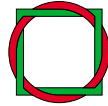


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# **Public Procurement of Energy Saving Technologies in Europe (PROST)**

**Report on the Country Study for Switzerland:  
Task 2a – Current Public Sector Purchasing, Building,  
and Replacement Practices**

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# 1 Executive Summary

Over the past ten years Switzerland has followed a more or less consistent energy policy under the programme „Energy 2000“. However, only part of the quantitative goals of „Energy 2000“ have been met, and Switzerland is still far from achieving the long-term goal of sustainable energy. Therefore, the 10-years programme „SwissEnergy“ was launched in 2001 in collaboration with the cantons, the municipalities, industry and the environmental organisations. The programme has clear quantitative objectives and comprehensive strategies for energy efficiency and utilisation of renewable energy in industry, buildings and transport, and is based on a broad partnership. The task of „SwissEnergy“ is to fulfil the national energy and climate policy objectives, and to initiate a sustainable energy supply based on innovation and new technologies. Specifically, these objectives are the reduction of CO<sub>2</sub> emissions by 10 per cent below the 1990 level, the limitation of the growth in electricity demand at 5 per cent, the retention of the hydropower's share of final electricity consumption and the increase of other forms of renewable energy to 0.5 Terawatthours (TWh) or 1 per cent of total electricity production, and in the case of heating energy to 3 TWh or 3 per cent of the total. It is the declared intention of the Confederation, the cantons and the municipalities and there are several activities planned to realise the aims of „SwissEnergy“ where their own buildings and plant are concerned.

The legal and institutional framework in Switzerland allows many possibilities to increase energy efficiency in public buildings and public procurement. There is no legal barrier to consider environmental aspects in public construction, maintenance and refurbishment, or to require environmental criteria in public purchasing under the Swiss law. Furthermore, sufficient information and experiences from pilot projects seem to be available. Experiences of purchasers and building owners and managers are shared through informal and formal networks. However, there are not enough or hardly any incentives to increase energy efficiency. Actions mostly depend on voluntariness, i.e. on committed individuals within the public authorities.

Besides setting incentives, framework conditions (laws and regulations, budgeting, aids, ecological tax reform) could be improved on international, national and regional level, quantitative targets set, binding programmes created, measurement and verification implemented, periodical reports on energy consumption required, and a transparent procurement policy carried out, which stimulates energy efficiency. Moreover, emphasis should be given to motivation and information campaigns, further education, increased networking and co-operation which are needed to change the purchasing, ordering and investment behaviour of purchasers, building managers and other public employees.

## **2 General Information on the Political, Legal, and Economic Framework for Energy-Efficient Public Purchasing**

### **2.1 Administration Structure in Switzerland**

#### **2.1.1 Political Structure**

Switzerland has a federal structure with three different political levels: the Federation, the cantons, the local authorities. The Federation is the Swiss designation of the State (the term Confederation is also frequently used). The Federation has authority in all areas in which it is empowered by the Federal Constitution - for example, foreign and security policy, customs and monetary policy, legislation that is valid through out the country and in other areas that are in the common interest of all Swiss citizens. Tasks which do not expressly fall within the province of the Federation are handled at the next lower level, i.e. by the cantons.

Since the creation of Canton Jura in 1978, Switzerland has consisted of 23 cantons, three of which (Unterwalden, Appenzell and Basel) are divided into two half-cantons for historical reasons. The cantons – often referred to as the "States" – are the original States which joined together to form the Federation to which they transferred part of their sovereignty in 1848. There are cantons which are virtually made up of just of one city, Geneva, for example. And there are cantons consisting almost entirely of mountains and valleys, like the canton of Uri. The cantons vary greatly in size and in population density. Basle-Town, for example, with its 37 km<sup>2</sup> has more inhabitants (188,500) than the largest canton, Grisons, whose 186,000 inhabitants are spread across 7,105 km<sup>2</sup>. The canton of Zurich has over a million inhabitants, while, for example, Appenzell Inner-Rhodes has 14,900 inhabitants. Each canton has its own constitution, its government, its parliament, its courts and its laws, though they must, of course, be compatible with those of the Confederation. The cantons enjoy a great deal of administrative autonomy and freedom of decision-making. They have independent control over their education systems and social services, and each has its own police force. Each canton also sets its own level of taxation.

All the cantons are divided into municipalities or communes of which there are at present 2903. Their number is tending to diminish as these municipalities merge. Around one-fifth of these municipalities have their own parliament; in the other four-fifths, decisions are taken by a process of direct democracy in the local assembly. In addition to the tasks entrusted to them by the Federation and the canton – such as the population register and civil defence - the local authorities also have specific tasks of their own for education and social welfare, energy supply, road building, local planning, taxation, etc. To a large extent, these powers are self-regulated. The scope of municipal autonomy is determined by the individual cantons, and therefore varies widely (<http://www.admin.ch/ch/e/schweiz/political.html>).

## 2.1.2 Federal Administration

The Federal Council, Switzerland's government, has 7 members (federal councillors). Each year, a different member becomes Federal President. The post confers no special powers or privileges, and the president continues to administer his or her own department. The 7 federal departments are:

- Federal Department of Foreign Affairs
- Federal Department of Justice and Police
- Federal Department of the Interior
- Federal Department of the Environment, Transport, Energy and Communications
- Federal Department of Finance
- Federal Department of Defence, Civil Protection and Sports
- Federal Department of Economic Affairs.

The Federal Council is assisted and advised on the running of its business by the Federal Chancellery. Several offices, agencies, institutes and/or laboratories are assigned to each Federal department. For example, the Swiss Federal Office of Energy (SFOE) is the office responsible for all questions relating to energy supplies and energy utilisation within the Federal Department of the Environment, Transport, Energy and Communications (UVEK); the Swiss Federal Office for Buildings and Logistic (BBL) within the Federal Department of Finance manages the Federal civil buildings and part of the Federal procurement.

## 2.1.3 Administration of the cantons and municipalities

The administration of a canton is divided into several offices („Direktionen“). However, because of the great deal of administrative autonomy of the cantons and municipalities, there is no common administrative structure on these levels.

## 2.2 National Targets for Energy Efficiency and/or Climate Protection in the Public Sector

Question(s) to be answered in this section:

- S1. Are there national targets for energy efficiency or CO<sub>2</sub> reduction in public institutions (maybe derived from other environmental targets)? Do such targets exist on other levels of government (regional, local)?
- S14 Trends, expected evolution?

Over the past ten years Switzerland has followed a more or less consistent energy policy under the programme „Energy 2000“. However, only part of the quantitative goals of „Energy 2000“ have been met (cf. UVEK 2000), and Switzerland is still far from achieving the long-term goal of sustainable energy. According to the SFOE the problem is not so much a technical one, but more so of effective application of commercial and political strategies.

Therefore, the programme „SwissEnergy“ was adopted on 17 January 2001 by the Federal Council and launched on 30 January 2001 in collaboration with the cantons, the municipalities, industry and the environmental organisations. The programme has clear quantitative objectives and comprehensive strategies for energy efficiency and utilisation of renewable energy in industry, buildings and transport, and is based on a broad partnership. The task of „SwissEnergy“ is to fulfil the national energy and climate policy objectives, and to initiate a sustainable energy supply based on innovation and new technologies.

The objectives that have been set for the new „SwissEnergy“ 10-year programme are derived from the Swiss federal constitution, the federal energy law and the CO2 law, and also reflect Switzerland's commitments under the international convention on climate warming. Specifically, these objectives are as follows:

- The CO2 emissions must be reduced by 10 per cent below the 1990 level between 2000 and 2010. The targets for heating and motor fuels differ. Thus the consumption of heating fuels is to be reduced by 15 per cent, and that of motor fuels by a total of 8 percent. Aviation fuels for international flights are excluded.
- The growth of electricity demand must not exceed 5 per cent.
- Hydropower's share of final electricity consumption must not be reduced despite deregulation of the Swiss electricity market.
- The contribution made by other forms of renewable energy must increase to 0.5 Terawatthours (TWh) or 1 per cent of total electricity production, and in the case of heating energy to 3 TWh or 3 per cent of the total.

Other important „SwissEnergy“ objectives that are less easy to measure include the development of a greater awareness of the energy dimension among the general public as a prerequisite for the optimum implementation of voluntary measures; ever closer co-operation among all partners; a spirit of innovation in all fields and an overall strengthening of the Swiss economy at the end of the day.

It is the declared intention of the Confederation, the cantons and the municipalities to realise the aims of „SwissEnergy“ where their own buildings and plant are concerned. The new "Association of major energy consumers in the public sector" („energho“, including hospitals, cantonal buildings, large federal government consumers) aims at reducing energy demand by 10 per cent within the next ten years, particularly by improving energy efficiency of public buildings. According to the SFOE (BfE 2001, 13) quantitative targets, binding programmes, measurement and verification, periodical reports on energy

consumption, and a transparent procurement policy, which stimulates energy efficiency, would be needed in the public sector to set a good example for other market actors.

On 26 January 2001 the Cantons adopted their own strategy within the framework of „SwissEnergy“. The intention is to reduce the energy consumption in public buildings, and to cover remaining energy needs as far as possible with renewable energies. In most cantons, responsibility for the enforcement of energy legislation lies with the municipalities. The intention is to augment the number of the so-called „Energy Towns“ (cf. chapter 2.3.3) disposing of exemplary energy policies from the present 66 to 110 by 2005, thereby saving around 5000 PJ.

A small group of 13 local authorities in Switzerland (Baden, Basel, Birsfelden, Grenchen, Luzern, Naters, Olten, Rorschach, Thun, Vernier, Winterthur, Zürich and Zug, as of December 2001), which have an own quantified CO<sub>2</sub> reduction target, comprises the municipalities that are members of the Klimabündnis der Städte (Alliance of the European Cities with the Peoples of the Rainforest for Protection of the Global Climate). Originally, the Climate Alliance had agreed that each member city must commit to reducing the CO<sub>2</sub> emissions by 50 % between 1990 and 2010. Recently, it became clear that this target was too ambitious for most cities, and also not necessary to be reached by 2010. Therefore, the 50 % target was reconfirmed, but the "deadline" 2010 removed. Furthermore, the association has added the long-term target to achieve a level of per capita emissions that is compatible with climate stabilisation and equitable on a world-wide basis; and the commitment for each member city to develop realistic short and medium term targets of its own, based on operational criteria ([www.klimabuendnis.org](http://www.klimabuendnis.org)).

## 2.3 Policy Programmes on Energy Efficiency in Public Institutions

Question(s) to be answered in this section:

- S2. Is there a national programme on energy efficiency in public institutions in your country? If yes, is it voluntary or compulsory? Is there such a programme on other levels of government (e.g. run by a regional govt., or a co-operation of local governments)?
- S3. Is it on product procurement, or building energy management, or both?
- S4. What does it contain?
- Info?
  - Training?
  - Benchmarking
  - Product databases, best practice databases, etc
  - LCC analyses and evaluation?
  - Specifications, guidelines, target values
  - Laws, regulations, rules
  - Financial incentives (purchasing; investments; and institution building)
  - Credit, revolving funds, etc
  - Support for performance contracting (rule making, promotion, training)
  - Other
- S5. Who co-ordinates the programme?

S6. If a specific programme, what are the resources (staff, funding/year) available for the programme and the co-ordinator? How is it organised: on the central government level only, or with regional branches?

S14 Trends, expected evolution?

### 2.3.1 Federal Government Activities

Policy programmes on energy efficiency in public institutions are part of „SwissEnergy“. The organisation of „SwissEnergy“ has its roots in the federal constitution and national legislation, which determine where the responsibilities lie:

- The federal government is responsible for co-ordination of the programme, and for regulations governing appliances of all kinds and motor vehicles.
- The cantons are responsible for implementation of legislation and legal measures for buildings, as well as for the promotional programme stipulated in the federal energy law.

As the political authority responsible, the Federal Council exercises supreme authority over the programme „SwissEnergy“, monitoring its political objectives and orientation, and supervising the energy policy dialogue. The Director of the Department of the Environment, Transport, Energy and Communication (UVEK) is responsible for „SwissEnergy“ within the Federal Council.

The day-today running of „SwissEnergy“ is in the hands of the Federal Office of Energy (SFOE). As the body in which sovereign responsibility for energy policy is vested at the federal level, the SFOE has taken steps to adapt its organisation to the needs of the new programme. Its team in charge of the programme co-ordinates contacts with the cantons and agencies, the research and development, the education and training as well as general implementation of the programme. It is responsible for general marketing duties including the information and communication strategy, controlling, and neutral evaluation of the programme. The SFOE team co-ordinates all „SwissEnergy“ activities nationwide.

Because of its exemplary function and its responsibility for the environment, the core sectors of the Federal administration are to implement an environmental management system called 'Resource and Environmental Management in the Federal Administration' (RUMBA), which emphasizes energy aspects. In an initial stage, offices, office equipment and official journeys will be analysed in each organisational unit with respect to their direct and indirect environmental impacts, the objective being to achieve a steady reduction in the latter. Subsequently, the procedure will be applied to products, services, ordinances and administrative orders. An interactive information system for Federal purchasers will be developed by the Competence Center for Federal Public Procurement in 2002/2003. The information system will be implemented in the form of an on-line handbook with lots of links. The links to the Environmental Criteria for the different product groups will allow to integrate the criteria in the call for tenders following the idea of the "Check-it" criteria catalogue of the Austrian procurement service. The information system will be implemented in the form of an on-line handbook with lots of links. It is

planned to disseminate the system later to the whole public sector using the electronic purchasing platform SIMAP.

The SFOE (BfE 2001, 23) sees the need for further activities on the Federal level within „SwissEnergy“, especially for projects on rational energy use and on the implementation of renewable energy systems which can set an example. The decision of the Federal council to support the „MINERGIE“ standard (energy in buildings, cf. chapter 2.7.2.2) in Federal buildings and in buildings which receive state aid and the decision of the Federal Office for Buildings and Logistic (Bundesamt für Bauten und Logistik) to include external costs in his profitability calculations can be seen as an important step towards this direction and can set an example for cantons, municipalities and other market actors.

### 2.3.2 Programmes and Activities of the Cantons

The implementation of „SwissEnergy“ requires co-operation between the three levels of government – federal, cantonal and local. To ensure that the specific requirements of each canton are met the cantons have been more actively involved at all programme levels and fully integrated into the decision-making process. Public sector activities and public buildings are being given a certain amount of priority. The cantons are directly participating in management of the various programme sectors, of core activities at the local level (Energy Town programme, cf. chapter 2.3.3), and with the "Association of major energy consumers in the public sector" („energho“).

The new federal energy law shifts the burden of responsibility to the cantons, particularly insofar as building energy requirements and the preparation of the cantons' own promotional programmes are concerned (payment of subsidies). This approach will enable the cantons to adapt the priorities to local conditions. On 24 August 2000 the Conference of Cantonal Energy Directors (EnDC) agreed on a package of standard regulations in the energy field (CEnSt) as the basis for harmonisation of cantonal energy legislation. Most cantons have revised their energy laws in recent years, and virtually all have developed their own promotional programmes, or are preparing such programmes. In supporting the „MINERGIE“ standard (energy in buildings, cf. chapter 2.7.2.2) the cantons have taken an important step for the improvement of the "energy profile" of buildings in their areas.

However, these harmonisation efforts could not hinder the increasing, environmentally counterproductive deregulation in the building sector, particularly regarding the allocation of heating costs and the conditions of allowance of electric heating appliances. Furthermore, the programme of the cantons for the second half of Energy 2000 have been only partly implemented. Therefore, the most important duties of the cantons in the context of the „SwissEnergy“ programme as formulated by the SFOE (BfE 2001, 24f.) are as follows:

- Adapting building-related legislation to the "state of the art" and ensuring proper implementation. Efforts have to be made to promote new standards (e.g. SIA 380/1 and 380/4) and to incorporate these into cantonal legislation. In most of the cantons

implementing the provisions of energy legislation is the responsibility of the local authorities, many of which are short of funds. It will be particularly important to see that spot checks are carried out so as to ensure that energy regulations are actually applied in buildings. The federal authorities have announced to give the cantons all the necessary support for preparation of suitable instruments for implementation and controlling.

- Now that the energy law has given the cantons direct responsibility for the promotion of energy efficiency and renewable energy, it will be important to prevent fragmentation of the cantonal promotional programmes, through efforts to harmonise on the basis of promotional model prepared by the federal and cantonal authorities. Both the federal government and the cantons are preparing analyses of the impact of the cantonal promotional programmes. This will be an opportunity to compare the various programmes (benchmarking), so as to ensure that federal subsidies are being used to the maximum effect.
- The cantons must lead by example, in particular through model programmes in their own buildings. A point of emphasis is the implementation of the „MINERGIE“ standard (cf. chapter 2.7.2.2). The decision to replace the cantonal buildings forum by the "Association of major energy consumers in the public sector“ should help, since the new association includes hospitals that participated in the Energy 2000 programme as well as the federal agencies that consume the most energy.
- The most important voluntary measures require the active collaboration of the federal and cantonal authorities in follow-up activity groups, notably in the residential buildings and public sector activities sections -- groups such as the "Association of major energy consumers in the public sector", and „SwissEnergy at the local level“ (cf. chapter 2.3.3). Also important is the promotion of pilot and demonstration projects and training programmes.

For public buildings the cantonal energy directors (Konferenz kantonaler Energiedirektoren 2001) have planned to

- analyse the need for new cantonal buildings and refurbishment,
- establish priorities according to the budget,
- implement projects to set an example and as a contribution to the achievement of the goals of „SwissEnergy“, and
- centralise the procurement of end-use energy, thereby increasing the share of sustainably produced energy.

### 2.3.3 Local Activities

As part of the programme „Energy 2000“ the project „Energy Town“ has become a widely accepted quality label for advanced energy policy. The label is given for the realisation and resolution of exquisite energy policy measures. The results of these measures are

subject to yearly audits. An „Energy Town“ has to fulfill specific criteria which have been defined according to a standardised catalogue of energy policy measures. This catalogue comprises six important areas:

- building and planning
- energy supply
- water/waste water/waste heat
- traffic and transport
- public relations
- internal organisation.

134 municipalities are members of the „Energy Town“ organisation. 66 of them have received the label (December 2001). To get the fullest possible participation of the local authorities in the „SwissEnergy“ programme, the "Energy Town" programme will be promoted and further developed under the name „SwissEnergy at the local level“, which is a joint effort of the federal government, the cantons and local authorities (BfE 2001, 25). The intention is to augment the number of „Energy Towns“ to 110 by 2005.

Apart from the label „Energy Town“ there are further ‚products‘ offered to municipalities within the programme „Swiss Energy at the local level“. For example, numerous energy conservation weeks and seminars for caretakers have been carried out in schools and municipal buildings, and nearly 3000 energy monitoring and accounting systems („Energiebuchhaltungen“) have been implemented in the course of „Energy 2000“. These activities will be continued within „SwissEnergy at the local level“.

The contribution of the „Association of major energy consumers in the public sector“ will also be important. The Energy Town organisation will continue to be represented in the "Association of major energy consumers in the public sector", making its products available through the Energy Town programme, particularly in the case of energy management based on the experiences of the Energy 2000 hospitals section.

Two Swiss cities (Geneva and Zurich) are members of the International Council for Local Environmental Initiatives (ICLEI), which functions as an international environmental agency for local governments. Its mission is to build and serve a worldwide movement of local governments to achieve tangible improvements in global environmental and sustainable development conditions through cumulative local actions. With its „European Eco-Procurement Programme and Eco-Efficient Economy“ (ICLEI EPP) ICLEI particularly supports green purchasing on the local level. In January 2001 ICLEI has started a research project on green purchasing („RELIEF“, by full name "Environmental Relief Potential Of Urban Action On Avoidance And Detoxification Of Waste Streams Through Green Public Procurement"). The City of Zurich is a pioneer city in this project.

## 2.4 Co-operative Purchasing by Public Institutions

Question(s) to be answered in this section:

S7. Is there a co-operative purchasing or a common buying-agency - among agencies at one level of government? across levels of government? (e.g., national agency provides buying services to local governments)?

S14 Trends, expected evolution?

### 2.4.1 Federal Government

In principle, goods of the same kind are purchased by a central procurement department (centralised purchasing of goods). However, the Federal Postal Administration (Schweizerische Post) and the Federal Railway (SBB) have separate purchasing units. Contracts for services are offered directly by the respective Federal authority (decentralised purchasing of services).

### 2.4.2 Cantons and Municipalities

There are some examples of co-operative purchasing of municipalities and the respective canton. For example, the central office for school and office materials of the city of Bern (Schul- und Büromaterialzentrale, SBZ) buys materials for the canton of Bern, too. The cantonal central office for printed matter and material of the canton of Zurich (Kantonale Drucksachen- und Materialzentrale, KDMZ) offers the municipalities to order office materials (IGÖB 2000, 42). Finally, there is the plan to centralise the cantonal procurement of end-use energy, thereby increasing the share of sustainably produced energy. Further information on co-operative purchasing could not be gained in the course of the study.

## 2.5 Energy Management in Public Institutions

Question(s) to be answered in this section:

S8. Typically, which type of national/ regional/ municipal/ other institutions in your country have an energy management unit?

S14 Trends, expected evolution?

### 2.5.1 Federal Government and Cantons

The "Association of major energy consumers in the public sector" („energho“) wants to achieve its goal of a 10 per cent reduction in energy demand within 10 years particularly by implementing new and improving existing energy management systems in their members' institutions (including further education and exchange of experiences).

## 2.5.2 Municipalities

Nearly 3000 energy monitoring and accounting systems („Energiebuchhaltungen“) have been implemented in municipal buildings in the course of „Energy 2000“. „SwissEnergy at the local level“ aims at an increased dissemination of this and other products (e.g. energy management based on the experiences of the „Energy 2000“ hospitals section) for public institutions. These products will be made available through the „Energy Town“ programme.

## 2.6 Key Statistical Data

### 2.6.1 Energy Data

Question(s) to be answered in this section:

S9. Key statistical data

Energy data:

- How much energy of which type goes to public sector? How much (%) of natl. total?
- Energy costs as share of the jurisdiction’s total budget (specific jurisdiction examples or typical)

S16. Do bottom-up studies of energy by end-use in public institutions exist?

S14 Trends, expected evolution?

Table 1: Decomposition of final energy consumption in Switzerland by fuel

[TJ]	1970	1980	1990	1997	1998	1999
oil	454 570	488 300	501 050	504 130	518 560	523 800
electricity	90 310	126 910	167 670	175 000	178 630	184 370
gas	7 360	33 740	63 430	88 430	91 370	94 940
coal, coke	24 440	13 630	14 360	4 590	3 810	3 980
wood, charcoal	10 110	9 670	17 090	20 420	20 930	20 590
district heating		7 920	10 420	12 980	13 250	13 290
waste		3 700	8 680	14 090	14 830	14 530
other renewables			3 440	5 340	5 720	6 270
total	586 790	683 870	786 140	824 980	847 100	861 770

Source: Bundesamt für Statistik (www.statistik.admin.ch)

The buildings and institutions owned by the Federal government (Federal buildings, buildings of the Swiss postal administration, the Federal railway and the Swiss Federal Institute of Technology Zurich) demand about one per cent of the fossil fuels and about 11 per cent of the electricity consumption of Switzerland (UVEK 2000, 4). The electricity consumption is certainly downrated by the railway. No further information on public sector use could be found.

## 2.6.2 Product Data

Question(s) to be answered in this section:

Product data

- annual appliance sales (to all, to public sector)
- annual energy use - for each year's purchase
- suggested efficiency norm for purchasing
- energy savings (for public sector only) if all were purchased at that norm (per 1 year of sales - Note: need to look at potential after several years of sales and turnover, especially for products with longer lifetimes and slower rates of turnover.)

- “public sector” includes: national, regional and municipal governments, universities, schools, public housing

S14 Trends, expected evolution?

Table 2: Types of goods purchased by the Federal government (including military and Federal railway) in 2000 (Mio. SF)

Types of goods	from abroad	domestic	total
<b>electronics and electrical engineering</b>	80	825	905
<b>vehicles</b>	165	496	661
<b>machinery and appliances</b>	282	339	621
<b>metals</b>	74	287	361
<b>software for EDP</b>	17	309	326
<b>others</b>	132	1209	1341
<b>Federal procurement in total</b>	750	3465	4215
	<b>Federal administration (including military)</b>		3032
	<b>Swiss Federal railway</b>		1183

Source: [www.admin.ch/beschaffung](http://www.admin.ch/beschaffung)

## 2.6.3 General Data

Question(s) to be answered in this section:

General data:

- building floor area by type:
  - office/admin. (public sector as % of total)
  - public housing (# units as well as floor area; public sector as % of total)
  - schools (# students; public sector as % of total)
  - universities (# students)
  - hospital/health (# beds)
  - prisons (# prisoners/beds)
  - military housing (barracks, family housing - # units or # soldiers)
- building area by %: heated, cooled, ventilated

- # employees (schools, universities, other)
- population
- GDP (% produced by public sector)
- employment (% employed by public sector)

S14 Trends, expected evolution?

Table 3: Employees in the Swiss public sector

	<b>Employees</b>
<b>Employees in Switzerland in total in 1998</b>	3,471,428
<b>Employees in public administration, national defence and social insurances (3<sup>rd</sup> quarter 2001)</b>	around 140,000
<b>Employees in % in 1998</b>	100.0
- industry, trade, energy supply	21.0
- building trade	8.5
- commerce, repairs, restaurant industry	23.7
- traffic, transmission of news	6.8
- banks, insurance companies, consulting	5.4
- immovables, information technology, services for enterprises	9.9
- public administration	4.0
- education sector	6.0
- public health	10.6
- other services	4.1

Source: Bundesamt für Statistik (www.statistik.admin.ch)

Table 4: Swiss population and economic data (2000)

<b>Population (31/12/2000)</b>	7,204,000
<b>GDP (1000 Mio. SF)</b>	404.4
<b>Consumption expenditure (1000 Mio. SF)</b>	302.6
<b>... of which is public sector</b>	52.5 (17.4%)
<b>... of which are goods purchased by the Federal government (including military and Federal railway)</b>	4.2 (8%)
<b>... of which are service contracts offered by the Federal government (including military) (estimate)</b>	1.3 (2.5%)
<b>Construction work expenditures (Mio. SF)</b>	43,708
<b>... of which is public sector</b>	15,983 (36,6%)
- civil engineering	15,983
... of which are roads	5,221
- building construction	5,923

Source: Bundesamt für Statistik (www.statistik.admin.ch)

About a quarter to a third of the whole office area in Switzerland (46 Mio. m<sup>2</sup> in total) is owned by the public sector (and partly let to the private sector). About 80% of the Swiss

infrastructure buildings (schools, hospitals, power stations, etc.; total area around 90 Mio. m<sup>2</sup>) belong to the public sector (Neue Züricher Zeitung, 15.12. 2001).

## **2.7 Laws and Regulations Governing Product Purchasing and Investments by Public Institutions**

### **2.7.1 General Laws and Regulations**

Question(s) to be answered in this section:

- S10. Which laws and regulations govern product purchasing and investments in general (including building codes, minimum efficiency standards, technical guidelines etc. that apply to all purchasers/investors)?
- buying products
  - replacing components (if different from above)
  - for buying energy
  - for making investments in buildings
  - for O & M in buildings (buying services or through internal staff)

S14 Trends, expected evolution?

In the last years, new laws and regulations have been implemented, the procurement procedures have been changed. The bilateral treaty with the EU which will probably become effective during the next months (first half of 2002) will lead to further changes.

The following laws, regulations and guidelines are currently governing public procurement and investments in Switzerland:

- GATT/WTO-Agreement on government procurement of April 1994 (GPA)
- Federal Law on the Internal Market (BGBM)
- Public Procurement Law (BoeB)
- Ordinance on public procurement (VoeB)
- Intercantonal Agreement on public procurement (IVöB)
- Guideline on the award of services (Vergaberichtlinie)(VRöB)
- Ordinance on Federal building management and the logistics (VILB)
- Antitrust Law
- Ordinance on the adjustment of threshold levels
- Ordinance on the co-ordination of service contracts
- Recommendations to Art. 8 BoeB Procedures

- Directive on securities in favour of the Confederation
- Guideline on the agreement on the right of insight in case of Federal procurement (Richtlinie über die Vereinbarung des Einsichtsrechts bei Beschaffungen des Bundes)
- Alps transit resolution (Alpentransitbeschluss)
- Law on public budgeting
- Ordinance on public budgeting
- Law on the organisation of government and public administration
- Ordinance on the organisation of government and public administration
- Federal law on technical barriers to trade
- Federal law on the administrative procedure (Bundesgesetz über das Verwaltungsverfahren)
- Energy law
- Ordinance on energy

Furthermore, there are several cantonal laws and ordinances (e.g. Kanton Basel-Landschaft 2000 and 2000a) and numerous cantonal and municipal decrees and guidelines.

BoeB and VoeB apply to Federal procurement according to the GPA. Cantonal and municipal procurement is regulated by cantonal and municipal ordinances, decrees and guidelines according to BGBM, IvöB and VRöB (IGÖB 2000).

According to GPA, above a certain threshold of the contract value, there has to be a public call for tenders. On the Federal level, public procurement above the thresholds is regulated by BoeB, contract procedures below by VoeB. The thresholds which can be yearly adjusted by the Federal Department of Economic Affairs for the Federal level and by an intercantonal organisation for the cantonal level are shown in Table 5.

Table 5: Thresholds for call for tenders according to GPA in 2000 (SF)

orderer	kind of order	
	services and other deliveries	building construction/maintenance
Federation	248,950	9,575,000
Cantons (and partly municipalities)	383,000	9,575,000
Public enterprises (water and energy supply, public transport)	766,000	

Source: IGÖB 2000, 23

Below the thresholds according to GPA, there are thresholds according to VoeB, which determine the contract procedure. They are documented in Table 6.

Table 6: Thresholds which determine the contract procedure according to VoeB (SF)

procedure	kind of order	
	services and other deliveries	building construction/maintenance
open or selective procedure (public call for tenders)	248,950	2,000,000
invitation procedure (asking particularly competent firms to submit a bid)	383,000	≥ 100,000
freehand procedure	766,000	< 100,000

Source: IGÖB 2000, 24

There is no legal barrier to consider environmental aspects in public construction, maintenance and refurbishment, or to require environmental criteria in public purchasing under the Swiss law, especially on the Federal and cantonal level (on the municipal level there will be no legal barrier to "green procurement" either after the bilateral treaty will have become effective). The Federation and the Cantons have to offer the contract with reference to the most economically advantageous offer. However, it is nothing said about to whom the decision should provide the best economic advantage, to the purchasing authority or to the economy as a whole. In contrast to the criterium of the lowest prices, the economic principle of the most economically advantageous offer makes it possible to base the decisions on a holistic approach, e.g. using life-cycle methods (LCA, LCC; cf. OECD 2000, 72) and/or calculations including (avoided) external costs. Therefore, it is important, that when tendering, the buyers have to identify in beforehand the criteria that will given priority when making the procurement decisions. (IGÖB 2000).

Energy conservation and the increased use of renewables are principles of the energy law (EnG 1999) which applies to the public as well as to the private sector. The EnG furthermore defines that the Federation can support the implementation of these goals by yearly global grants (Globalbeiträge) to the cantons of which up to 50 per cent can be used for measures in the public sector.

The ordinance on energy (EnV 1999) sets minimum efficiency standards (Verbrauchszielwerte) for specific goods (e.g. electrical appliances like personal computers and monitors). These maximum energy consumption criteria have been developed within in the programme „E2000“, which has been part of „Energy 2000“. Appliances with low energy consumption can get the label „E2000“ (energy two-thousand) label, now called „Energy“. Voluntary agreements are negotiated with manufacturers and distributors so as to establish „target values“ in order to reach certain efficiency levels within a stipulated time (OECD 2000, 73f.).

## 2.7.2 Special Energy Efficiency Regulations for Public Buildings

Question(s) to be answered in this section:

S11. Do national guidelines and/or national target values for public buildings that exceed national building codes or minimum efficiency standards both in strictness of values and in scope (e.g., maximum kWh/m<sup>2</sup>a not only for heating, but also for ventilation, air conditioning, lighting, and in refurbishment of buildings) exist? Different for new construction vs. refurbished buildings?

S14 Trends, expected evolution?

### 2.7.2.1 Binding guidelines - An example of the canton of St. Gallen

There are some special cantonal guidelines on environmental protection and/or energy efficiency in public buildings. One good example is the guideline on the ecological model function of the public authority regarding buildings (Richtlinie zur ökologischen Vorbildfunktion der öffentlichen Hand bei Bauten) of the canton of St. Gallen (Baudepartment des Kantons St. Gallen 2001). Its guiding principles for sustainable construction emphasize the need to

- reduce energy and material flows by an efficient resource management,
- reduce emissions and waste,
- internalise external costs,
- adequately consider cultural and aesthetical aspects, and to
- increase participation and education.

The guideline defines concrete goals, fields of action, implementation measures and evaluation/calculation methods. For example, one target is that for new buildings on average at least 30% of energy consumption for heat and hot water has to be covered by renewables, which must be documented by using SIA 380/1 (SIA 2001). Economic calculations of energy costs have to consider the following surcharges on the energy prices (internalization of external costs):

Gas: + 60% (+ 3.0 Rp./kWh)

Oil: + 150% (+ 4.5 Rp./kWh)

Wood: + 40% (+ 1.5 Rp./kWh)

Electricity: + 30% (+ 5.0 Rp./kWh).

### 2.7.2.2 The „MINERGIE“ standard

„MINERGIE“ is a quality label for new and refurbished buildings. The trade name „MINERGIE“ is mutually supported by the Swiss Confederation, the Swiss Cantons along

with Trade and Industry and has been registered to prevent misuse. Specific energy consumption is used as the main indicator to quantify the required building quality (e.g. for offices: 15 kWh electricity per m<sup>2</sup>, 50 kWh space heat per m<sup>2</sup>). Only the final energy consumed is relevant. The „MINERGIE“ label may only be used for buildings that actually meet the „MINERGIE“ standard. About 1,200 buildings are already certificated. Apart from buildings, products and services can conform to „MINERGIE“ standards. The same applies to building modules such as systems, components and materials.

The „MINERGIE“ standard is widely accepted. There are many reasons for this, the most important: builders and planners have complete freedom both in their design and choice of materials and also in their choice of internal and external building structures. In the meantime, the building sector has developed a wide range of products and services for „MINERGIE“ buildings. Suppliers include architects and engineers as well as manufacturers of materials, components and systems ([www.minergie.ch](http://www.minergie.ch)).

### 2.7.2.3 SIA norms

The Swiss Society of Engineers and Architects (SIA) proposes several norms referring to energy efficiency - e.g. SIA 380/1 and SIA 380/4 (SIA 1995, SIA 2001) - and other ecological aspects - e.g. SIA D 0123, SIA 493 - of construction, refurbishment and technical equipment of buildings (KBOB/IBP 2000, 25). They equally apply to public buildings.

### 2.7.2.4 Others

There are numerous documents and further practical information available on ecological and energy efficient construction and refurbishment in private and public buildings (cf., e.g., Nipkow 1998, Blanckarts et al. 2001, KBOB/IBP 2000, KBOB/IBP 2002). The Co-ordination of the Federal Services Concerning Building Organisations, Construction and Property Services (KBOB), founded in 1968 and re-organized in 1999, is an association of public building owners in Switzerland. It is the unit that coordinates the work of all the federal services and other public bodies active in the field of property management. Saving resources and improving quality are the main goals of KBOB. The KBOB has several subject sections, e.g. one group dealing with sustainable construction (cf. [www.kbob.admin.ch](http://www.kbob.admin.ch)).

Committed officials and engineers from federal, cantonal and municipal administrations created an ad-hoc group for the exchange of information on ecological and energy efficient construction and refurbishment („grass-root phenomenon“, OECD 2000, 53). The activities of this Co-ordination group for ecological building (KÖB) are supported by the Federal environmental authorities (Swiss Agency for the Environment, Forests and Landscape, BUWAL). Several surveyor's offices which are members of the KÖB are offering handbooks, recommendations and instruction leaflets to the private sector and/or to public authorities (e.g. the KBOB Bern for the Federal level and the surveyor's offices of the cantons Aargau, Basel, Bern, Luzern, Genf, St. Gallen, Thurgau, Waadt, Zug,

Zürich, and of the municipalities Basel, Bern, St. Gallen, Zug and Zürich; cf. [www.eco-bau.ch](http://www.eco-bau.ch) for a list of documents available).

### 2.7.3 Special Energy Efficiency Regulations for Public Purchasing

Question(s) to be answered in this section:

S12. Are there (national, regional, local) requirements or guidelines for energy efficient purchasing and investments/ building management? Maybe as part of "green" purchasing? Please state if these are voluntary or compulsory activities.

S13. Do any other national specifications or criteria exist for products, installed equipment or systems?

S14 Trends, expected evolution?

Special binding energy efficiency regulations for public purchasing are not known. While the confederation has not developed an official policy dealing with greening of government and environmentally preferable public purchasing, it has published a strategy paper on sustainable development in Switzerland in which greener public purchasing is pointed out as a key development (IDA Rio 2000; OECD 2000, 53).

The Interest group for ecological purchasing (Interessengemeinschaft Ökologische Beschaffung, IGÖB) is another ad-hoc group for the exchange of information created by committed officials and purchasers from federal, cantonal and municipal administrations. The IGÖB activities are supported by the Federal environmental authorities (Swiss Agency for the Environment, Forests and Landscape, BUWAL), too. Their handbook on sustainable public procurement (IGÖB 2000, [www.igoeb.ch](http://www.igoeb.ch)) is estimated to be the most important source of information for both green and energy efficient public procurement in Switzerland.

## 2.8 Organisation of and Decisions on Product Purchasing and Buildings Investments in Public Institutions

Question(s) to be answered in this section:

Based on your research and interviews, please draw simplified organisation and decision flow charts that are typical for your country (if needed, different for different levels of government) - which actors influence energy use, energy-related budgeting and purchase decisions, construction and renovation? How is the flow of decisions between these actors? (Please note that these are case studies and the organograms serve to illustrate processes and relations.)

S14. Trends, expected evolution?

## 2.8.1 Product Procurement

### 2.8.1.1 Organisation of procurement on the Federal level

There are both centralised and decentralised organisation schemes in Switzerland (IGÖB 2000, BKB o.J.). On the Federal level, in principle, goods of the same kind are purchased by one of the central procurement departments (centralised purchasing of goods). For example, household articles, furniture and office materials are purchased by the Swiss Federal Office for Buildings and Logistic (BBL), bandaging materials are purchased by the Generalstab UG Sanität. However, the Federal Postal Administration (Schweizerische Post) and the Federal Railway (SBB) have separate purchasing units, and some specific, mostly low-value goods are allowed to be purchased by the respective authority which demands the good. In total, there are 23 central purchasing offices on the Federal level which employ around 400 purchasers. Contracts for services are offered directly by the respective Federal authority which demands the service (decentralised purchasing of services). The Federal Procurement Commission (Beschaffungskommission des Bundes, BKB) is responsible for co-ordinating the Federal procurement of products and services on behalf of the Department of Finance. Furthermore, it offers consultancy and further education to Federal purchasers, gives information and recommendations, sets standards for contracts and framework tariffs on the Federal level, and is involved into the legislative processes.

IGÖB and BUWAL support the public purchasers in environmental preferable purchasing. For example, the BUWAL offers

- training of federal purchasers (taking the criteria of sustainable development into account in purchasing; incorporation of life-cycle thinking)
- information exchange and collaboration with the IGÖB and the KÖB to develop and harmonise ecological criteria for the different areas in purchasing,
- preparation and distribution of aids for environmental purchasing, such as handbooks, recommendations and informations on eco-labelling,
- support of purchasing offices in connection with the introduction of Federal Resources and Environmental Management (RUMBA), and
- analysis of financial and budgetary questions in connection with life-cycle approaches ([www.buwal.ch](http://www.buwal.ch)).

Furthermore, at a national and international level, the service works to develop framework conditions (law, finances, aids) that will favour environmental public purchasing. It cooperates with environmental, legal, financial, purchasing, usage and production specialists.

### **2.8.1.2 Organisation of procurement on the cantonal and municipal level**

Because of the great deal of administrative autonomy of the cantons and municipalities, there is no common organisation scheme on these levels.

## **2.8.2 Building Contracts and Services**

### **2.8.2.1 Federal government**

The Delegation of the Federal construction and real estate authority (Delegation der Bau- und Liegenschaftsorgane des Bundes, DBLO) co-ordinates the management of all Federal immovables, i.e. civil immovables, immovables of the Swiss Federal Institute of Technology Zurich (ETH Zurich) and military immovables. For the around 4,000 civil immovables, the Federal Office for Buildings and Logistic (BBL) is responsible. The BBL is both building owner and building manager. According to the Ordinance on Federal building management and the logistics (VILB) the construction and real estate authorities (BBL, counsel of the ETH Zurich, military authority) can delegate specific tasks to the users.

### **2.8.2.2 General remarks**

Yearly budgets instead of several years' budgets, and separated budgets for investments and maintenance (classical organisation model, cf. the report on the German situation) are still common in many public authorities. An increasing number of Federal administrations, cantons and municipalities implements the new public management (budgeted organisation model, cf. the report on the German situation). On the one hand, the associated decentralisation and outsourcing complicates the implementation of energy efficiency measures (however, the problems can be partly solved by contracts between the offices). On the other hand, the new global budgeting (Globalbudgets) which removes separation of most investment costs from operating costs abolishes one barrier to energy efficiency.

## **2.9 Incentives and Barriers for Energy Efficiency in Public Authorities**

### **2.9.1 Incentive Structure**

The legal and institutional framework in Switzerland allows many possibilities to increase energy efficiency in public buildings and public procurement. Furthermore, sufficient information and experiences from pilot projects seem to be available. Experiences of purchasers and building owners and managers are shared through informal and formal networks (OECD 2000, 73). However, there are not enough or hardly any incentives to

increase energy efficiency. Actions mostly depend on voluntariness, i.e. on committed individuals within the public authorities ("grass-root phenomenon", OECD 2000, 55).

## 2.9.2 Barriers

Barriers to energy efficiency in public administrations are:

### for procurement of products

- Framework conditions (law and regulations; e.g. GPA, but also some Federal, cantonal and municipal regulations) do not favour environmental public purchasing, but partly hinder it.

### for energy efficiency in buildings

- Lack of funding.
- Lack of willingness and knowledge of installation contractors

### for both

- Public employees are often not very much motivated and interested to increase energy efficiency in their offices. They do not have incentives to do so.
- Lack of clear guidance and binding regulations, which specify the environmental and energy efficiency requirements.
- In many public administrations yearly budgets instead of several years' budgets and separated budgets for investments and maintenance still exist (budget restrictions).
- Introduction of new public management is often associated with an increased decentralisation and outsourcing, without finding solutions for changes involved which hinder energy efficiency.
- There is no consensus on the methodology of calculating external costs.
- The absence of an ecological tax reform (IGÖB 2000, 55).

### **3 Success Stories and Good Examples of Energy Efficiency in Public Institutions**

Question(s) to be answered in this section:

S15. Do you have good examples, stories etc. from your country?

#### **3.1 Energy Efficiency in Buildings**

##### **3.1.1 „Energy Towns“ and other success stories of „Energy 2000“**

It can be called a success that the label „Energy Town“ has been widely accepted, that numerous energy conservation weeks and seminars for caretakers have been carried out in schools and municipal buildings, and that nearly 3000 energy monitoring and accounting systems („Energiebuchhaltungen“) and further activities on the local level have been implemented in the course of „Energy 2000“. Several success stories of „Energy Towns“ are documented at [www.energiestadt.ch](http://www.energiestadt.ch). In total, „Energy 2000“ is expected to have saved about 3000 TJ/a fuels and more than 1000 TJ/a electricity in the public sector (UVEK 2000).

##### **3.1.2 Reduction of public building area needed**

In the course of the implementation of new public management, the Swiss Federal Office for Buildings and Logistic (BBL) has started to reduce the office area needed by Federal administrations. The target value is a specific office area of 12 to 15 m<sup>2</sup> per Federal employee. In a similar way, the public real estate management by the city of Zurich aims at reducing the office area needed by the municipal administration by 10 per cent within 10 years. However, there are no estimates known how much energy could be saved by these measures (Neue Züricher Zeitung, 15.12.01).

#### **3.2 Product Purchasing**

##### **3.2.1 Ecological Procurement Project of the canton of Zurich**

The canton of Zurich is one of the most densely populated and developed regions in Switzerland: the developed areas, which are populated by approximately 1.2 million people, make up more than one fifth of the canton by now. Correspondingly the cantonal administration with more than 40,000 employees has taken on the dimensions of a large company. In order to cover various requirements such as training, health, safety etc., enormous flows of materials, energy and cash are triggered by the central administration and the cantonal offices (schools, hospitals, police, airport etc.). Each year the entire cantonal administration procures materials and services amounting to around SF 1.2

billion. This corresponds to approx. 4% of the procurements of all public administration institutions in the whole of Switzerland.

In 1991, the "Ecological procurement - Model behaviour by the public administration" project was initiated by the canton of Zurich. The main objectives are, on the one hand, to reduce material and energy consumption and, on the other hand, the cantonal administration, in its function as an enforcement agency, wants to set a good example to the municipalities and private companies. At the same time the canton's more environmentally compatible behaviour can save quite a lot of money in such a large administration. One good example is paper and office materials. For instance, in 1997 a complete changeover to environmentally compatible recycling photocopying paper saved around SF 200,000 (EUR 125,000), 41.5 t of CO<sub>2</sub>, 1.56 GWh energy, 44.2 t of waste and 2,950 m<sup>3</sup> wastewater. Furthermore, measures were introduced to reduce total paper consumption, to minimise disposal costs and to lower electricity consumption for photocopiers and EDP workplaces.

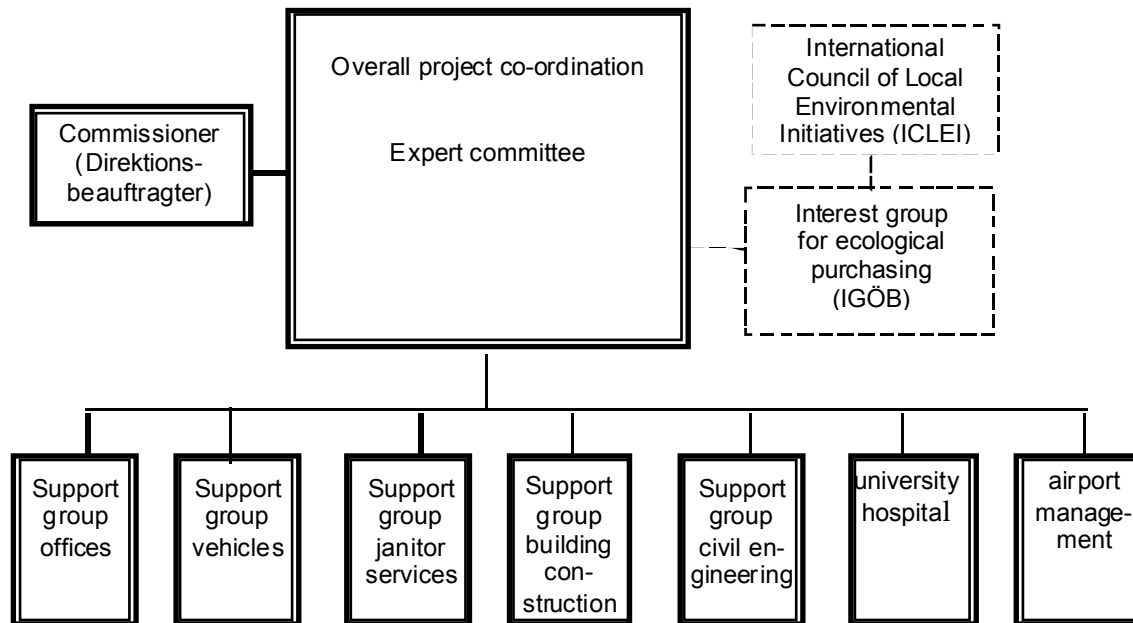
In the first years, "ecological procurement" was mainly limited to individual activities. However, the need for more efficient ecological administrative action grew. Therefore, in 1995 the canton of Zurich began developing an environmental management system (EMS) with eco controlling (according to ISO 14001). This allowed the canton, as an operative unit, to develop in the direction of reducing the impact on the environment and resource preservation and to represent the successes in a clearly measurable manner. Parts of the EMS have already been implemented into operations.

Communication with those involved plays a central role in the area of environmental protection in the office. Emphasis was placed on the active participation of the people working there. Therefore, for example, a special information concept was developed. Products that are not just more favourable from an ecological point of view but also from an economic viewpoint will be clearly marked as such ("Prodoppelök" products, i.e. products with a double ecological and economic benefit). Office material warehouse stock is examined in respect of criteria such as whether they can be refilled, the concentration of dangerous substances or the concentration of organic solvents, disposal and energy consumption. It is planned to draw attention to these criteria by means of internal labelling. Since 1995 staff have had a revised training module in the area of "office ecology" at their disposal. The cantonal administration only uses photocopiers that are able to handle recycled paper without a problem. In addition, they must bear the energy 2000 label (<http://cities21.com/egpis/egpc-156.html>, Baudirektion Kanton Zürich 2001, Hofer 1999).

Figure 1 shows the organization scheme of the Ecological Purchasing Project of the canton of Zurich. In order to integrate the most important procurement offices into the "ecological procurement" system, a project organisation was developed which consists of the expert committee (a committee of environment, administration, financial and information system specialists from various offices) and the so-called sponsor groups (Trägergruppen). Important procurement offices are represented by the respective managers. In addition, there are two large cantonal operations (airport management, university hospital). The tasks of ecological procurement are supported from a conceptional point of view in the

expert committee. The sponsor groups cover the relevant procurement areas (offices, vehicles, janitor services, building construction and civil engineering) and implement the measures that have been decided on a functional level in their respective areas (Baudirektion Kanton Zürich 2001, Hofer 1999, www.kdmz.zh.ch).

Figure 1: Organisation scheme of the ecological purchasing project of the canton of Zurich



Source: Baudirektion Kanton Zürich 2001, Hofer 1999

### 3.2.2 Others

Further examples of green procurement are mentioned in the handbook by IGÖB (2000). Another example mentioned in the OECD study (OECD 2000, 60) is the ecological purchasing of batteries and pipes for electric cables by the Swiss Telecom PTT.

## 4 Public Internal Performance Contracting (PICO)

Question(s) to be answered in this section:

S17. Would the (national) financial authorities supervising the budgets of local/regional administrations allow PICO to be used?

S18. In total: would it be possible / useful / necessary at all to use PICO? If not, why? If yes, which forms would be possible/preferable: (1) basic model, (2) profit centre, (3) fake privatisation, (4) hybrid PICO/external energy performance contracting? #(see ECEEE paper for description of these forms)# (5) other forms adapted to your country (describe)

S19. What actions would be needed to introduce PICO into public administrations in your country? e.g., what of the following would be needed?

*(1) a Concerted Action PICO with the following actions:*

- generation of information material in order to provide target groups with specific information on the instrument PICO
- assembly of all municipalities and districts in order to launch a PICO initiative (kick-off meeting), where newcomers should get access to relevant information and already existing experience of advanced municipalities;
- accompanying PR and media campaigns
- elaboration of a PICO seminar, which can be disseminated by (regional) energy agencies;
- introduction of PICO within the national state institutions in order to create pilot projects with high PR appeal
- use of new media for information exchange; this includes the creation of an internet platform and the establishment of networks through linked user groups, dedicated chat rooms, etc.
- other actions:

*(2) Elimination of legal, administrative and financial barriers*

It is necessary to improve the PICO instrument's compatibility with existing regulations. Examples are:

- clarification of formal and legal aspects of PICO, e.g. with regard to public debt management;
- elaboration of supportive codes which foster decisions in favour of PICO;
- generation of a common understanding of PICO among municipalities and supervising authorities, i.e. increasing the likelihood for a formal acceptance of PICO projects;
- use of (existing) policy programmes to ensure the initial funding of PICO schemes;
- support of municipal energy management systems as the nucleus of PICO activities.
- Other actions:

*(3) Accompanying activities*

- establishing the issue of PICO as a field of action of existing lobby groups and associations of municipalities and districts;
- integration of PICO into the energy related curricula of the relevant institutions for professional training and further qualification;
- making PICO a topic for (regional, local) energy agencies
- linking PICO with subsidy schemes targeting municipal energy strategies;
- improving the availability and quality of energy data in municipalities and public institutions in order to gain better insights into the size and nature of energy costs;
- provision of information on options for municipal climate protection actions and energy efficiency measures
- Other actions:

S20. Would someone in your country (e.g., the national government, local/regional governments, the financial supervisors of local/regional governments) be interested to participate in a European pilot project to disseminate and adapt the PICO method that was developed in Germany (including similar experiences from other places, if we find such) to other EU countries? I.e., that institution would test PICO itself and/or co-fund the country's participation in the pilot project.

S14 Trends, expected evolution?

In the canton of Basel-country energy efficiency measures are financed via a special "energy account" (Energiekonto) of the Building Surveyor's Office. Because of the tight project budget, it was not possible to find out more about this case and about PICO in Switzerland in general.

## 5 Needs for Policy Action

Framework conditions (laws and regulations, budgeting, aids, ecological tax reform) could be improved on international, national and regional level. One instrument to improve framework conditions will be the introduction of an integrated product policy (IPP) which will be supported by the Confederation in its strategy paper 2002 on sustainability.

According to the SFOE (BfE 2001, 13) quantitative targets, binding programmes, measurement and verification, periodical reports on energy consumption, and a transparent procurement policy, which stimulates energy efficiency, would be needed in the public sector to set a good example for other market actors. It is the hope of the SFOE that these activities could be implemented in the course of „SwissEnergy“. There is a need to combine voluntariness with binding forces, e.g. binding agreements of the „EnergyTowns“ with the „SwissEnergy at the local level“ administration.

Furthermore, incentive schemes, further motivation and information campaigns, further education, increased networking and co-operation are needed to change the purchasing, ordering and investment behaviour of purchasers, building managers and other public employees.

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