energy contracting ("Swiss-contracting" Association) as a valuable tool.

Trade and industry

There are effective measures that can be taken in the area of trade, industry and services to reduce CO₂ emissions: these often lead to lower energy costs and thus enhance the competitive capacity of innovative trade and industry sectors.

The Energy Agency for Industry, which works closely with SwissEnergy on the basis of a performance mandate, helps companies formulate and implement target agreements: each company specifies a binding target for the reduction of energy consumption and CO₂ emissions. If they achieve these targets, the companies concerned can gain exemption from any CO₂ fee that may have to be introduced at a later date.

The Swiss Agency for Energy Efficiency (S.A.F.E.) and the Energy Agency for Electrical Appliances (eae) both set out to stabilise electricity consumption in the area of appliances. The energy label for household appliances and lamps, obligatory since 2002, is a valuable basis for their activities.

Mobility

With a comprehensive package of measures in three priority areas, SwissEnergy is pointing the way towards sustainable mobility for the future.

The aim of a target agreement concluded in February 2002 between DETEC (Department of Environment, Transport, Energy and Communications) and "auto-schweiz" (the Association of Swiss Automobile Importers) is to reduce the fuel consumption of new motor cars by 24% between 2000 to 2008. SwissEnergy is supporting this effort with a compulsory energy label for new motor vehicles introduced in 2003, and through a special campaign. One of the products already launched by the predecessor to SwissEnergy (Energy 2000) is a special course for economical and ecological driving behaviour (Eco-Drive®). The most important measures introduced by SwissEnergy in the areas of human-powered and combined mobility are car-sharing, promotion of walking and cycling, consulting services at local level on energy-efficient mobility, consulting on mobility management in companies and participation in a Europe-wide action day, "Into town without my car".

Renewable energies

Renewables are the energy source of the future. Renewable energies help protect the environment, are climate-friendly and reduce Switzerland's dependence on fossil fuel imports (which are growing ever more scarce) and on rising oil and gas prices.

The various players, co-ordinated by the Agency for Renewable Energies and Efficient Energy Use, actively encourage the changeover to renewable energies (green power, heat pumps, wood, biomass, solar energy, sewage gas, geothermal energy and wind power). In view of the high growth rates and the significant potential in the medium to long term, renewables are the energy sources of the future for heating, refrigeration, electricity generation and motor fuels. One of the explicit objectives of SwissEnergy is to maintain the present level of electricity production from hydropower, which is by far the most important renewable energy source in Switzerland.

Useful links:

Mobility

Information concerning the Energy Label:
www.energieetikette.ch

Eco-Drive® courses:
www.eco-drive.ch

Car sharing: www.mobility.ch
and www.raillink.ch

"Veloland" (Cycling in Switzerland):
www.cycling-in-switzerland.ch

"Mobilservice":
www.mobilservice.ch

Verkehrsclub der Schweiz (Swiss Traffic Club):
www.autoumweltliste.ch

Association of Swiss Automobile Importers:
www.auto-schweiz.ch

Touring Club der Schweiz (Swiss Touring Club):
www.infotechcs.ch

Renewable energies

Agency for Renewable Energies and Efficient Energy Use (AEE):
www.erneuerbar.ch

Solar energy:
www.swissolar.ch

Heat pumps:
www.fws.ch

Wood energy:
www.holzenergie.ch

Biomass:
www.biomasse-schweiz.ch

Sewage gas, use of heat from sewage pipes:
www.infrastrukturanlagen.ch

Geothermal energy:
www.geothermal-energy.ch

Wind energy:
www.suisse-eole.ch

Part 2

Activities in 2003/04

General economic and political conditions

Finances

In 2003, total expenditure by the Swiss Federal Office of Energy (SFOE) for the SwissEnergy programme amounted to 63.4 million Swiss francs (excluding 3.6 million for SFOE personnel expenses). This amount includes the supplementary credit of 2 million Swiss francs for the promotion of renewable energies (2002: 4 million), plus extraordinary funding from the "Lothar" programme (promotion of use of wood resulting from damage to forests caused by hurricane Lothar) amounting to 6.8 million Swiss francs (2002: 9.7 million). It also includes the expenditure on the part of the Swiss Federal Office of Energy for management, marketing, controlling and further education totalling 5.9 million Swiss francs (2002: 5.8 million) and 14 million Swiss francs that were paid to the cantons in the form of global contributions (2002: 13 million). The cantons provided a further 26 million Swiss francs to their own promotion programmes (2002, including cantonal buildings: 43 million) (■ Annual Report, financial expenditure by the SFOE for SwissEnergy).

2003 was characterised by uncertainties concerning the future budget for SwissEnergy following the introduction of the 2003 federal relief programme. In the early part of the year the Federal Council resolved to cut the entire ordinary budget, but this decision was reversed thanks to joint efforts by the programme's partners, and especially by the cantons. Parliament spoke out in favour of retaining the programme, but cut its ordinary budget from 55 million Swiss francs to 50 million (for 2004) and 45 million (starting from 2005). By 2005, federal funding will thus have been cut by

40% versus 2001 (75 million Swiss francs). It is only thanks to increasing contributions from partners and third parties (2003 total, 74 million Swiss francs) that it has been possible to maintain overall funding at around the same level since 2001 (approx. 130 million Swiss francs p.a.).

Energy policy

In June 2004 the Federal Council resolved to submit four proposals concerning the introduction of a CO₂ fee and/or "climate centime" ("Klimarappen") for consultation. The draft of a new Electricity Supply Act was also released for consultation. It contains binding objectives for renewable electricity and efficient electricity use, and specifies subsidiary measures by the federal government in the event that these targets should not be met. When the Nuclear Energy Act enters into force at the beginning of 2005, a new electricity labelling procedure will be introduced, together with a new system of remuneration of additional costs associated with the feeding of electricity from renewable energy sources into the network (on the basis of the revised Energy Act).

International climate policy

Russia still has to ratify the Kyoto Protocol before it can enter into effect. The EU, Canada and Japan have each declared their commitment to meeting their Kyoto objectives. For this purpose the EU has issued a directive on CO₂ emissions trading, which is due to commence at the beginning of 2005. However, in a large number of countries there are still barely any signs of an effective energy policy that sets out to reverse the increasingly apparent Kyoto target gap. In the countries of the EU, energy efficiency and the use of renewable forms of energy are being promoted with varying degrees of success through numerous, though often insufficiently co-ordi-

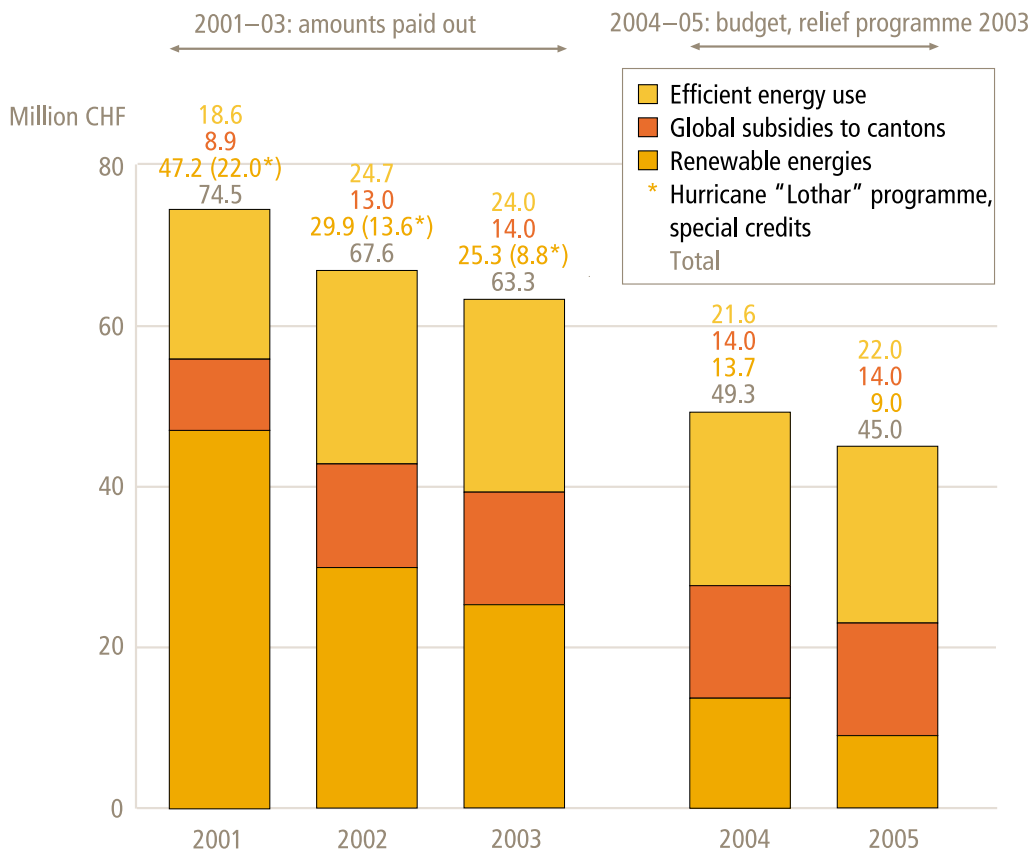


Fig. 3
SwissEnergy federal funding,
2001 to 2005

nated measures. Some countries (e.g. UK and Germany) have introduced higher energy taxes in recent years, and the Scandinavian countries, Italy, Austria and France have been levying special taxes on fossil fuels since the beginning of the 1990s. A recent study carried out by the International Energy Agency (IEA) found that strong and consistent pricing signals have the most pronounced impact on energy consumption.

Switzerland ratified the Kyoto Protocol in July 2003, and is positioned somewhere in midfield in terms of attainment of the specified emission targets. The target gap with respect to the greenhouse gas emissions as per the Kyoto Protocol was 6.3% in 2002 (target for 2010: -8% versus 1990; 2002 status: -1.7 %). As of 2002, greenhouse gas emissions throughout the entire EU were 2.9 % below the 1990 reference level. In Germany and a number of other countries, the

use of coal increased in 2003 due to higher gas prices. With a gap of +8.5 % in 2002, Austria was a long way from achieving the Kyoto target of a 13 % reduction in the level of greenhouse gas emissions. Here, tax measures are rejected as resolutely as they are in France (2001 target gap, 0.4 %), Belgium (17.8 %) Italy (13.6 %), Spain (17.1 %) and Canada (24.5 %). Only Sweden (which exceeded the Kyoto target by 7.5 % in 2002), Luxembourg and the new member states of the EU (except Slovenia) are on target, but this is primarily attributable to economic factors. The USA is by far the biggest CO₂ emitter in the world, but has resolved not to ratify the Kyoto Protocol. Despite numerous specific measures aimed at reducing emissions, the USA's volume of greenhouse gases is constantly increasing (2002 status versus 1990: +13.1 %) (■ Annual Report, International energy and climate policy).

- Annual Report, Marketing and Communication
- Rapport annuel Encouragement de l'innovation et de la technologie
- Annual Report, Training and further education

Programme management

Marketing and communication

Presentations at trade fairs and exhibitions, press releases and reports, publication of newsletters, energy infoline, booklets, guides, etc. were the main communication activities at the Programme level. (■ Annual Report, Marketing and Communication). The main thematic priority was the campaign to promote the compulsory energy label for new motor cars that was introduced on 1 January 2003. This label, which is based on a similar concept to that for household appliances, provides information about the fuel consumption and CO₂ emissions of the car model concerned. Thanks to an intensive promotion campaign by SwissEnergy, around 46% of the population were already aware of this label as of June 2003. In view of its success (the TV advert was awarded the "Golden OttoCar" prize) and the strong support from partners of SwissEnergy, it was decided to extend the campaign until June 2004.

At the same time, preparatory work was initiated in the year under review concerning the two-year buildings campaign (2004/2005). The aim here is to exploit the high potentials for efficiency gains and the use of renewable forms of energy in buildings. The campaign focuses on decision-makers at various levels (cantons, house-owners, architects, the building industry, etc.), and Federal Councillor Moritz Leuenberger formally launched it at the "MINERGIE" trade fair in Bern on 28 November 2003. The main components are presentation at trade fairs, an Internet portal (www.bau-schlau.ch, which received the 2004 award for the best Swiss web site) and a comprehensive advertising campaign. The concept calls for close collaboration with a variety of partners, who can draw attention to specific topics (e.g. renovation in accordance with the "MINERGIE" standard), and thus directly benefit from their participation in the campaign.

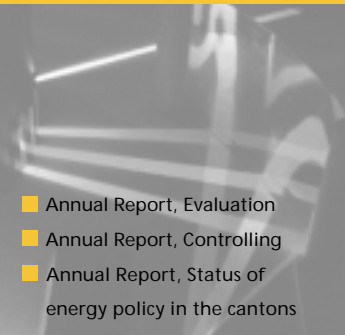
Promotion of technology and innovation

In 2003, the Swiss Federal Office of Energy spent a total of 23 million Swiss francs on energy research (which included 12 million for pilot and demonstration projects). As a consequence of the budget cuts associated with the 2003 relief programme, federal funding for pilot and demonstration projects will be reduced to almost zero. (■ Rapport annuel Encouragement de l'innovation et de la technologie). It is hoped that it will be possible to at least partially compensate this loss by economising in the area of research and development and through support from the private economy.

More than 500 projects were given financial support in the course of 2003. Some of the more noteworthy results included the development of the "Pac Car" by the Federal Institute of Technology, Zurich (which succeeded in travelling 90 kilometres at the Shell Eco Marathon in France with only 15 grams of hydrogen fed into a fuel cell electric motor), the successful technology transfer of thin-film photo cells from the University of Neuchatel to Unaxis, the activities of HTceramix aimed at improving series production of fuel cell piles, and a new concept for wind turbines.

Training and further education

The training and further education activities of the Swiss Federal Office of Energy are primarily addressed to construction specialists and instructors at all levels. The programme encompasses around 15 to 20 courses, and focuses on supporting new courses and teaching aids (■ Annual Report, Training and further education). In 2003/04, 76 candidates completed the diploma course on energy and sustainability in buildings (NDS EN-Bau), and the aim is for this course to gain recognition as a masters degree. A CD-ROM on the topic of energy in vocational education was completed in the middle of 2003. Within the scope of the PENTA PROJECT (a further education programme produced by industry associa-



- Annual Report, Evaluation
- Annual Report, Controlling
- Annual Report, Status of energy policy in the cantons

tions and trade organisations on the topic of renewable forms of energy), 36 courses were held that were attended by 470 students. SwissEnergy's internal funding for training and further education amounted to 0.8 million Swiss francs in 2003. This was supplemented by 0.5 million from the cantons and 0.7 million from third parties (including trade and industry, educational institutions, industry associations and networks).

Evaluation and controlling

Despite the budget cut for evaluation activities from 0.6 to 0.4 million Swiss francs, SwissEnergy was able to present a total of 10 evaluation reports in 2003/04. One of these confirmed the extent of the long-term impacts of the "Energy City" label in terms of contributions to energy efficiency in accordance with the impact analysis. Based on the new methodology, the short-term impacts are roughly halved (in the present report, this has also been taken into account for the previous years). Other evaluations dealt with the explanation of differing cantonal energy characteristics of buildings and the question of incorporating SwissEnergy into the federal government's transport policy (■ Annual Report, Evaluation).

The controlling process manuals for the SFOE, networks and agencies of SwissEnergy were further optimised in 2003, and have meanwhile become widely accepted and firmly established. The Management Information System (MIS) was completed in the course of the year, and is now being used by all external partners. The quality of controlling procedures is being constantly improved (■ Annual Report, Controlling).

Public sector and buildings

Cantons

In 2003, the global contributions from the federal government to cantons amounting to 14 million Swiss francs generated an additional 26 million in cantonal funds for programmes aimed at promoting efficient energy use and the utilisation of renewable energies. By contrast with the prior year, this total of 40 million Swiss francs no longer includes expenditure for cantonal buildings (2002: 56 million Swiss francs, 20 million of which were for cantonal buildings), since these are no longer entitled to global contributions. The funds were deployed for renewable energies (23.8 million Swiss francs), the promotion of efficient energy use (15.8 million) and increased use of waste heat (0.4 million). Promotion programmes currently exist in all cantons except Schwyz, Obwalden and St. Gallen (since these cantons lack the necessary legal basis and/or promotion budget) (■ Annual Report, Status of energy policy in the cantons).

Important steps for strengthening cantonal energy policy included the introduction and implementation of SIA standard 380/1 ("Thermal energy in buildings"), the approval of the cantonal promotion model by the Conference of Cantonal Energy Directors and the initiation of the SwissEnergy buildings campaign.

Twenty cantons have now implemented the basic module concerning cantonal regulations in the buildings sector (proportion of Swiss population, 80%), and eleven of these have also implemented the extended requirements on new buildings. By contrast, only eight cantons have legally regulated the obligation of consumption-based individual heating and hot water metering in existing buildings (33% of the population). In 2003, 15 cantons carried out enforcement or quality controls concerning legislative measures. The "MINERGIE" standard is being directly or indirectly promoted by eighteen cantons. In the course of the year under review, the cantons of

- Annual Report, "MINERGIE"
- Annual Report, Large-scale consumers within the federal administration



Fig. 4
Key visual for SwissEnergy buildings campaign launched in November 2003

Valais, Schwyz and Ticino joined "energho", which supports the authorities in their efforts to optimise energy systems in their own buildings (the cantons of Appenzell Innerrhoden, Bern, Lucerne, Nidwalden, Obwalden, Solothurn and Uri have not yet joined "energho").

MINERGIE

During 2003, increasing interest was shown in "MINERGIE" by the private sector. As of the end of the year, the association numbered 176 members and 202 partners (prior-year figures, 143 and 146 respectively). Since 1 July 2003, the "MINERGIE" label can only be issued after the building concerned has been completed. This new quality assurance system has greatly improved the certification procedure. The number of houses awarded the "MINERGIE" label rose to approximately 3,000 by the end of 2003 (approx. 2.4 million square metres), and a total of 94 renovations were carried out on the basis of the "MINERGIE" standard. (SwissEnergy funding, 2003 1 million Swiss francs; declared equity and third-party funding: 0.8 million Swiss francs.)

In February 2003 the "Minergie P certification" office (P = passive constructions) commenced operation, and it issued a number of certificates during the first few months (■ Annual Report, "MINERGIE").

Large-scale energy consumers within the federal administration (including some semi-privatised entities)

The "RUMBA" system (Resource and Environmental Management of the Federal Administration, www.rumba.admin.ch) or similar concepts (ISO 14,001) are now being implemented for all large-scale consumers¹ with the exception of Swiss Federal Railways. Activities here include promotion of the "MINERGIE" standard, the procurement of hybrid vehicles and optimisation of systems at various levels through agreements with "energho". The level of attainment of objectives varies considerably. Overall, the consumption of energy for heating systems by large-scale consumers has fallen by 14% since 1990, partly as the result of redimensioning processes, in particular within the Federal Department of

¹ The following entities are involved: Federal Office for Buildings and Logistics (BBL), Federal Institute of Technology, Zurich (ETHZ), Federal Institute of Technology, Lausanne, entities attached to the two Federal Institutes of Technology, the Federal Department of Defence, Civil Protection and Sports, Swiss Federal Railways, Swiss Post and Swisscom.



“From the point of view of the cantons, SwissEnergy functions as a joint platform for a sound energy policy. In this way we are able to effectively promote energy efficiency and the use of renewable forms of energy throughout the country.”

Stefan Engler,
member of the government of Canton Graubünden and
Chairman of the Conference of Cantonal Energy Directors

- Annual Report, “energho”
- Annual Report, SwissEnergy for Local Authorities

CHF per capita

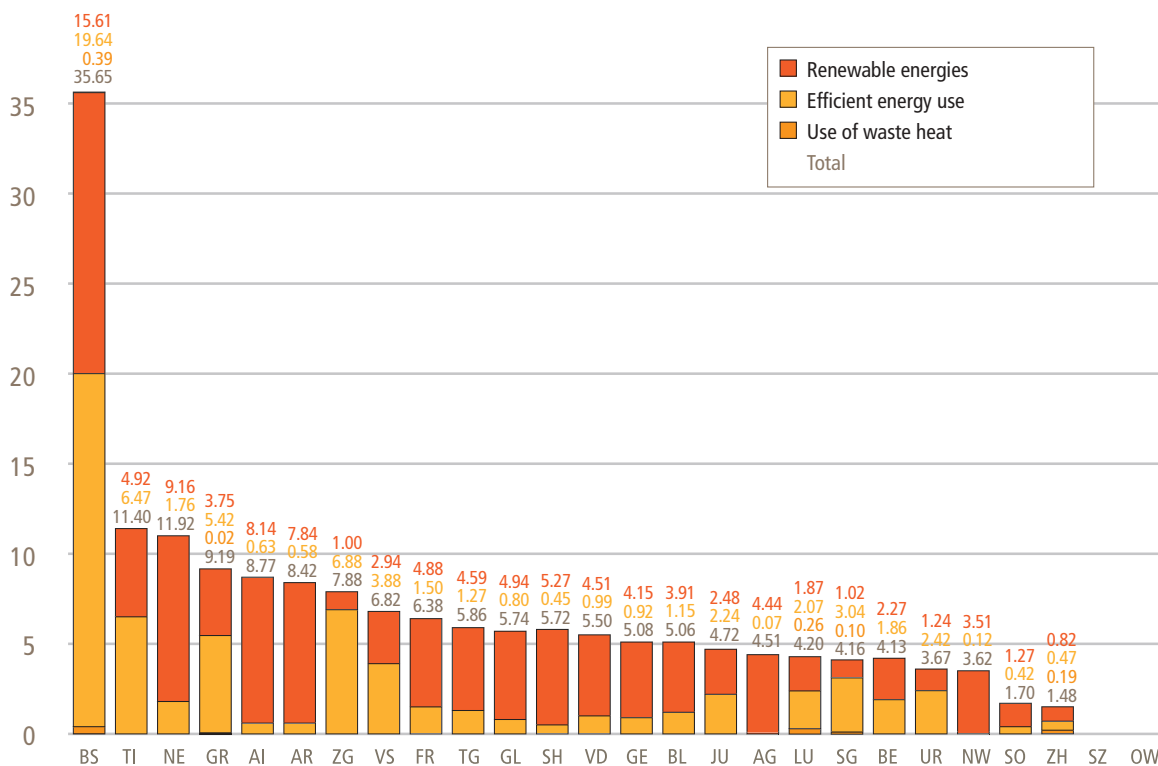


Fig. 5
2003 cantonal promotion programmes: amounts paid out (including federal global contributions) per head of population and designated purpose

Defence, Civil Protection and Sports. At the same time, electricity consumption has risen by 19% (■ Annual Report, Large-scale consumers within the federal administration). SwissEnergy funding, 2003: 0.05 million Swiss francs. No figures are available concerning the expenditure by large-scale consumers for these activities.

energho

This institution offers large-scale consumers a service aimed at reducing energy consumption in public buildings by at least 10 per cent within five years. The “Gibloux” retirement home may be cited as a good example of the impacts of this service. Subscriptions rose sharply during 2003, from 32 to 89, but the target of 140 subscriptions by 2003 was not met (■ Annual Report, “energho”).

An evaluation of “energho” revealed that its products are well conceived and meet subscribers’ needs, but that considerable improve-

ments are required with respect to reaching out to the main target groups (federal government, cantons and local authorities) together with the other involved partners of SwissEnergy. The 2003 impact analysis with 30 subscriptions (prior year, 16) clearly demonstrates the successes that were achieved through this service, even though some of the subscriptions were less than a year old: on average, energy savings amounted to 4 per cent (heating and electricity), and the costs per saved kWh were 0.36 centimes. (SwissEnergy funding, 2003: 1.3 million Swiss francs; declared equity and third-party funding: 1.9 million Swiss francs.)

SwissEnergy for Local Authorities

18 new “Energy City” labels were awarded in the course of 2003, and a major milestone was reached with the nomination of Schwyz as the 100th “Energy City” (■ Annual Report, SwissEnergy for Local Authorities). At the end of

■ Annual Report, Energy
in infrastructures

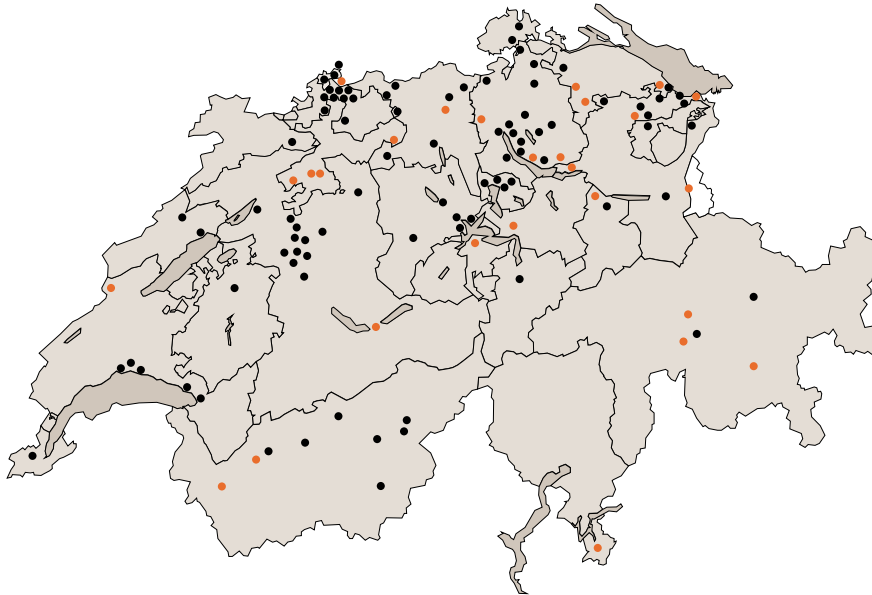


Fig. 6
The 114 Swiss "Energy Cities"
(26 additions between June
2003 and June 2004)

June 2003 to June 2004: 26 new "Energy Cities"

AG Magden, Obersiggenthal, Oftringen, Seon, Stein, Turgi, **Windisch**, Wölflinswil, AR Herisau, BL Aesch, Arlesheim, Birsfelden, Bottmingen, **Frenkendorf**, Lausen, Münchenstein, Muttenz, Reigoldswil, Reinach, Sissach, BS Riehen, BE Bern, Burgdorf, **Interlaken**, Köniz, Langenthal, Lyss, Münchenbuchsee, Münsingen, Ostermundigen, Urtenen-Schönbühl, Zollikofen, Wohlen b. Bern, FR Fribourg, GE Meyrin, GL Bîlen, **Näfels**, GR Region Albulatal, Davos, **St. Moritz**, **Thusis**, **Vaz/Obervaz**, JU Delémont, LU Region Entlebuch, Kriens, Luzern, Meggen, Sempach, NE La-Chaux-de-Fonds, Neuchâtel, NW **Stans**, SG Altstätten, Buchs, **Eschenbach**, Gaiserwald, Gossau, Rorschach, Rorschacherberg, **St. Gallen**, Thal, Wil, Wittenbach, SH Schaffhausen, Thayngen, SO **Grenchen**, **Olten**, **Solothurn**, **Zuchwil**, SZ **Schwyz**, TG Aadorf, Arbon, **Eschlikon**, **Frauenfeld**, **Roggwil**, TI **Mendrisio**, UR Erstfeld, VD Crissier, Lausanne, Montreux, Morges, **Ste Croix**, Vevey, VS **Ayent**, Brig-Glis, Leuk, **Martigny**, Naters, Saas-Fee, Sierre, Sion, Visp, ZH Adliswil, Bülach, **Dietikon**, Dübendorf, Hombrechtkon, Illnau-Effretikon, Küsnacht, **Meilen**, Opfikon, Ossingen, Pfäffikon, Rheinau, **Rüti**, Uster, Winterthur, Zürich, Zumikon, ZG Baar, Cham, Steinhausen, Zug, Liechtenstein **Triesen**, Germany Lörrach

Status as of June 2004: 114 "Energy Cities"

2003, more than 1 in 4 people in Switzerland were residents of an "Energy City". And more than 50 towns and cities in Austria and Germany are now working with this model. Riehen and Lausanne received the first "European Energy Awards".

One of the main activities of SwissEnergy for Local Authorities is to provide the designated "Energy Cities" with consulting services: in 2003, some 250 local authorities benefited from these services of specialised consultants, and 97% of the "Energy Cities" received direct support. A total of 4,400 people participated in 51 events that were held to promote know-how transfer among the local authorities. Furthermore, some new products were tested in the course of the year, e.g. the "European Energy Award", "Factor 21" (evaluation of the sustainable development of a local authority) and energy/CO₂ declarations. All three were successfully tested in pilot local authorities, and are to be definitively intro-

duced in the near future. In the area of mobility, the main focus was on activities relating to traffic-free zones and roads with a speed limit of 30 km/h. More than 50 Swiss local authorities participated in the European mobility day, which was held on 22 September under the motto "Into town without my car". And SwissEnergy successfully launched a new action ("Getting to work without my car") involving 280 companies and more than 40,000 employees. (SwissEnergy funding, 2003: 2.3 million Swiss francs; declared equity and third-party funding: 4.9 million Swiss francs.)

Infrastructure systems

In 2003, SwissEnergy integrated the following facilities into its "Energy in infrastructure systems" action: sewage treatment plants, heat production from sewage pipes, water supply, waste incineration plants (■ Annual Report, Energy in infrastructures). To promote activities



“Energy savings in the area of heating in buildings will become substantial if tenancy law makes it possible for landlords to obtain acceptable returns from investments carried out for this purpose.”

Claudine Amstein, secretary general of the Association of Property Owners in Western Switzerland

- Annual Report, Swiss Contracting
- Annual Report, Energy Agency for Industry

in this field, the number of offices in all three language regions of the country was increased from three to seven. The various objectives relating to events, direct consultation, project support and volume of media contributions were either met or exceeded. The “Energy in infrastructure systems” team also announced the introduction of a special award (“Medaille d’eau”) to coincide with the United Nations “Year of Fresh Water”. In all, 86 sewage treatment plants received the award in recognition of their exemplary energy efficiency measures. It was demonstrated that electricity production from sewage gas is ecologically sound and represents an attractive addition to the range of environment-friendly forms of electricity production. In the area of water supply, the aim is to proceed with the general analysis (free of charge) as the trigger for freshwater power plants. The aim behind the detailed analyses carried out in waste incineration plants is to exploit the large potential for increasing electricity production from waste materials. (Swiss Federal Office of Energy funding, 2003: 0.4 million Swiss francs; declared equity and third-party funding: 0.4 million Swiss francs.)

Swiss Contracting

During 2003, Swiss Contracting achieved more widespread acceptance as a neutral and independent information centre for contracting services. This became clearly apparent from the record attendance at the symposium held in the German-speaking area of the country, the strong interest in the guidelines for local authorities and the number of new subscribers to the service (■ Annual Report, Swiss Contracting). The various specimen contracts in the areas of tenancy and property law were updated during the year, and a workgroup was established for the purpose of developing an independent contracting label. Due to a lack of relevant data it has not been possible to assess the degree of success of the projects that have been realised to date. (Swiss Federal Office of Energy funding, 2003: 0.12 million Swiss francs; declared equity and third-party funding: 0.22 million Swiss francs.)

Trade and industry

Energy Agency for Industry

The process of concluding target agreements is being hampered by uncertainties caused by the ongoing debate on the introduction of a CO₂ fee and/or “climate centime” (“Klimarappen”). Nonetheless, in 2003 the Energy Agency for Industry (which was launched in 2001 with a total of 16 groups) (■ Annual Report, Energy Agency for Industry) was able to report a sharp rise in the number of companies participating in the scheme. 65 groups in the large-scale consumer segment according to the energy model, and 11 groups in the benchmark model for small and medium-sized companies are now actively involved in the target agreements process. This means that there are approximately 1,000 companies now involved in this scheme, or around 400 more than in the prior year. Furthermore, a sector agreement was concluded with “Swissmem” that involves approximately 500 companies.

Up to the end of 2003, a total of 12 groups had been audited by the federal government, and a further 39 were either undergoing the Energy Agency for Industry’s internal assessment or being audited by the federal government (43 large-scale consumers or energy model groups and 8 benchmark model groups). The purpose of such audits is to verify that the company’s declared target for the reduction of CO₂ emissions complies with the provisions of the CO₂ Act and is sufficiently ambitious. On 23 April 2004, Federal Councillor Moritz Leuenberger and EnAW president Rudolf Ramsauer signed the first target agreement with a total of 45 groups encompassing some 600 firms and accounting for around 25% of the CO₂ emissions from Switzerland’s industrial sector. The agreed reduction target for CO₂ emissions from combustibles and motor fuels is 17.9% (0.47 million tonnes of CO₂).

The estimated level of emissions from all companies involved in this process is 4 million tonnes of CO₂, which is equivalent to approximately 40% of total emissions from Switzerland’s economic sector. On the basis of available data it appears

- Annual Report, Swissmem
- Annual Report, Industry and services / Optimisation of complex systems
- Annual Report, Electrical appliances
- Annual Report, "eae"
- Annual Report, S.A.F.E.

likely that industries that participate in the target agreement process will attain the targets as specified by the CO₂ Act. The members of "Swissmem" have succeeded in reducing their CO₂ emissions by 40% since 1990, and 65% of them are involved in the Energy Agency for Industry's target agreement process (■ Annual Report, Swissmem).

The project aimed at optimising energy systems in indoor swimming baths and ice rinks was completed during the year under review (■ Annual Report, Industry and services/Optimisation of complex systems). Furthermore, the Energy Agency for Industry was able to initiate a first series of practical support projects (e.g. energy check-ups). The funding provided to the Energy Agency for Industry by the Swiss Federal Office of Energy within the scope of the performance agreement amounted to 2.6 million Swiss francs in 2003 (average funding over three years, approx. 2 million Swiss francs p.a.). The estimated own funding and contributions from third parties were three times higher, namely 7.8 million Swiss francs.

Appliances

In 2003, the first series of controls was carried out concerning the use of the compulsory energy label for electrical household appliances that was introduced on 1 January 2002 (■ Annual Report, Electrical appliances). It was found that the initially very low degree of compliance in the area of printed advertising has meanwhile improved. Nonetheless, in approximately 10% of the cases the label was missing, and in a further 10% it had not been affixed according to the instructions.

The co-operation between the electrical appliances sector, the Energy Agency for Electrical Appliances (eae, which represents industry and consumer organisations) and the Swiss Agency for Energy Efficiency (S.A.F.E., which represents environmental organisations and consumers) was intensified in the course of the year.

The Energy Agency for Electrical Appliances (■ Annual Report, "eae") promotes energy-efficient technologies at the point-of-sale and influences the behaviour of buyers and users by advising them on ways in which to use appliances more energy-efficiently, both on site and via the Internet (www.energyBrain.ch and www.eae-geraete.ch). The latter contains the successfully completed pilot project aimed at compiling a comprehensive appliances database, which is to be constantly expanded. The involved companies (Migros and Coop, plus 15 out of 17 importers and manufacturers of large household appliances) cover a major proportion of the market. In the area of electrical appliances, the commitment on the part of the eae and SwissEnergy has generated an estimated contribution of around 15.3 million Swiss francs for measures aimed at reducing electricity consumption in Switzerland. This figure is far higher than the funding provided by the Swiss Federal Office of Energy to the eae (1.2 million Swiss francs).

The Swiss Agency for Energy Efficiency (■ Annual Report, S.A.F.E.) looks after the information home page, www.topten.ch, which recorded a sharp increase in visitors in the year under review (350,000 versus 100,000). In the course of the year a total of 33 million reader contacts were recorded (prior year, 22 million). 34 companies participated in the "Golden Plug" competition for energy-efficient lamps with a total of 58 products. An impact analysis of the market success of the 1999 and 2001 winners of this competition resulted in an estimated contribution of around 10 GWh towards efficient electricity use (projected over a period of ten years). S.A.F.E.'s degree of own financing reached 74% (funding 2003 by the Swiss Federal Office of Energy, 0.9 million Swiss francs, declared equity and third-party funding: 2.6 million Swiss francs) and is thus well above the level of 60% required by the SFOE.

- Annual Report, "auto-schweiz"
- Annual Report, Mobility sector
- Annual Report, "e'mobile"

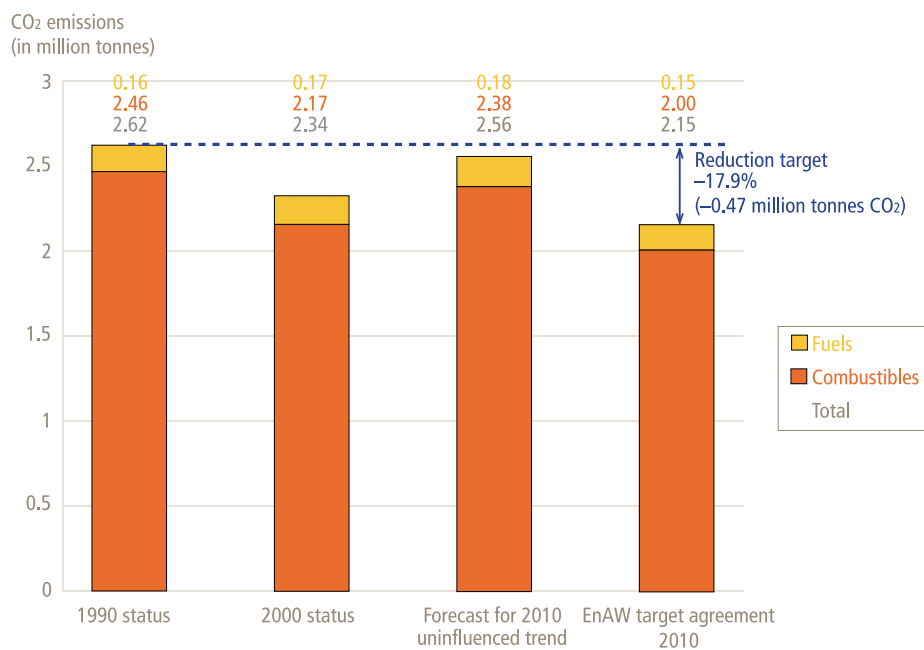


Fig. 7
Energy Agency for Industry target agreement dated 23 April 2004. Status of CO₂ emissions for the 600 involved companies (1990 and 2000), and 2010 reduction target versus 1990

Mobility

It appears that the chances of meeting the target set by SwissEnergy (reduction of CO₂ emissions relating to motor fuel consumption by 8% up to 2010 versus the 1990 level) are growing increasingly slim. At 16.7 tonnes, the level of CO₂ emissions from motor fuels in 2003 was 8.1% higher than the 1990 level.

In the area of mobility, SwissEnergy is focusing on three priorities: energy-efficient vehicles, energy-efficient driving behaviour and human-powered and combined mobility.

Energy-efficient vehicles

The target agreement between the Department of Environment, Transport, Energy and Communications (DETEC) and "auto-schweiz" calls for a reduction of the average fuel consumption of new cars from 8.4 litres per 100 kilometres in 2000 to 6.4 litres by 2008 (■ Annual Report, "auto-schweiz"). In 2003, the average specific consumption fell by 1.4% to 7.99 litres (versus the target level of 7.65 litres). One of the main

reasons for this deviation from the target is the trend towards heavier and more powerful motor vehicles. At the same time, the proportion of sales of more energy-efficient diesel-fuelled vehicles rose from 17.4 to 21.4%. The introduction in 2003 of an energy label for motor vehicles similar to that for household appliances will help buyers of new cars to choose more energy-efficient models. SwissEnergy is also providing support in the form of information services, e.g. a web site (www.energieetikette.ch), an information line (0848 444 444), a fuel consumption catalogue in collaboration with the Touring Club of Switzerland, and the VCS (Swiss Road Traffic Association) guide to environment-friendly vehicles. As of autumn 2003, the label was displayed on more than 90% of new motor vehicles (■ Annual Report, Mobility sector).

With the aid of a newly developed model it was possible to estimate the level of energy savings achieved by the "e'mobile" association in 2003 (■ Annual Report, "e'mobile"). According to the information provided at the "EcoCar" stand at the Geneva International Motor Show, the estimated savings amounted to approximately 300,000 litres of fuel. Advice provided by the in-



"The energy label for motor vehicles tells us which cars are economical and efficient. auto-schweiz is pleased to support SwissEnergy in its effort to achieve sustainable mobility."

Tony Wohlgensinger, President of "auto-schweiz"

- Annual Report, VEL2
- Annual Report, Swiss Gas Industry Association
- Annual Report, Eco-Drive® Quality Alliance
- Annual Report, "Veloland"
- Annual Report, NewRide

formation centres resulted in savings of around 22,500 litres, while the estimated figure for "e'mobile" information centres was 6,500 litres. (Swiss Federal Office of Energy funding, 2003: 0.42 million Swiss francs; declared equity and third-party funding: 0.64 million Swiss francs).

Associazione VEL2 (■ Annual Report, VEL2) has been entrusted by the canton of Ticino and SwissEnergy with the tasks of promoting low-consumption vehicles and developing the canton as a mobility model. In 2003 it registered a total of 800 energy-efficient vehicles (prior year, 600). Furthermore, the number of involved dealers rose to 100, and the number of member local authorities increased to 25 (equivalent to one-third of the population of Ticino). (Swiss Federal Office of Energy funding, 2003: 0.90 million Swiss francs; declared equity and third-party funding: 1.56 million Swiss francs.)

Further progress was made with respect to the promotion of gas-based motor fuels: the number of natural-gas filling stations rose to 33, and approximately 700 gas-driven vehicles were in use as of the end of 2003. The conclusion of a framework agreement between the gas industry and biogas producers concerning the active promotion of biogas production means that the potential for CO₂ reduction has grown higher.

(■ Annual Report, Swiss Gas Industry Association.)

Energy-efficient driving

In the course of 2003, a total of 43,000 people (prior year, 36,000) attended Eco-Drive® courses on ecological driving, which has the potential to lead to savings in fuel consumption of between 10 and 15% (■ Annual Report, Eco-Drive® Quality Alliance). This resulted in a reduction in CO₂ emissions by 9,700 tonnes, or expressed in terms of the full lifetime of the measures concerned, almost 100,000 tonnes (Swiss Federal Office of Energy funding, 2003: 0.99 million Swiss francs; declared equity and third-party funding: 1.12 million Swiss francs).

Human-powered mobility, combined mobility

In 2003, a "mobility management in companies" pilot phase was defined and six sub-projects (plus a subsequent one from the French-speaking part of the country) were initiated. In the area of mobility platforms, steps are to be taken to improve the provision of information as well as interfaces between the various forms of transport. Five involved federal authorities have jointly defined the way in which these aims are to be achieved in a position paper on the topic of mobility co-ordination centres.

During 2003, the focus of activities of "Veloland Schweiz" (Cycling in Switzerland) was on linking the nine national "Veloland" routes with 5,000 kilometres of sign-posted regional cycle routes in all parts of the country (■ Annual Report, "Veloland"). Furthermore, regional "car-free" action days ("slowUp") were carried out again, in which a total of around 100,000 people took part. (Swiss Federal Office of Energy funding, 2003: 0.48 million Swiss francs; declared equity and third-party funding: 1.32 million Swiss francs.)

The number of local authorities participating in "NewRide" rose from 9 to 21 in the course of the year, and the sale of electric bikes increased by 50% to 1,800 (■ Annual Report, NewRide). Thanks to the sale of these vehicles, it was possible to reduce CO₂ emissions by 1,680 tonnes in 2003. The costs for the Swiss Federal Office of Energy fell versus the prior year from 13 to 6 centimes per saved kWh. (Swiss Federal Office of Energy funding, 2003: 0.49 million Swiss francs; declared equity and third-party funding: 1.10 million Swiss francs.)

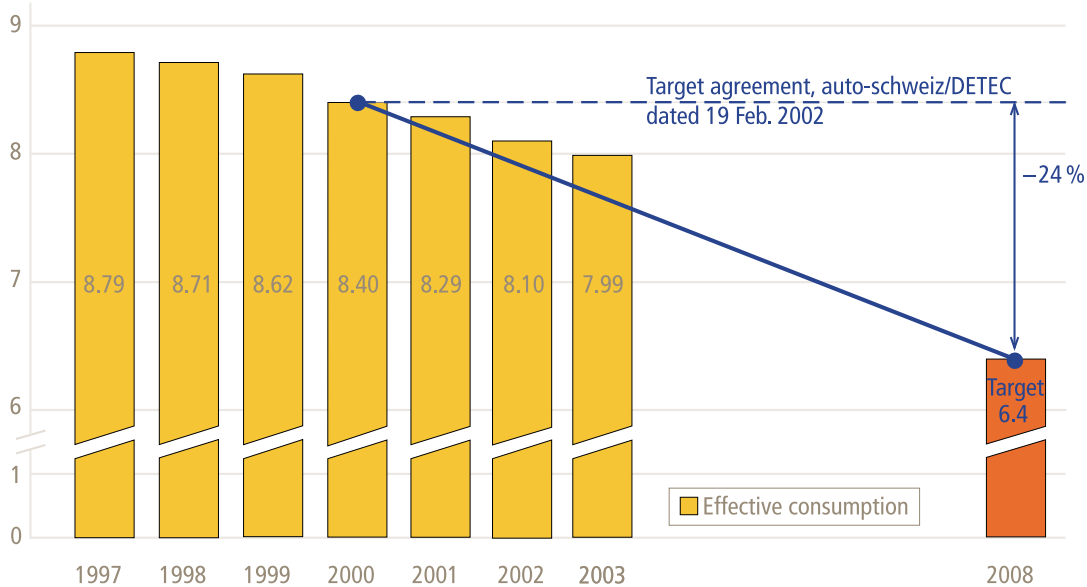
Consumption
(litres per 100 km)

Fig. 8
Target agreement concerning
specific fuel consumption of
new motor vehicles and trend
in effective consumption

Renewable energies

In 2003, the production of electricity from hydropower (plants with a capacity of more than 300 kW) remained practically constant versus the prior year (36,445 GWh). At 34,886 GWh, the 2003 mean budgeted production was more than 400 GWh higher than the figure for 2000. SwissEnergy's objective of stabilising the electricity production capacity of hydropower plants at the 2000 level was therefore exceeded.

The volume of production of renewable energy excluding hydropower rose again in 2003: the figures were 953.9 GWh for electricity (+23.7 GWh), and 8,162 GWh for heat (+ 246.2 GWh) versus the prior year (■ Annual Report, Renewable Energies sector). Growth in the area of electricity was strong compared with 2002, but was slightly slower in the area of heat production. The objectives of SwissEnergy for the period from 2000 to 2010 are an increase in production by 500 GWh for electricity and by 3,000 GWh for heat. In the area of heat production, SwissEnergy is just about on target, but only around

21% of the 2010 target for electricity has been met after three years.

Electricity supply companies are increasingly marketing electricity from renewable sources as own products (currently 430 products). Thanks to the supply of electricity from hydropower plants by a major provider, the sales volume rose versus the prior year by a factor of 13 to almost 2,500 GWh. 3.5% of these supplies were certified with the "nature-made star" label. Today, more than 90% of households in Switzerland are offered the opportunity to buy electricity from renewable energy sources. The number of subscriptions rose by a factor of 2.5 versus the prior year to 340,000 (survey on ecological electricity conducted by the Agency for Renewable Energies and Efficient Energy Use, AEE).

In 2003, the main focus of the AEE in the area of ecological electricity was once again on joint marketing activities. Around 70 companies supplied ecological electricity certified by the "nature-made star" label. The volume of sales rose from 45.2 GWh in 2002 to 86.5 in 2003, and in



"Climate-friendly, ecological and creating jobs even in peripheral areas: The promotion of renewable energies ensures quality of life for us all."

Silva Semadeni, President of Pro Natura and member of the SwissEnergy strategy group

- Annual Report, "Wood Energy Switzerland"
- Annual Report, Swiss Association for the Promotion of Heat Pumps
- Annual Report, Geothermal energy competence centre
- Annual Report, Solar energy
- Annual Report, "Suisse Eole"

the same period the number of subscriptions increased by more than 20% to 36,350. The AEE also updated its web site (www.erneuerbar.ch) and recorded some 250,000 hits.

In 2003, the funding provided by the Swiss Federal Office of Energy for renewable energies amounted to 18.5 million Swiss francs (including a special parliamentary credit, but excluding the credit of 6.8 million for the promotion of wood energy from the hurricane "Lothar" programme), of which 7.3 million was allocated to pilot and demonstration projects. Own financing by the various partners amounted to around 6 million Swiss francs. Renewable forms of energy were also supported by the cantons within the scope of their own promotion programmes (total funding, approximately 24 million Swiss francs).

Specific forms of renewable energy

Wood accounts for the largest proportion of heat production from renewable energy sources. In 2003, the balance of the additional "Lothar" credit was 6.8 million Swiss francs. The main focus of activity is on consulting services (■ Annual Report, "Wood Energy Switzerland"). With its range of services, which has been carefully defined in order to meet the requirements of all target groups as an evaluation of the networks clearly shows, Wood Energy Switzerland makes a valuable contribution towards strengthening the market chances and status of wood energy.

The second-largest contribution towards heat production from renewable energy sources comes from waste incineration plants, followed by use of environmental heat via heat pumps (utilisation of heat from air, soil and water). Sales of heat pumps rose by almost 15% in the year under review to a new record high of around 8,700 (■ Annual Report, Swiss Association for the Promotion of Heat Pumps). Approximately 25% of the sold heat pumps were used for renovation purposes (an increase by 60% versus the prior year). Sales of large-scale heat pumps rose by 39%. The efforts aimed at sensitising the gen-

eral public and specialised partners proved to be effective. Training and further education courses held by the geothermal energy competence centre met with a strong response, and attracted more than 500 participants (■ Annual Report, Geothermal energy competence centre).

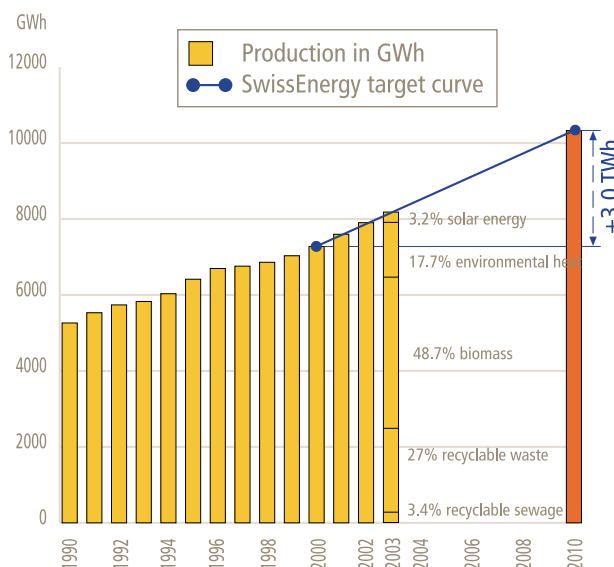
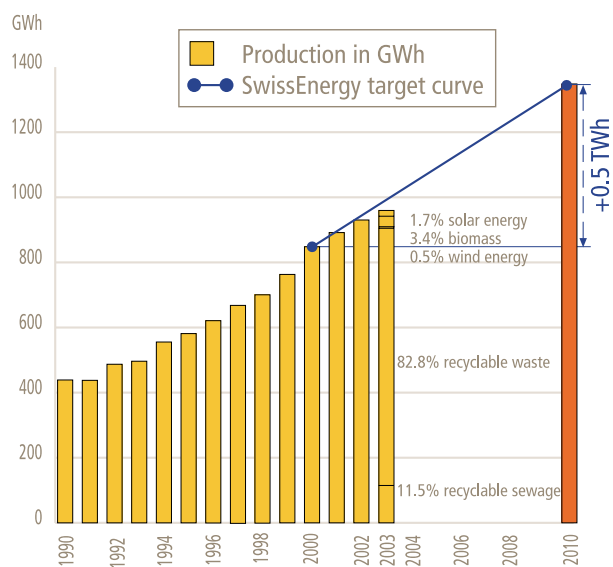
A campaign launched by the SWISSOLAR network in 2003 to promote the use of solar power is beginning to produce results (■ Annual Report, Solar energy). The number of enquiries about solar heating installations received by the information desk rose to 3,200 in the year under review, and a total of 3,000 information packages were distributed in parallel campaigns together with the cantons. The corresponding section of the web site (www.swissolar.ch) recorded around 300,000 hits.

A total of 5.5 GWh of solar power was sold to 31,200 subscribers in the course of the year (versus 5.3 GWh in 2002), and an additional 1.0 GWh was sold as part of mixed products (prior year, 0.7). However, fewer solar power exchanges are being established today. It appears that, unless more attractive remuneration is offered for feeding ecological energy into the network, the market will soon reach saturation point.

As before, the majority of electricity production from renewable energy sources other than hydropower (namely around 83%) comes from the incineration of waste materials, of which roughly half consist of renewable substances. This is followed by electricity production from sewage treatment plants.

For the wind energy sector, 2003 was a fairly difficult year (■ Annual Report, "Suisse Eole"). Overall there was around 20% less wind versus the long-term annual average. At 5.2 GWh, the 21 Swiss wind energy plants generated approximately 3% less electricity in 2003 than in 2002. On top of this, it was only possible to install one additional 7 kilowatt plant in Berg (canton of Thurgau) in the year under review, primarily as a

Fig. 9 Production of renewable energy (electricity and heat) in Switzerland



Electricity production (excluding hydropower)

Heat production

consequence of complex and time-consuming planning procedures. On the positive side, the objection against the wind power project in Entlebuch was withdrawn. In the future, general information activities are to be replaced by a stronger emphasis on consulting services in support of specific projects. Thanks to the wind energy concept that was drawn up in the course of the year and presented to the public in August 2004, it ought to be possible in future to optimise Swiss wind power production in close collaboration with environmental associations and organisations focusing on protection of the landscape. This concept formulates uniform criteria for the choice of location of wind energy facilities, and proposes 29 suitable sites for expansion up to 2010. Preliminary cantonal or local planning bases already exist in 16 of these locations. If all 29 sites were to be fully developed with 190 wind power plants, it would be possible to produce around 300 GWh of electricity each year. SwissEnergy's production target for wind energy is 50 to 100 GWh by 2010.

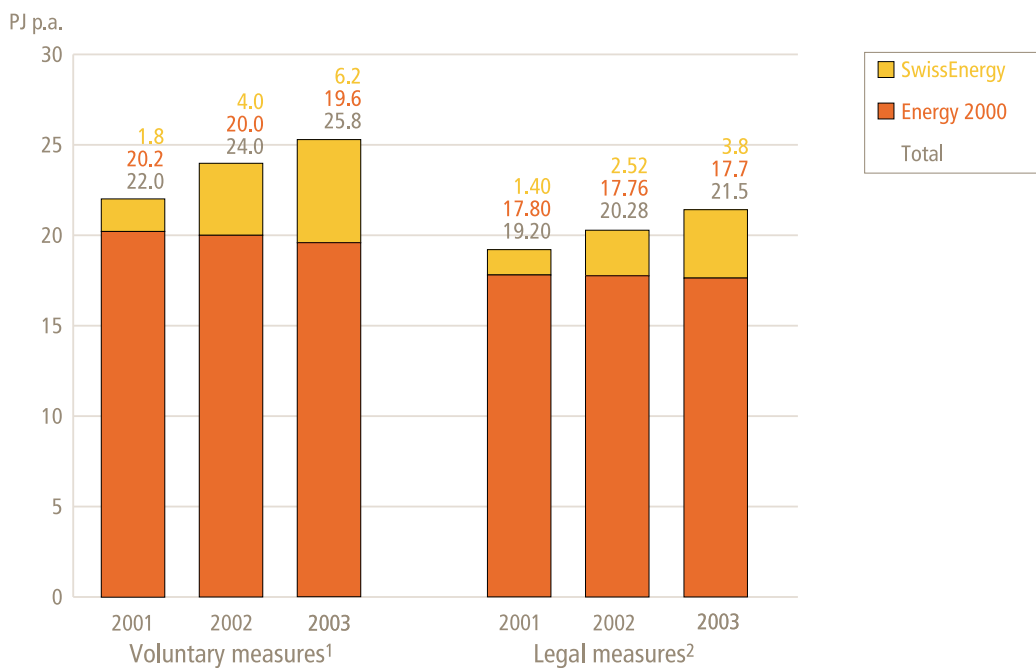
The use of biogas as a motor fuel should gain momentum as a result of the plan to exempt it from fuel tax and thanks to an agreement concluded with the gas industry concerning the promotion of biogas (■ Annual Report, Biomass mandate).

2003 (in million Swiss francs)	SwissEnergy funding	Declared equity and third-party funding
Biomass	0.45	0.2
Geothermal energy	0.44	0.04
Wood (excl. "Lothar")	1.11	3.7
Photovoltaics	0.30	0.1
Solar power plants (heating)	1.11	0.6
Heat pumps	1.35	0.9
Wind	0.58	0.3
Total networks	5.34	5.8



- SwissEnergy 2003 impact analysis (INFRAS)
- report on the development and basis for calculation of energy consumption in 2003 versus 2002 and 1990 (Prognos)

Impacts in 2003



¹ According to INFRAS impact analysis

² According to Prognos ex-post analysis

Fig. 10
Impacts of measures implemented by Energy 2000 and SwissEnergy on energy consumption in the period from 2001 to 2003

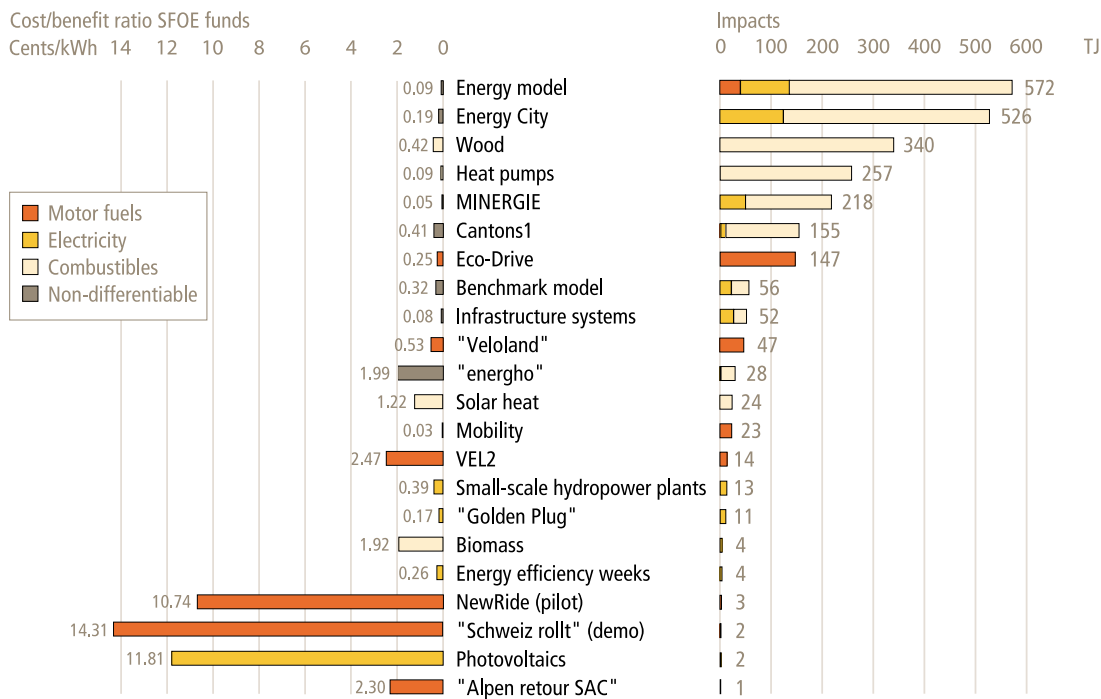
Methodology

As in past years, the impacts of SwissEnergy in 2003 were once again carefully analysed and subsequently published. Thanks to two detailed analyses encompassing the entire programme it is possible to verify the degree to which SwissEnergy's objectives are being achieved as required by the Energy Act:

□ The analysis carried out by INFRAS (■ SwissEnergy 2003 impact analysis) examines the impacts of the programme's activities on energy consumption, employment and investments. Here the focus is on voluntary measures. Cantonal buildings have not been included in this analysis since they are no longer entitled to global contributions, but this year the following products have been integrated: energy-efficiency weeks, "Alpen Retour", "NewRide" and "Mobil sein – Mobil bleiben" ("Be mobile

– Stay mobile"). The results of the analyses of the energy label for appliances and for motor vehicles – which were carried out in 2003 for the first time – will only be available towards the end of 2004.

□ The ex-post analysis carried out by Prognos (■ report on the development and basis for calculation of energy consumption in 2003 versus 2002 and 1990) is based on annual changes in energy consumption. This report analyses the influence of external factors such as energy prices, size of population, number of cars, buildings, appliances etc., climate and policy, on energy consumption. It also assesses the impacts of the legal measures of SwissEnergy on energy consumption, employment and investments.



¹Cantons: excluding MINERGIE, wood, solar energy and heat pumps

Fig. 11
Impacts on energy consumption and cost/benefit ratios of the main measures implemented by SwissEnergy

Allocation of reduced funds

The decreasing government funding was used to an increasing extent in favour of short-term measures in the area of efficient energy use, to the detriment of the promotion of renewable forms of energy. As a consequence it was possible to maintain the short-term impacts. In the area of renewable energies, funding (excluding global contributions to the cantons) fell during 2001 and 2003 from 47 million Swiss francs to 25 million (or by 46%), and the fact that Parliament resolved to cut the overall SwissEnergy budget by an additional 18% as part of its 2003 relief programme means that further reductions will be unavoidable over the next two years. Generally speaking, the impacts of investments in renewable forms of energy tend to be felt over the long term (i.e. over many years). Therefore the increasing orientation of the budget on short-term measures will inevitably lessen the im-

pacts of the programme over the long term, especially since the credits for pilot and demonstration projects (which function as a direct link between research and the market) have been cut almost in their entirety as a consequence of the above-mentioned relief programme.

Impacts of SwissEnergy and its contribution towards climate policy

In 2003, overall energy consumption in Switzerland rose versus the prior year by 19.4 PJ, or 2.3%, to the new record level of 873.1 PJ, a trend that may be partly attributed to the significantly colder weather conditions (according to the ex-post analysis the consumption level would have been more or less constant without this climate effect). At the same time, the impact analysis found that overall energy savings rose again versus the prior year from 44.6 to 47.3 PJ (or to 6% of overall consumption) thanks to the sus-

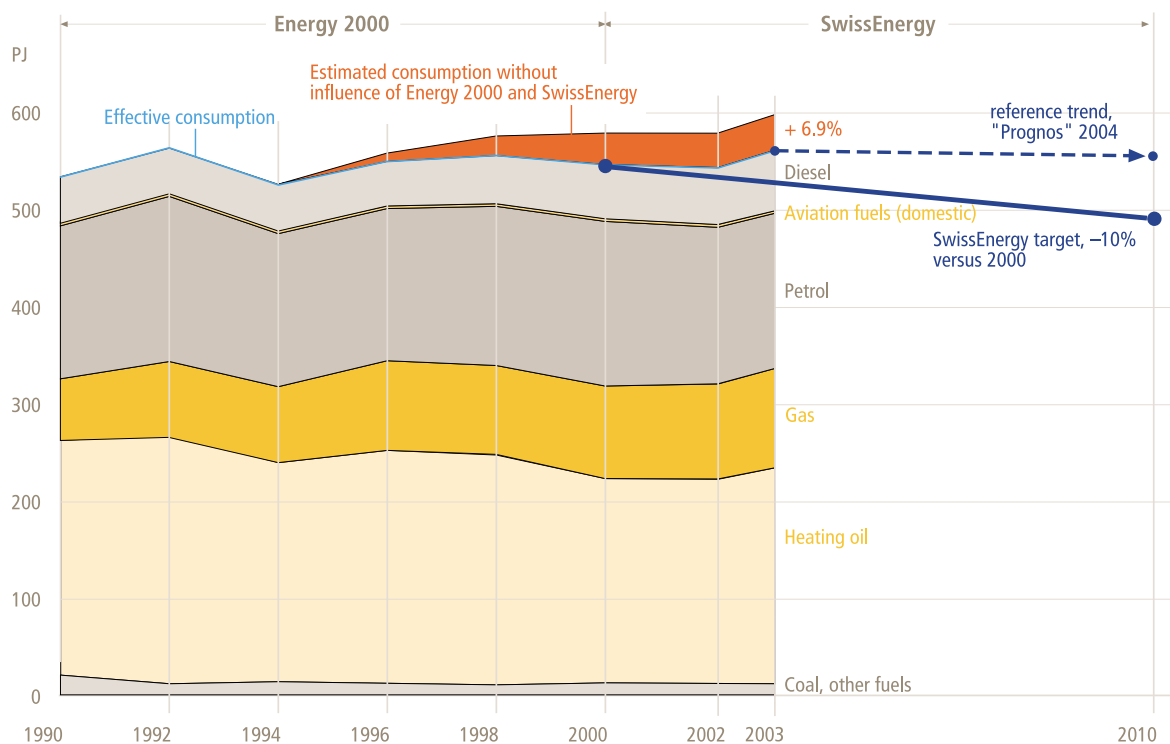


Fig. 12
Consumption of fossil energy in Switzerland from 1990 to 2003 and energy savings achieved through Energy 2000 and SwissEnergy

tained influence of Energy 2000 and SwissEnergy. However, this was only sufficient to compensate roughly one-third of the increase in consumption resulting from the growing numbers of buildings, appliances, vehicles, etc. (i.e. the quantity effects between 1990 and 2003). Expressed in terms of hard cash, energy consumers saved an equivalent of around 1.3 billion Swiss francs in 2003 thanks to the Energy 2000 and SwissEnergy programmes.

The additional impacts on energy consumption resulting from the voluntary measures implemented in the year under review remained constant at 2.5 PJ (0.3% of end consumption, 0.45% including legal measures), while government funding was lower than in the previous year. However, in view of the current focus of priorities on short-term effects, these measures will inevitably be somewhat less sustainable: versus 2002, the impacts of the newly implemented measures fell from 44.7 to 37.9 PJ projected over

their full useful life. A slight increase in the additional impacts (from 1.12 to 1.26 PJ) was also identified in 2003 in the area of legal measures. The biggest contributions came from the energy model that was used for the target agreements between the Energy Agency for Industry and the private sector, the "Energy City" label, promotion of wood heating (thanks to the special credit from the "Lothar" programme), heat pumps, the "MINERGIE" standard and Eco-Drive® (in order of importance – cf. Fig. 11 on page 21).

Between 2002 and 2003, the consumption of fossil fuels (excluding aviation fuels for international flights) rose by 3.4% (but was almost constant if the climate effect is excluded). The increase with respect to combustibles was primarily attributable to the comparatively cold temperatures during the heating period. In 2003 the number of heating-degree days rose by 7.1% versus 2002, and this resulted in a sharp rise in

Savings achieved by Energy 2000 and SwissEnergy as percentage of overall energy consumption

	2001	2002	2003
Voluntary measures	3.0	3.3	3.3
Legal measures	2.2	2.6	2.7
Total	5.2	5.9	6.0

Ex-post analysis of the increase in energy consumption between 2002 and 2003

Climate	+21.8 PJ
Quantity effects	+5.6 PJ
Policy/technology	-7.1 PJ
Prices	-0.1 PJ
Miscellaneous factors	-0.8 PJ
Total increase	+19.4 PJ

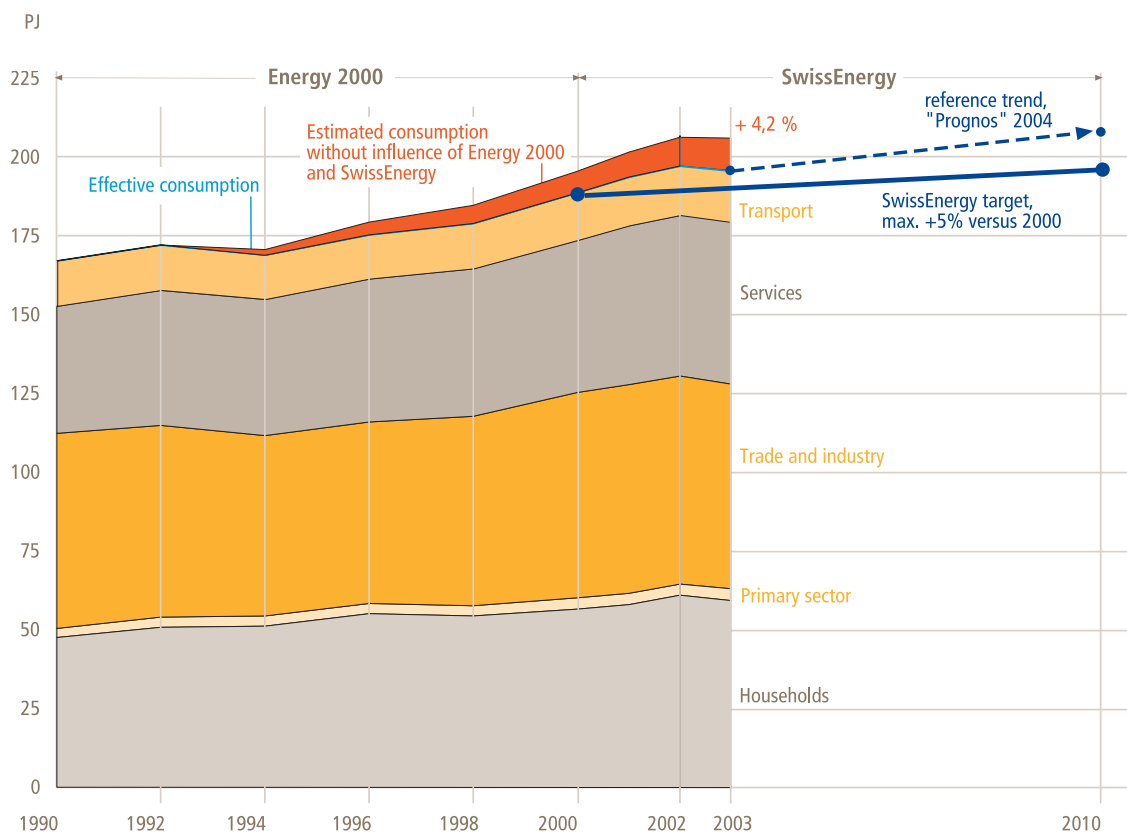


Fig. 13
Electricity consumption in Switzerland from 1999 to 2003, and savings achieved through Energy 2000 and SwissEnergy

the demand for combustibles (heating oil +5.3%, gas + 5.6%). Without the climate effect, the consumption of combustibles was more or less constant despite an increase in the overall energy-relevant surface area by 1.2%, and this points to additional efficiency gains.

Motor fuel consumption (excluding aviation fuels) rose by 1.2%. While the consumption of petrol fell slightly by 0.5% versus 2002, the figure for diesel rose by 6.0%, which reflects the increasing proportion of diesel-fuelled vehicles in Switzerland. The reduction in motor fuel consumption by 0.64 PJ (0.3%) in 2003 resulting from the additional voluntary and legal measures of SwissEnergy was by no means sufficient to compensate the increase in consumption.

The total quantity of fossil energy saved through Energy 2000 and SwissEnergy in 2003 was 39.0 PJ (37.0 PJ in 2002). This means that, without these two programmes, the consumption of fossil fuels would be 6.9% above the present-day level.

With respect to electricity consumption, SwissEnergy's objective for 2010 is a maximum increase of 5% versus the 2000 level. In 2003, consumption was already 5.2% (without the climate effect, 4%) above the level recorded in 2000. The increase versus 2002 was 2.0% (without the climate effect, 1.0%). Alongside the weather conditions, this trend was primarily attributable to quantity effects. But the measures implemented by Energy 2000 and SwissEnergy also played a positive role with respect to electricity consumption; without them consumption in 2003 would have been 4.2% higher. In other words, without these programmes the target gap would be significantly wider.

At 40.9 million tonnes, Swiss climate-related CO₂ emissions in 2003 were just as high as in 1990. The CO₂ Act calls for a reduction of CO₂ emissions directly associated with the consumption of fossil fuels by 10% in 2010 versus the 1990 level. Although significant reductions in CO₂ emissions

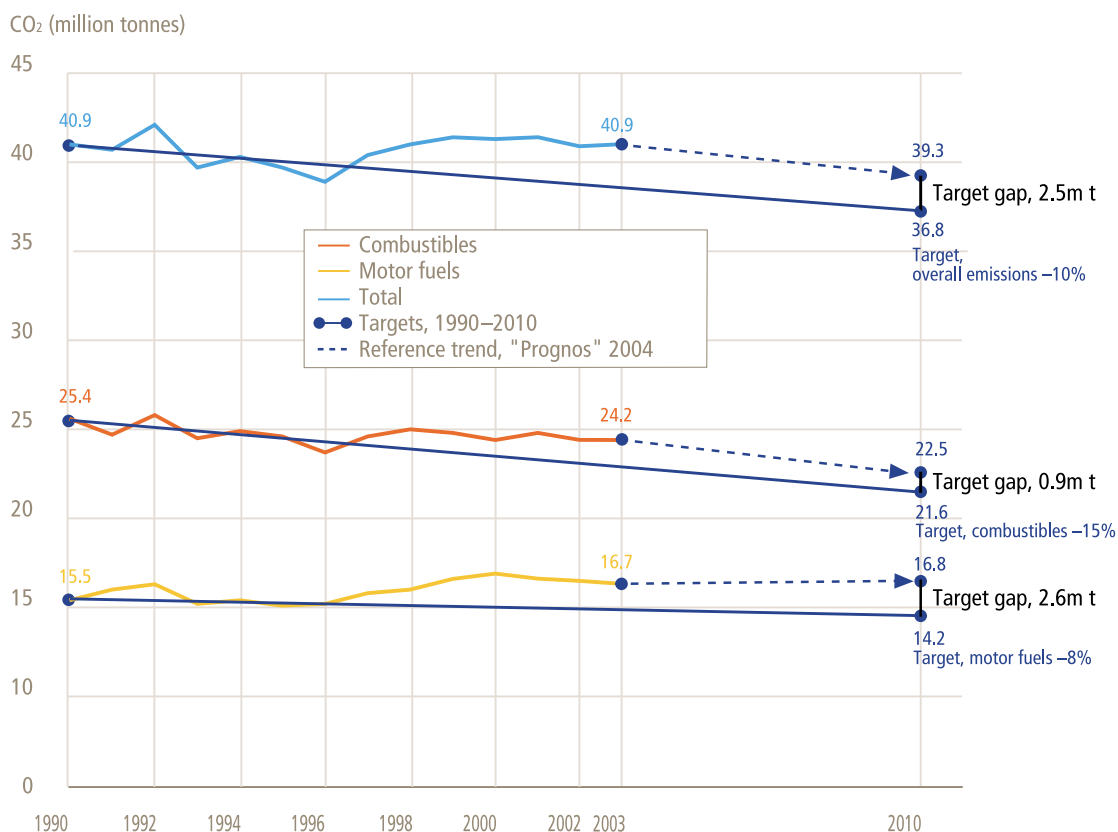


Fig. 14
 CO₂ emissions, reference trend and targets as per CO₂ Act, combustibles adjusted for climate factor (according to the Prognos Report "Aufdatierung der Standortbestimmung CO₂-Gesetz")

have been achieved through Energy 2000 and SwissEnergy, these are by no means sufficient: thanks to legal measures, CO₂ emissions in Switzerland (without upstream processes) fell in the year under review by 1.0 million tonnes, while the reduction attributable to voluntary measures was another 1.5 million tonnes. Without the two programmes, overall CO₂ emissions in Switzerland would have been 6.1% higher in 2003.

From the trend with respect to CO₂ emissions from combustibles and motor fuels and the respective reference trends up to 2010 it is clear that the target gap in the area of transport is continuing to widen. And with respect to combustibles (2003 status of CO₂ emissions, -4.6% versus 1990), it will only be possible to meet the target (namely a reduction by 15% versus 1990) by strengthening the impacts of existing measures or introducing new ones such as a CO₂ fee. The need for action in the area of motor fuels is even more urgent. The growing traffic volume and continual rise in average vehicle weight are the

main reasons why the energy saved through increased efficiency of motor vehicles failed to yield the desired result. In 2003, the effective level of CO₂ emissions was 8.1% above that of 1990, so the introduction of new measures (CO₂ fee and/or "climate centime") will be unavoidable if SwissEnergy is to meet the declared target of an 8% reduction by 2010.

In 2003 the production of renewable energies for which SwissEnergy has specified quantitative targets also rose (details see page 17).

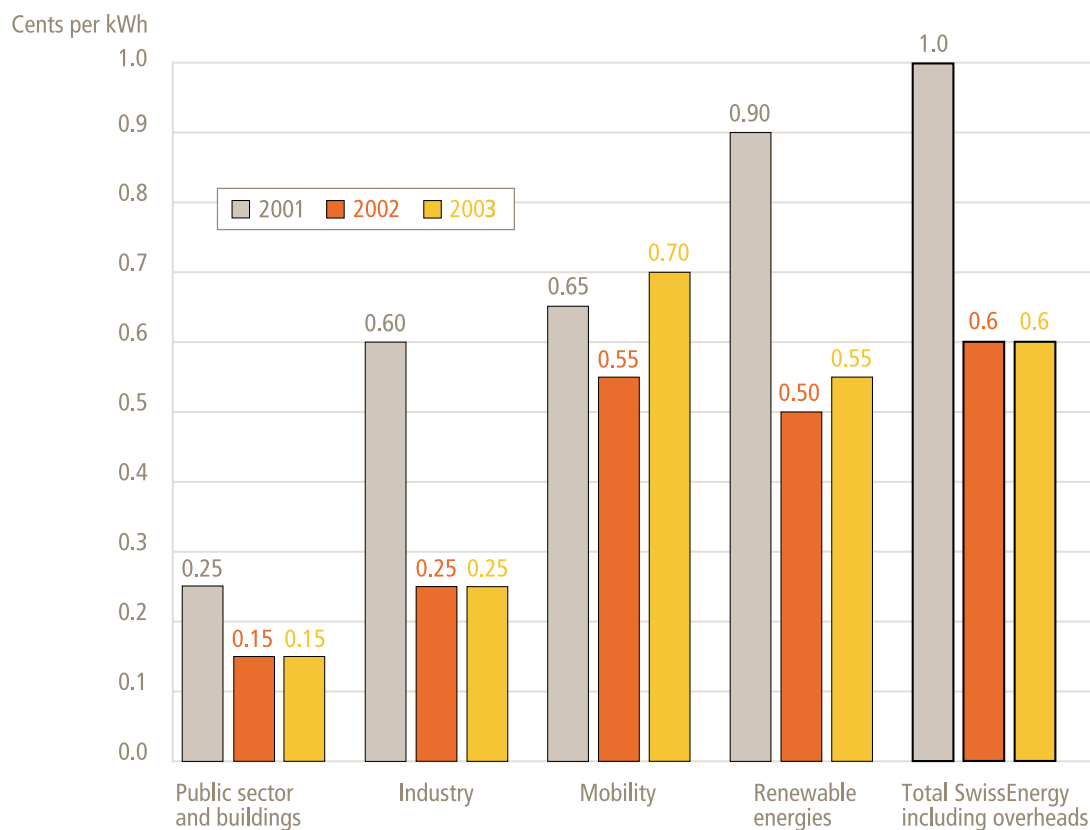


Fig. 15
Government funding per saved kWh from 2001 to 2003

Cost-effectiveness

In 2003, SwissEnergy was able to achieve approximately the same additional impacts on energy consumption as in 2002 despite budget cuts by Parliament. However, increased contributions from partners and third parties more or less brought the available funding back up to the prior-year level. Although the impacts of the measures implemented in 2003 will be shorter-lived, it was possible to maintain the cost-benefit ratio for federal funding at the same level as last year, namely 0.6 centimes per saved kilowatt hour (2001 level, 1.0 centimes). The increase in the cost-benefit ratio in the mobility sector was primarily attributable to the integration of new (and thus relatively costly) projects into the impact analysis that are not yet able to influence energy consumption, namely "NewRide" and "Veloland Regional". On the other hand, the relatively low figure for the public sector and buildings can be explained by the long-term impacts of the measures. The most effective measures in

2003 in terms of funding by SwissEnergy were "MINERGIE", energy use in infrastructure systems, the Energy Agency for Industry energy model and the promotion of heat pumps (in order of importance). All of these cost less than 0.1 centimes per kWh of saved or produced energy (cf. Fig. 11 on page 21). An evaluation of the total deployed funds (including cantonal funding and generated investments) results in the same cost-benefit ratio as last year (2003: 7.0 centimes per kWh; 2002: 7.0 centimes per kWh; 2001: 9.4 centimes per kWh).

Impacts on investments and employment

SwissEnergy has a positive influence on Switzerland's economy. It supports the trend towards domestic investments in innovative, efficient technologies and renewable energies instead of imports of fossil fuels, i.e. the associated added value is generated at home instead of abroad. The impact and ex-post analyses estimated that through the deployment of public funds

Voluntary measures: funding (million Swiss francs)

	2001	2002	2003
Funding by SFOE	75	68	63
Partners (incl. cantons)	56	60	74
Estimated investments	475	660	595

Impacts on employment, 2003 (public and private sectors)

	Person years
Voluntary measures	
Public sector and buildings	1200
Trade and industry	410
Mobility	160
Renewable energies	1900
Total¹	3670
Total, legal measures²	
	1862
Overall total	5532

¹ According to INFRAS impact analysis

² According to Prognos ex-post analysis

Expenditure

	(in CHF million)
Federal government ¹	63
Cantons (excl. federal global subsidies)	26
Other SwissEnergy partners	48
Total SwissEnergy	137

¹ incl. global subsidies to cantons (14 million), hurricane "Lothar" programme (6.8 million) and supplementary credit for renewable energies (2 million)

Recorded investments

	(in CHF million)
Voluntary measures ² (total)	595
of which public sector and buildings	120
industry	45
mobility	20
renewable energies	410
Legal measures ³	219
Total recorded investments	814

² as per INFRAS impact analysis

³ as per Prognos ex-post analysis

Fig. 16
Expenditure and investments,
2003

amounting to 89 million Swiss francs (federal government, 63 million / cantons, 26 million), investments worth a total of 595 million Swiss francs were required in 2003 to implement voluntary and support measures and a further 219 million were required for legal measures. SwissEnergy therefore generated investments worth a total of 814 million Swiss francs. The reduction versus 2002 (924 million Swiss francs) was primarily due to cuts in SwissEnergy's budget (especially to the detriment of pilot and demonstration projects and renewable energies) and the focus on shorter-term measures influencing consumption. Nonetheless, in 2003 SwissEnergy once again generated significant innovation and investment activity within the Swiss economy. The budget cuts also lessened the impacts of SwissEnergy on employment in 2003 (estimated effect, 5,530 person years (prior year, 5,900). The main beneficiaries were the construction industry, followed by machinery and motor vehicles, consulting, planning, IT, education, electrical technology, electronics and optical engineering.

Impacts on public finances and unemployment insurance

The investment and employment effects generated by SwissEnergy also influence public finances. On the positive side this takes the form of additional revenue from VAT and income tax. The reduction in unemployment benefits result-

ing from a higher employment rate does not directly affect public finances, since the contribution from the federal government towards unemployment insurance is fixed on the basis of the overall wage total. However, any such reduction directly benefits the economy and private households.

On the other hand, alongside the direct expenditure for SwissEnergy by the federal government and the cantons amounting to 89 million Swiss francs, the reductions in revenue from oil tax and VAT of around 8 million Swiss francs resulting from saved energy quantities also have to be taken into account.

Overall, the public funding of 97 million Swiss francs is reduced by between 23 and 53 million, depending on the scenario, as a consequence of the increased federal revenue. If we consider the overall impacts including the easing of the burden on unemployment insurance, the positive effect is between 50 and 185 million Swiss francs. In view of the fact that the labour market is currently not saturated, the effective easing of unemployment by SwissEnergy may be regarded as greater than would be the case with an overheated economy and a tight labour market. For this reason, the overall positive impacts of SwissEnergy are probably at the higher end of the scale (i.e. 185 million Swiss francs) rather than the lower end (50 million).

Impacts of SwissEnergy measures on public finances and unemployment insurance in 2003

(million Swiss francs)	
Income tax (additional revenue)	21–38
VAT (additional revenue)	2–15
Unemployment insurance (lower contributions)	125–229
Total (positive)	147–282
SwissEnergy	
Federal funds	63
Cantons	26
Energy taxes (reduced revenue)	8
Total (negative)	97
Balance (positive)	50–185

Conclusions and outlook

The main conclusions to be drawn from the year under review are as follows:

- Despite major uncertainties arising from the debate on budget cuts within the scope of the 2003 federal relief programme, the existence of SwissEnergy was secured thanks to decisive action by its partners.
- The overall budget cut from 75 million Swiss francs (2001) to 63 million (2003) was offset by higher financial contributions from the programme's partners, so that the level of total available funds was maintained at around 130 million Swiss francs p.a. from 2001 onwards.
- The positive impacts of the programme on energy consumption, emissions of CO₂ and other pollutants, investments, employment and release from dependence on imports are continuing to increase, albeit at a slower pace, but they are not sufficient to secure the declared objectives, especially in view of the already announced additional budget cuts up to 2005 (–40% versus 2001).
- It is primarily major growth effects that are preventing the attainment of the programme's objectives. These effects (increasing traffic volumes and heated surface areas in buildings, and the appearance of ever more and ever larger appliances, equipment and vehicles on the market) clearly exceed all the realised efficiency gains.
- Government funding for renewable energies and pilot and demonstration projects is being drastically cut, and over the long term this will inevitably lessen the positive impacts of the programme on the environment, the climate, innovation, investments, employment and dependence on imports.

Given this situation, SwissEnergy will have to be significantly strengthened if it is to meet its declared objectives. For this purpose the programme will be pursuing the following four-point strategy:

1. The remaining funding available to SwissEnergy must be utilised even more efficiently and effectively. The trend towards the promotion of measures with a relatively short-term impact needs to be examined in a critical manner, and sustainable, long-term impacts must not be left out of the equation. The option of supporting measures that are in any case economically viable needs to be examined and reduced if necessary.
2. It is essential that SwissEnergy strengthens its partnerships and makes more effective use of synergies wherever these arise. The programme's partners have to be persuaded to increase their contributions and actions. SwissEnergy also needs to find new partners – especially in the area of voluntary measures – and offer them attractive fields of action (e.g. the "climate centime", an electricity agency, sponsoring, media partnerships).
3. The existing legal options need to be fully exhausted: in the area of buildings, by the cantons through the implementation of model energy legislation and cantonal promotion programmes; in the area of appliances and motor vehicles, by the federal government with the aid of energy labels, consumption requirements, bonus/penalty system for motor vehicle tax, tax relief for ecological motor fuels, and, in the area of power, the promotion of renewables and efficiency with the planned Act on Electricity Supply.
4. Since all this will still not be sufficient for the programme to meet its objectives, it will be necessary to introduce a CO₂ fee and/or "climate centime". In autumn 2004, the Federal Council will be submitting four proposals for consultation, and will make its decision on the basis of the outcome of this procedure.

SwissEnergy: focuses in 2005/06

Area	Partners	Measures
Buildings	SwissEnergy buildings campaign ("bau-schlau"): The aims of this campaign are to co-ordinate, network and strengthen measures relating to buildings. One of its main goals is to bring about a wave of building renovations. Information: www. bau-schlau.ch	
	Cantons "MINERGIE" AEE, networks Renewable energies	New/renovated buildings: – Implementation of model cantonal provisions (MuKE), 10 modules – Promotion programmes ("MINERGIE", renewables) – Cantonal buildings (to set an example)
	energho "Energy City", cantons, large-scale consumers	Public buildings: – Optimisation of operation of heating/cooling systems, subscription – "MINERGIE"
	SIA, S.A.F.E, eae, VUE	SIA 380/4, category A appliances, green power
Public sector	SwissEnergy for Local Authorities	– "Energy City" label – CO ₂ declaration
	Infrastructure systems VSA, SVGW, VBSA, FES	– Optimisation of systems – Large-scale heat pumps (sewage) – Ecological electricity from drinking water, sewage gas, waste – Renewable fuel from sewage gas
	Large-scale consumers SBB, Swiss Post, ETH, BBL, ...	Implementation of SwissEnergy strategy
Trade and Industry	Energy Agency for Industry	Comprehensive target agreements
	eae, S.A.F.E Stabilisation of electricity consumption of appliances	– Energy labels, including A+, A++ – EU admission – Campaign to promote replacement of old appliances
	Oil Association	Climate centime
	Electricity industry	Promotion of technology, electricity agency
Mobility	Energy-efficient vehicles auto-schweiz, AGVS, TCS, VCS, Eco-Car	Implementation of "–24%" target agreement: – Bonus/penalty scheme for motor vehicle tax – Reduction of fuel tax on gas/biogas
	Energy-efficient driving: Quality Alliance Eco-Drive®	– Integration of Eco-Drive® into driving test and 2-phase instruction for new drivers – Co-operation with traffic safety organisations
	Human-powered and combined mobility ARE, FEDRO, SBB, Swiss Post, "Energy City", BAG, "Veloland"	Combined and human-powered mobility: – Energy cities – 22 September mobility day – Leisure-time travel

SwissEnergy: 3rd Annual Report

Summary

2003 was another successful year for SwissEnergy, in which it was able to achieve positive impacts despite severe budget cuts. However, its longer-term impacts have been reduced and it has not been able to close the target gap in the area of fossil fuels. The introduction of a CO₂ fee and/or "climate centime" is now unavoidable if the programme is to have any chance of meeting its declared targets.

Budget cuts

In its third year, SwissEnergy faced the threat of being closed down as part of the federal government's 2003 relief programme, but this decision was reversed thanks to joint efforts by the programme's partners, and especially by the cantons. Parliament spoke out in favour of retaining the programme, but cut its ordinary budget from 55 million Swiss francs to 50 million (for 2004) and 45 million (starting from 2005). The level of available funding, including the credit for the wood heat programme (hurricane "Lothar") and the supplementary credit for the promotion of renewable energy, fell further in the course of the year under review, from 75 million Swiss francs in 2001 to 63 million in 2003 (-15%). Thanks to increasing contributions from partners and third parties it was nonetheless possible to maintain overall funding at around the same level since 2001 (approx. 130 million Swiss francs p.a.).

Highlights

- Despite difficult circumstances and widespread uncertainty, SwissEnergy carried out a broad range of activities in 2003. Some of the highlights are briefly outlined below:
- Award of the 100th "Energy City" label to the local authority of Schwyz, and nomina-

tion of the first holders of the European "Golden Energy Awards" (Lausanne and Riehen).

- Conclusion of the first target agreement with the Energy Agency for Industry, involving more than 600 companies in 45 groups representing 25% of the total level of CO₂ emissions from Switzerland's economic sector.
- Winner of the "Golden Ottocar" award at the International Video-Film and Multimedia Festival at the Frankfurt International Motor Show for its TV commercial promoting the energy label for motor cars (joint campaign with the automotive industry), and award of the "Best of Swiss Web" prize for the buildings campaign home page (www.bauschlau.ch).
- Instruction of 43,000 new Eco-Drive® motorists.
- End of 2003: 3,000 "MINERGIE" buildings with 2.4 million square metres of heated surface area.
- New sales record for heat pumps: 8,677 (+15%), 25% of which for renovation purposes.
- Award of the "Médaille d'eau" to 86 energy-efficient sewage treatment plants (serving a total of 2 million people) that have succeeded in reducing their electricity consumption by one-third over the past ten years.

Impacts on energy consumption, 2003 cost/benefit ratio

Without Energy 2000 and SwissEnergy, energy consumption in Switzerland would probably be around 6% higher, consumers would have to spend an additional 1.3 billion Swiss francs on energy, and external costs would be around 910 million Swiss francs higher.

	2010 targets	2003 status	Estimated 2003 status without Energy 2000 and SwissEnergy ⁴
Efficient energy use			
Consumption of fossil energy ^{1/2}	-10 %	+2.9%	+9.8%
Electricity consumption ²	≤ +5 %	+5.2 %	+9.4%
CO ₂ emissions ^{1/3}	-10 %	+0.2% ⁷	+6.3 to +7.7% ⁶
from combustibles ³	-15 %	-4.6% ⁷	+3.6 to +5.8% ⁶
from motor fuels ^{1/3}	- 8 %	+8.1%	+10.8%
Renewable energies			
Hydropower production ^{2/5}	stable	+ 1.6%	not available
Other forms of renewable energy ²			
Electricity ²	+0.5 TWh (+1%-point)	+0.11 TWh	+0.08 TWh ⁸
Heating ²	+3.0 TWh (+3%-points)	+0.89 TWh	+0.24 TWh ⁸

Fig. 17
SwissEnergy targets for 2010: status as of 2003, plus estimated 2003 status without the influence of Energy 2000 and SwissEnergy

¹ Excluding international flights; domestic principle in accordance with CO₂ Act

⁴ Estimate based on impact analysis and ex-post analysis

⁶ Depending on assumption for electricity mix (Switzerland or EU)

⁸ Estimated 2003 status without SwissEnergy

² Versus 2000

³ Versus 1990

⁵ Estimated average

⁷ Adjusted for climate factor

Despite a lower budget, the programme was able to maintain the additional impacts of voluntary measures on energy consumption at around the same level as in 2002 (2.5 PJ, 0.3%). The total additional savings resulting from both voluntary and legal measures were 3.8 PJ (or 0.45%). The long-term impacts of voluntary measures implemented in 2003 projected over their useful life were shortened by 13%. This was because the budget cuts forced the programme to increasingly focus on measures with short-term impacts. The cost-benefit ratio relating to SwissEnergy funds remained at the same level as in the prior year: 0.6 centimes per saved kilowatt hour (1.0 centimes per kWh in 2001). The low figures for the public sector and buildings segment (0.15 centimes per kWh) and trade and industry (0.25 centimes per kWh) resulted from the long-term impacts of the various measures.

CO₂ target gap

Overall, the sustainable impacts generated by Energy 2000 and SwissEnergy in 2003 amounted to 47.3 PJ. This is equivalent to 6.0% of Switzerland's overall energy consumption in the year under review (excluding international civil aviation). Effective energy consumption rose versus the prior year by 2.3% to the new record level of 873.1 PJ, primarily because of the cold weather conditions (according to the ex-post analysis the consumption level would have been more or less constant without the climate effect). Without the two programmes, overall CO₂ emissions in Switzerland would have been 6.1% higher, but this is not enough to enable the programme to meet its objectives. In 2003, CO₂ emissions from combustibles were 4.6% below the 1990 level, while those from motor fuels were 8.1% above it.

Electricity consumption was 5.2% higher than the 2000 level (excluding climate effect, +4%). The target is a maximum increase of 5% by 2010, so additional efforts are required here too.

Positive impacts on investments, employment and public finances

The budget cuts and focus on shorter-term measures lessened the positive impacts of SwissEnergy on investments, employment and public finances versus the prior year. Nonetheless, according to the impact analysis, the 63 million Swiss francs from the federal government generated around 600 million Swiss francs in investments and employment equivalent to 3,700 person years with voluntary measures alone. The impacts on public finances (increase in revenue from VAT and income tax) and unemployment insurance were also clearly in the positive zone.

Conclusions

SwissEnergy is, and remains, the central tool for implementing Switzerland's energy and climate policies. Despite a decreasing budget, its impacts continue to increase thanks to intensified efforts by its partners and constant optimisation of the programme. However, it is clear that SwissEnergy's objectives, and thus those of the CO₂ Act and Switzerland's commitments arising from the Kyoto Protocol, cannot be met with the measures implemented to date. In order to credibly continue pursuing Switzerland's energy and climate policies, the remaining funding will have to be used even more effectively, co-operation with the existing partners will need to be intensified, additional partners will have to be found, increased use will have to be made of the existing legal options at the federal and cantonal levels, and a CO₂ fee and/or "climate centime" will have to be introduced.

More about SwissEnergy

Publications and periodicals

- 2001/02 SwissEnergy 1st Annual Report ("A flying start"); 2002/03 2nd SwissEnergy Annual Report ("Making good progress"); both with accompanying CD-ROM containing numerous supplementary documents (free of charge – limited quantity) SwissEnergy booklet: informative pocket-sized brochure (16 pages, available free of charge in German, French and Italian)
- "energy extra": journal of the Swiss Federal Office of Energy, published every 2 months until end 2004 (available free of charge in German and French)
- SwissEnergy – follow-up programme to Energy 2000: Objectives, strategy, organisation (available in German, French and English)
- Final report of the Energy 2000 action programme: description and evaluation of the activities of Energy 2000 (available in German, French and English)
- Energy calendar: overview of training and further education courses for energy specialists (free of charge). Published twice a year. May be downloaded from the following web site: www.swiss-energy.ch
- SwissEnergy projects (updated by involved parties). Information may be downloaded from the following web site: www.misinteractive.ch
- SwissEnergy address book: pocket-sized brochure containing details about all SwissEnergy partners (available free of charge in German and French)

PR material

SwissEnergy material is available for public appearances, exhibitions, lectures, etc., including display panels (in German and French), modules, give-aways, etc.

Internet sites and links

www.swiss-energy.ch
www.energieforschung.ch
www.infoenergie.ch
www.misinteractive.ch
www.energieetikette.ch

Ordering material and publications

PR material and the most recent publications and periodicals may be ordered from the Swiss Federal Office of Energy, 3003 Bern, phone no. 031 322 56 38, fax no. 031 323 25 00, e-mail office@bfe.admin.ch

Programme management

- Swiss Federal Office of Energy, 3003 Bern
- Programme head (with effect from August 04):
Michael Kaufmann, Vice Director,
Swiss Federal Office of Energy,
phone no. 031 322 56 02,
michael.kaufmann@bfe.admin.ch
 - Peter Cunz, head of Efficient Energy Use,
phone no. 031 322 55 97,
peter.cunz@bfe.admin.ch
 - Hans Ulrich Schärer, head of
Renewable Energies,
phone no. 031 322 56 59,
hansulrich.schaerer@bfe.admin.ch
 - Nicole Zimmermann, head of
Public Sector and Buildings,
phone no. 031 322 56 04,
nicole.zimmermann@bfe.admin.ch
 - Gerhard Schriber, head of Co-ordination,
Research and Education,
phone no. 031 322 56 58,
gerhard.schriber@bfe.admin.ch

Contents of the CD-ROM

- SwissEnergy 3rd Annual Report 2003/04
- 8 documents Controlling, evaluation, impact analysis
- 14 documents Federal government and cantons
- 26 documents Agencies and networks
- 10 documents Towns, companies, organisations

“Unity is strength!”

Hans-Luzius Schmid



SwissEnergy

Swiss Federal Office of Energy, Worblentalstrasse 32, CH 3063 Ittigen
Postal address: CH 3003 Bern · phone no. 031 322 56 11,
fax no. 031 323 25 00, office@bfe.admin.ch · www.swiss-energy.ch

Order no.: 805.950.03 e