



Energy Agency of Southwest Finland

The district of Southwest Finland consists of 56 municipalities which comprise five sub-regions. *Turku* is a powerful engine for research, industry and service. The *Salo* sub-region has grown to become the centre of Finland's electronics manufacturing industry.

In *Vakka-Suomi*, the industrial share has expanded well past the traditional agricultural economy and *Turunmaa* has a primary production base as well as small-scale production, which is suitable for the archipelago environment. *Loimaa* sub-region is the most agriculturally intensive area in the Region, but it does not belong to the area of the Agency.

The Region holds a central position in the Baltic Sea area, with age-old connections to the south and west. Population in 2000 was 447 103. Employment in 1996 was: 29 % industry, 27 % public services, 17 % technical and business services, 9 % construction industry, 7 % country and forest economy, 7 % transport and communication and 4 % others.

Total energy production in Southwest Finland in 1997 was 11 700 GWh. Fossil energy sources represent 91 % of whole production. About half of energy was produced with oil and one third with coal. The use of renewable energy sources was 9 % what is less than in Finland average (17 %). Total consumption of primary energy by end-use-sector in 1997 was 18 300 GWh.

Southwest Finland's CO₂ emissions in 1997 were 3,4 million tonnes. One third of them was caused from industry and one third of district heating power plants.

Operation

Founded as an autonomous body in March 1999, the Agency is monitored by a Management Board chaired by the political leader. The Board consists of ten members. Five of them are local and regional elected representatives and nominated by the Regional Council of South-West Finland. There is also one representative of consumers, professional association, regional energy agency and two other persons. The chairperson is Mr. Mikko Rönholm from the Regional Council of South-West Finland. The Agency has also a regional Guiding Group consisting of 13 specialist members. The chairperson is Mr. Juhani Harittu from the Regional Council of South-West Finland.

Human resources consists of three full time employees. The Agency is managed by an appointed Director. The other full time employees of the Agency are an Energy Adviser and Secretary. In autumn 2000 and 2001 the Agency had a trainee for a month from Sustainable Development Department in Turku Polytechnic.

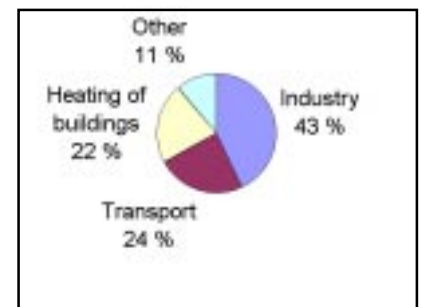
Methodology

Energy Agency works with other organisations to progress the development of chosen topics. Agency collects data on energy matters such as energy saving agreement, energy audit, biofuels, wind power, education material etc. It has also built up a small library. The Agency distributes this knowledge by

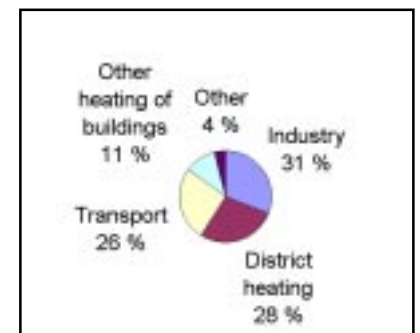


Within SAVE II contract the Energy Agency of Southwest Finland had partners in Scotland and in Germany. The coordinator was South Ayrshire Energy Agency.

Energy Consumption in Southwest Finland 1997:



CO₂ emissions in 1997:





The main raw material in the biofuel heating plant in Turku is logging residues of a whitewood. Also other forest retreatment and mechanical forest industry by-products such as dust, shell, wood chips and cutter chips will be exploited. (Picture: Photo archive of Turku Energia, Esko Keski-Oja)



The Agency has organized spring trips every year to Management Board and Guiding Group members in order to introduce the use of renewable energy.



In the excursion day during the partnership meeting summer 2001 the agencies visited chip harvesting site, water power plant and Electricity Museum in Paimio.

organizing and participating seminars, and other events, excursions etc. The Agency does not only disseminate information and experience but also be straight involved with local projects and plans. The role of Agency is to act as an initiator, motivator and to offer further collaboration. That's why the Agency has created regional and national cooperation networks

Progress of the Work Plan

Strategic Advocacy

Energy Agency co-operates with the Regional Council to get a future energy plan to Southwest Finland. The focus is in increasing the use of renewable energy sources. The Agency has also participated in the work of Provincial Plan, Provincial Program and Turku area Development Plan.

It is planned to extend the natural gas grid to West Finland, where natural gas would mostly replace coal in the production of district heating and power. Any decision to go ahead with the project will be made in late summer 2002. The project aims at making natural gas available in the Turku economic zone by 2006.

In Southwest Finland 12 municipalities have signed the climate protection agreement. Over 70 % of the population of our province lives in this area. The Agency has participated as an expert to national project, which developed an easier tool for municipalities to make regional emission and energy balance calculations. The new Kasvener program was published in end the of year 2001.

Renewable Energies

The Agency has consulted wind power projects in archipelago and one wind park is under construction. In spring 2002 Energy Agency of Southwest Finland will begin a common wind project with the Energy Agency of Satakunta.

Turku Energia Oy introduced a new 50 MW biofuel heating plant in Turku in November 2001. The heating energy produced in the biofuel plant covers 15-20 % of district heating energy in Turku. The main raw material is logging residues of a whitewood. Also other forest retreatment and mechanical forest industry by-products such as dust, shell, wood chips and cutter chips will be exploited.

The energy, that is generated with biofuel, will substitute district heating energy generated with fossil fuels. This will considerably decrease carbon dioxide as well as sulphur oxide emissions.

"Puulämpöä Varsinais-Suomeen"-project's aim is to decrease the heating costs in rural areas, to improve employment and forestry. The objectives till the end year 2004 are to increase: the use of wood chip in warming farms, heating entrepreneurship and local heating plans in the rural area.

Marketing of The Ministry of Trade and Industry's **Energy Saving Contract** is one main task of the Agency. There are seven cities and one countryside teaching establishment who have signed the contract before February 2002. Experiences in the City of Turku has shown that there is much potential to reach savings in energy consumption via energy audits. As a result, the City of Turku will save 19 500 MWh annually that means 524 000 euros. The theoretical effect to CO₂ emissions is 5 265 tonnes Carbon per year.

Energy for Second Grade

The Agency has invited eight-year-old children to take part in an Energy study-program called 'Energy for second grade'. At years 1999 - 2001 two hundred classes/ 5000 children took part. The schools were from 16 communes. This campaign will be carried out annually.

NGO's and Citizens

The cooperation done with NGO's has dealt energy saving of households and individual citizens. Energy Agency has given lectures in meetings of different associations and seminars when asked. This work will continue in the future.

Energy Saving Week is spend yearly in October and is coordinated in whole Finland by Motiva. Energy Agency acted in Southwest Finland and tried to get different organisations to join to the theme. The Agency started 1999 from Turku area, 2000 was held in Vakka-Suomi area and 2001 in Salo area. During this week the Agency has reached about 10 000 people. Energy Agency participated also to the work of Local Agenda 21, environmental awareness group and gave Consumer advice on energy to the local Martha organisation.

Energy Agency has participated in Environmental campaign of local Radio Sata in 1999, 2000 and 2001. The goal was to give listeners practical environmental tips that can be used in everyday life. In 2001 Radio Sata (with partners Energy Agency and Turku Energia Oy) got honorary mention from Motiva of active communication during Energy Saving Week. Radio Sata has given honorary mention two times to the Agency as an active partner.

Links to European Partners

In the period of the contract there has been a regular exchange of information and ideas with other local energy agencies and outside bodies. Links to European Partners have been trough two networks: the SAVE II contract and the collective of European Energy Agencies. EU activity consists of 6 partner meetings and 3 events of European collaboration.

Within SAVE II contract The Energy Agency of Southwest Finland has relationship with South Ayrshire Energy Agency, Scotland and Energieagentur Westmecklenburg, Germany.

Energy Agency has strongly links with other Finnish energy agencies. It means exchange of information and experience. In 2001 agencies started to provide closer network and project initiatives.

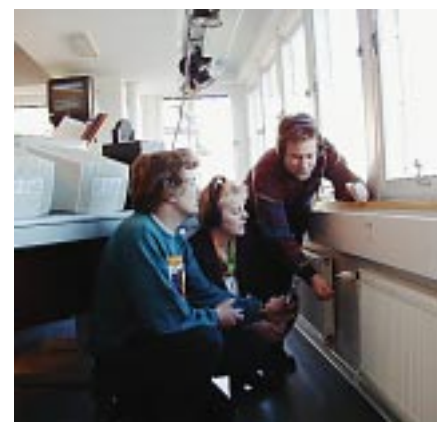
Dissemination and information activities has included the distribution of Management Board and Guiding Group meeting papers, annual report to financers and a web site. Illustrated presentations have been provided to 3 conferences and 20 seminars. The Agency contacts the local citizen directly by working with NGO's, exhibiting and giving lectures at local events. An important happening is the annual Energy Saving Week in October. The Agency has organised 25 education events and 29 other events. There has also been regular contact with the local media and Local Agenda 21 office.

Conclusions

Energy Agency has build up active network with local partners. The network makes it possible to initiate new projects in the energy field. From now there are two projects concentrating on renewable energy sources. The next few



In Finland the European Car Free day was organized first time at 22.9.2000. The City of Turku participated this happening by naming one street as an auto free zone. In 2001 there was an address for getting more room for bicycle parking from The Agency's initiative and 1 352 persons signed it. The address was sent to Municipal Council of Turku. Week before the car free day partners named a "bicycling ambassador". She gave many interviews to the media and got the publicity desired.



Environmental campaign of local Radio Sata has been on the air since 1998. The topics of the campaign have been handled as frequent brief information flashes, edited narratives, announcements and competitions. The largest task for the Energy Agency has been realising the information flashed for the Energy Saving Week, providing background material for the editors and ecological tips on energy. Agency has also given tips for the campaign books "Hundred green ideas", "Hundred green kilometres" and "Hundred green drops".



The 6th partnership meeting was held in Turku in August 2001. Dinner at Villa Solin was hosted by Mr. Olli A. Manni, The Chairman of Business Activity Department of Turku City Government and Mr. Juho Savo, Executive Director of Regional Council of Southwest Finland.



The staff of the Agency 1999 - 2001: Mrs. Sari Pirhonen, Mr. Timo Jurvelin and Mrs. Liisa Harjula.

During the three years of operation, Mr. Timo Jurvelin has trained 25 voluntary energy experts. Energy expert is a voluntary inhabitant usually in a terrace house or apartment house, who follows energy consumption values in heating, water and electricity, and informs other inhabitants about the saving possibilities. Housing organizations have saved money by the energy expert operation and used the savings to promote living comfort.



Energy Saving Week is spent yearly in October. Energy Agency acted 1999 in Turku area, 2000 in Vakka-Suomi area and 2001 in Salo area. This energy day was held at Salo marketplace with Fortum Sähkösiirto Oy.

years will show the effect of the new CHP plant in Turku and the small-scale power plants using wood to the energy balance. If the natural gas grid is build to Southwest Finland, it would decrease the CO₂ emissions remarkable. In the future we also hope to see wind parks in the archipelago. The energy balance will be dated in 2003.

Experiences in the City of Turku has shown that there is much potential to reach savings in energy consumption via energy audits. In the future it is important to continue this work and get the plans into action in other cities who have signed the energy conservation agreement too. In the grassroots level energy advise and information has started well. The work done with schools, NGO's and energy experts will continue in the future.

Future of Energy Agency of Southwest Finland A new Future Plan has been made for years 2002 – 2006. The aims are same as before; increase the use of renewable energy sources, energy efficiency and energy saving. The main projects in 2002 are:

- Wind Mapping Project, including the technical aspect about the connections to the electricity grid. Cooperation project with Energy Agency of Satakunta.
- Project increasing the use of wood in rural areas. Started January 2002 and led by Forest Center of South-West Finland.
- Energy for Schools in Turku area. Part of Finnish Energy Agencies network project.
- Advice and expertise communities in putting energy conservation agreements into action.
- Energy expert training in local real estates.
- Energy Agency has also taken wood pellet to the information range. It will start a pellet project in the end of year 2002. Aim of the project is to increase the use of wood pellets in local rural heating plants. The experience of Central Finland Energy Agency in this matter will be used.

The Management Board and Guiding Group will be quitted after the three years SAVE contract. A new Management Board will be nominated in April 2002.

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