

## IEA task 24

### Active Solar Procurement

#### Evaluation after the 1<sup>st</sup> round 1998-2001

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# 1 Executive Summary

This report includes a description and evaluation of the first 3-year round of the IEA Task 24 Solar Procurement.

In this first round 19 campaigns and projects have been initiated in the five participating countries: Canada, Denmark, the Netherlands, Sweden and Switzerland.

Some of the activities are still ongoing while some of the activities have been completed. In the completed projects, the results have varied and experience about successful and not successful approaches has been gained.

Experiences from the activities have been disseminated efficiently among the task participants resulting in good synergy of the co-operation between those countries.

The benefit of extracting experience, hints, knowledge ideas, warnings, recommendations etc. from the various projects has been of great value, and will especially be utilised in the coming 2-year round of the task

## 2 Introduction

IEA task 24 Solar Procurement is divided into 2 phases. In the first 3-year period (starting 1998, ending 2001) it has been planned to obtain experience from national procurement activities in every participating country, while it in the final 2-year period has been planned to establish more international based buyer groups with the use of e.g. international tendering.

The aim of this report is to evaluate the activities that have taken place in the first 3-year period.

The activities carried out have also been reported in the Task status reports [see references], which supplements this evaluation report.

In this report the latest detailed information on the Canadian activities has been impossible to include, as a change of expert from Canada is taking place during the period of the evaluation.

It should also be mentioned that Switzerland joined the IEA task 24 in 1999 and therefore has not participated from the start. From mid 2001 Belgium will also participate in IEA Task 24.

The evaluation is carried out in 3 levels. First the individual evaluations of the projects have been carried out in the different countries. (Project evaluation forms will be available in a separate booklet).

On the basis of these projects every country has summarised their general evaluations and conclusions which are given in appendix A.

Finally the subtask co-ordinator has tried to extract the general conclusions which are given in the following chapters.

Since the projects are realised on the background of the existing different market conditions in the participating countries a short introduction to these conditions has been given.

### 3 Market conditions in the participating countries

As it is seen from this report there are differences in what way projects have been carried out - and their results - in the participating countries. The major reason for this is of course the existing market conditions in the different countries.

Although the solar water heater technology is quite similar in each country, different traditions, market developments etc. have played a major role in the now existing markets.

In the table total market sales in the involved countries in year 1999 together with the total estimated number of installed systems have been stated.

<b>Solar Collector Markets</b>			
	<b>Sales 1999</b>	<b>Sales 1999</b>	<b>Accumulated 1975-1999</b>
	m <sup>2</sup> /1000 inhabitants	1000 m <sup>2</sup>	M <sup>2</sup> /1000 inhabitants
Canada			
Denmark	2.6	14	53
Sweden	1	9	21
Switzerland	4	26	33
The Netherlands	2	30	10
Europe	2.4	900	24
Source: ASTIG & Jan-Olof Dalenbäck			

The differences in the markets have of course influenced the results and experience. There are however also such similarities that comparisons of findings are of great value.

The characteristics about the markets in the participating countries are summarised below:

#### **Canada**

In Canada energy has traditionally been very cheap, and that makes it difficult for solar heating to compete. However there are many grass root organisations/people who are easy to attract to the idea of solar heating. However, solar heating systems are up against the general opinion, that all investments should have a pay back period less than 5 years. In Canada product development is taking place to develop systems that match this pay back period.

#### **Denmark**

In Denmark the market growth has been stable during the 80s and 90s until 1997 where the market decreased.

It is characteristic that there is a well-established subsidy and quality scheme, and manufacturers and installers who have been on the market for many years. Many attempts to enlarge the market have been tried. The most successful attempt was the involvement of natural gas companies. However, after having reached most of the potential new customers they have lost interest in promoting solar heating.

Another successful actor has been an electricity utility selling solar heating systems to their customers in co-operation with an installation company.

It is not quite certain what the reason is for the decrease in sales since 1997. A survey is going to be carried out in 2001.

It is also characteristic that solar heating in district heating areas is not subsidised. Since most new buildings are built in these areas, solar water heating in new buildings is not a large segment.

In Denmark it has been difficult to reach the market for exchanging of old hot water tanks.

As it appears from the table, Denmark has the highest solar energy penetration per inhabitant of the participating countries. The reason for this is mainly the long and stable market development until 1997 and the installation of a few very large solar heating systems for district heating.

### **Sweden**

In Sweden the efforts on solar energy were in the early 80s placed on large plants for district heating and in some cases with seasonal storages.

Since 1996 Sweden has had no subsidy for thermal solar. However a new subsidy was introduced in 1999.

The market for small solar water heaters for one family houses can in some respects be seen as new and inexperienced, but have a big potential.

### **Switzerland**

Switzerland is the country with the highest sales per inhabitant in 1999.

However, special efforts have to be made in Switzerland to convince manufacturers of the opportunities with the solar procurement initiative for expanding markets. This should be possible with new tools prepared from the task. More information will soon be available at the web-site [www.solarpooler.ch](http://www.solarpooler.ch).

### **The Netherlands**

In the Netherlands solar water heater projects with the Energy Companies and local authorities have been realised for several years.

In the Netherlands (contradictory to the situation e.g. in Denmark) the Energy supplier supplies various types of energy (gas, electricity) and therefore they also see themselves as a company that should deliver solar heaters. Furthermore, an act between the government and the energy companies has been formulated committing the companies to reduce CO<sub>2</sub> outlets.

## **4 Creation of buyer groups**

### **4.1 Presentation of country projects**

During the first 3-year period various approaches to create buyer groups and procurement activities have been initiated in the participating countries. A summary of the most important in every country is given below.

A list of the activities is also given in the table following the summary.

#### **Canada**

Two community-based organisations in Canada have been working towards expanding the market for solar water heaters within their regions. The leader, Peterborough Green-Up, has installed 9 systems. These systems were tendered and selected from three manufacturers and has undergone extensive testing at the National Solar Test Facility. Parties involved include Peterborough Green Up, Peterborough Electricity Utility and City of Peterborough.

The second organisation, EnerACT (Energy Action Council of Toronto) has a long-standing history of delivering energy efficiency products and services to the people of Toronto. EnerACT has installed their first 8 systems from the same suppliers during May 2000. Local utilities, municipal governments, and Natural Resources Canada are co-sponsors in these two projects.

An NGO and a utility jointly launched the tendering of Phase II in Peterborough and Toronto in autumn 2000. They plan to install 20 and 30 systems, respectively. After evaluation of the tenders, it is expected that the systems will be installed during 2001. Most likely, several communities will participate in the Phase III tendering, and up to 50 systems will be installed in each community. A market transformation study will be undertaken. A market survey, new performance and system specifications and the value of peak saving electric load with solar water heating will be included in this activity.

#### **Denmark**

In Denmark the campaign "Sun over Thy and Mors Regions" is currently running with the local electricity utilities. Thy and Morsø Utility have 18.000 customers of which about 1000 have electricity heated houses. A tender has been carried out and the winning solar heating plant is offered to those customers. Result: 20 SHS sold in 2000. The campaign is continued in 2001.

KFS house builders, delivering new single-family houses in a region in Jutland, (50 houses a year) are offering solar heating in their house concept. The offer is made using a local panel manufacturer and local boiler manufacturer. The price is not significantly low, however the approach is so new that the results cannot be measured yet. The idea will be taken up with other larger housing manufacturers / house builders.

Contacts have been established to other potential buyer groups such as:

- Dansk Solenergi (Association of Plumbers selling solar heating plants)

- WWF (World Wildlife Foundation)
- Danish Nature Conservation Foundation
- A large franchise food company
- A large company: Rockwool International. Contacts have been taken in order to form a buyer group out of the employees, but none have registered as buyer groups yet.

Also the large company FDB (a large supermarket chain) has been addressed in order to make them take up solar heating as a special monthly offer to their members. Until now it did not appeal to FDB, but it might be taken up again in another version.

Typical for most of the companies/organisations has been a very positive attitude towards the idea – but it has not been possible to make them take the last step: to join the campaign.

### **Sweden**

In a Technology Competition, Sweden had tenders on small domestic hot water systems(SHS) at the end of March 2000. The winner has been appointed: A system from Uponor AB. In March, 1800 buyers signed up on the WEB site to buy this plant, and contracts are going to be made in 2001. The Uponor system is a new system with a low cost light weight plastic collector. This shows that even in the first round with relative small national tenders, an initiative like task 24 can initiate and stimulate product development.

Almost parallel an invitation for tenders on Large Solar Collectors has been sent out. The purchase should extend to a total of 5.000 – 10.000 m<sup>2</sup> solar collector area in larger systems. The cost that is set out in the mandatory request is aiming for a substantial price reduction for the buyers that are participating. In 2001, app. 2000 m<sup>2</sup> have been registered, and it is considered to continue the registration in the 2. round of the IEA task 24 and to make it part of an international tender.

### **Switzerland**

Switzerland joined the task in the spring of 1999 with funding from the Swiss government, and the work is carried out in the frame of Swiss Solar Energy Society (SSEC).

Contacts have been established with different electricity companies with the intention of forming buyer groups and starting projects. Experience has been gathered from some municipal initiatives, in Zurich, Basel, Lausanne and Zug for example.

Switzerland has been focussing on 3 utilities within those 3 regions:

- “Solar roofs in the city of Zug” concerns hot water for single-family houses and for multifamily houses with less than 10 apartments. The intention is to have turnkey installations at a fixed price, professional management and to use only certified components. Wasserwerke Zug is organising. 40 systems of 10 m<sup>2</sup> installed.
- Service Industrielle de la Ville Lausanne (contacts have been established).
- One project for standard hot water installations is planned to be in the city of Lucerne.
- Electricity Works in Basel (have already planned a campaign with PV, and SSEC wants to participate in this campaign).

Furthermore, contacts to the Union of Swiss City Works are planned.

The Swiss Solar Energy Society (SSEC) is now planning an Internet-based project with a “virtual” buyer group. It is aimed at private house owners, and the call for tender will be in accordance with the Task 24 guidelines. A local project team has been formed, consisting of, among others, PR specialists, computer experts, suppliers, contractors and Swiss Task 24 representatives.

## **The Netherlands**

Several solar campaigns for systems in existing dwellings as well as in new housing development and large renovation have been running in the Netherlands.

### *Essent*

In 2000, the utilities Essent and RENDO started in co-operation with Ecofys a campaign aiming at stimulation of the implementation of solar water heaters in new housing developments in the provinces of Drente and Groningen. The goal was set on 1,200 solar water heaters. After a publicity campaign, 47 projects with a total of 2,079 domestic houses participated. Of these houses about 1,400 will be equipped with solar water heaters.

### *ASN bank and WWF*

Another example of a new way of marketing solar water heaters is the campaign of the Dutch ASN Bank which started with an announcement in their magazine in December 1999. Until the end of 2000 about 2000 leads (interested customers) were gathered. About 10% of these leads results in an offer. The ASN continues the announcements in their magazine. . This campaign also included different financing possibilities either through banks or through renting of the water heaters and parts of the solar systems. The WWF campaign started with a small publicity campaign in March 2000 which is directed towards members of WWF. In May 2001 there was a follow-up campaign, the results of this campaign are not known yet

### *SolHas*

Together with the Dutch umbrella organisation of all housing associations named ‘Aedes’ and its European counterpart Cecodhas a European survey called ‘Solhas’ has started. The goal is to develop a market strategy for solar water heaters for the market sector of housing associations. Starting from an investigation of the housing corporation sector in 10 different European countries, the goal is to obtain a clear image of the possibilities and bottlenecks for further introduction of solar water heaters and the final aim is to establish European scale buyer groups of Housing Associations. This buyer group will tender during the second, more international part of the IEA task 24. At the moment this buyer group consists of 33 housing associations. During the survey , national projects, especially in the Netherlands, will take place in co-operation with Aedes and the utility EDON.

### *Space for Solar*

Work for medium-sized systems is carried out through the "Space for Solar" initiative. This is a buyer group of 59 participating organisations most housing associations and rest homes. To give this buyer group a legal basis a foundation has been created in which all participants are represented. The initiative has a portfolio of more than 100 projects, with a total of approx. 20,000 m<sup>2</sup> which are to be realised the coming years. A tender for turnkey delivered systems was issued in December 2000 and the winner of the tender will be selected in May 2001. The foundation has an open character, new parties are invited to join the “Space for Solar” initiative. Since medium-sized systems are more tailor-made, various solar services will be offered, including buying and leasing.

### *Sol\*id*

Another initiative was the formation of a national installation company, the so-called “Sol\*ID solar company”, owned by 40 installers. The company also has an open character, so other installers can join; however they have to prove that they can offer a certain quality level. SOL\*id is the only Dutch installation company that offers solar sales and installation services on a national scale. A national call centre has been established for facilitating customer contacts. This approach offers an opportunity for customers to have only one contact person who takes the whole responsibility, transferring matters of warranty etc. to the installers and the manufacturers. This makes it easier with central marketing and publicity, stressing the importance of the system buyer and central logistics. SOL\*id is now working on feature packages, also offering some more features, such as standard black collector edges and solar viewers – instruments installed which provide the tenants with the possibility of seeing that the system is actually working.

### **An overview of initiated projects is given below:**

List of projects carried out in IEA Task 24.

Name of project	Type of project	Including	Number of buyers	Systems realised/ status/ evaluation
<b>Canada</b>				
Peterborough GreenUp	Community based organisations will expand their activities with SHS	Tender, selection, testing of plants	9 systems installed. See below.	Ongoing 9 systems installed
EnerAct (Energy action council of Toronto)	Community based organisations will expand their activities with SHS	Tender, selection of plants, testing	8 systems installed. Tender for 50 systems together with Peterborough in 2001	Ongoing 8 systems installed The two organisations will issue a tender for respectively 20 and 30 systems. Expected to be installed in 2001.
<b>Denmark</b>				
Thy Energi	Buyer group in utility	Registration of buyers, tender, evaluation of tender, deliverance and installation of the plants.	20	Ongoing 20 systems sold and installed
KFS Houses	Solar heating in new, single-family houses.	KFS and a solar heating company are offering solar systems to new house owners.	Too new to have any results at present.	Will be taken up with other housing companies.
WWF	Buyer group	WWF has been addressed in order to make them offer their members a real	WWF were interested and positive – but could not manage to start	Will be taken up again

		CO2 -free solution: Solar heating.	a campaign now. We will address them again later.	
Danish nature conservation Foundation	Buyer group among environmental organisations.	DN has been addressed in order to make them offer their members a solar water heater.	DN was interested and positive – but could not manage to start a campaign now. We will address them again later.	Will be taken up again
Mac Donald's-Franchise – chain	SHS on the shops	SHS used for energy savings and marketing purposes – image bettering.	Only one shop keeper addressed – interested – but not enough to implement a system.	Given up for the moment
Rockwool: Large private company	Buyer group among company employees		Interested in the beginning – but has withdrawn.	Given up with this company. No good results in this field are seen until now with any of the participants in the task.
FDB – one of the largest Danish grocery companies.	Buyer groups among members	Announcements in members magazine as a "Offer of the Month"	Interest was withdrawn.	Will be taken up in one way or another again

<b>Sweden</b>				
Systems for Solar Heated domestic hot water supply in detached houses. (Värmland)	Buyer group on internet for small systems.	Registration of buyers on internet, tender, technology competition, evaluation of tender, choice of plant, contracts with buyers	Solar heating plant : 16.000 SKR, 1800 registered buyers	Ongoing. Here the procurement has resulted in a new solar heating system: All of plastic and with a stainless steel tank. Good output/ price ratio. The experience with deliverance etc. is still to come. Enormous public interest has helped the project.
Solar collectors for use in large solar heating systems	Buyers for large scale.	Tender for 10.000 m <sup>2</sup> plants. Substantial price reduction required	2.000 m <sup>2</sup> registered – will maybe be transferred to the international round-	Ongoing. (Announcement of winner in spring 2001. Product on market summer 2001)
<b>Switzerland</b>				
50 solar roofs for the city of Zug – (Wasserwerke Zug is organising)	Buyer group of private buyers. Local advisers used.	Buyers found by public announcement, local information. Tender for each planned	40 systems of 10 m <sup>2</sup> installed at the beginning of 2001. 50 systems expected	Ongoing with the regular district subsidy. Problems: Solar advisers were sometimes installers – which did maybe not seem neutral...therefore a responsible person from the utility always

		installation.		participated when contacts were made. Advice: better to use advisers from the buyer group itself.
222 solar roofs for Basel (electricity utility)	Buyer group. Solar water systems for single-family houses.	Pre-qualification of manufacturers. Campaign with direct mailings, solar weekends, etc.	Systems expected: 100 systems of 4 – 6 m <sup>2</sup> in the first year.	Ongoing. Problems with the solar system lead to this recommendation: Only use well tested systems for large buyer groups.
<b>The Netherlands</b>				
Sol*ID	SHS-company of installers with central marketing, publicity, sales etc.	Tendering, call centre, organisation of sales and deliverance.	Confidential	Ongoing
ASN Bank	Buyer group of bank clients.	Campaign, announcements, registration of buyers, financing offers, tendering.	2000 registered interested buyers (bank clients).	Ongoing
WWF	Buyer group	Announcement registration of buyers, tendering.	Members of WWF	Ongoing
SolHas	Buyer groups of housing association - European scale.	Based on international Survey among housing associations and projects in nine European countries. International tender in the second round of the task .	33 housing associations have claimed that they want to participate in a buyer group.	Ongoing
Space for Solar	Buyer group among medium-sized.	Registration of buyers. Tender for turn key, winner selected May 2001.	59 housing associations or rest homes	Ongoing 100 project/ 20.000 m <sup>2</sup> in the coming years. Tender is out to large national suppliers.
Solar Energy in the ESSENT supply region	Buyer group among property developers and housing associations	Establishment of buyer groups, tender, evaluation etc.		Ongoing. The goal was 1200 SHS, - it seems likely that 1400 SHS will be established.

From the presentations and table above it is seen that many activities have been initiated. Some of the activities are still ongoing while some of the activities have been completed. In the completed projects, the results have varied and experience about successful and not successful approaches has been gained.

In the following, the processes that projects have been through, are discussed and some conclusions are drawn.

## **4.2 Discussion**

The success with creating buyer groups has varied from country to country: A discussion of some of the possible reasons for this is given below:

In the Netherlands the creation of large buyer groups has generally been a success. The success is due to:

- a business to business approach between buyers and installers.
- a simple project approach with clear benefits for both buyers (not necessarily economic benefits) and the intermediary organisation.

In Denmark two of the above criteria seem to be fulfilled: Simple projects and close connection between seller and buyer (in Thy). However, the advantage for the buyers has not been so clear, as the buyer group has been too small to create significant price reduction.

Furthermore, it was experienced in Denmark that it was difficult to find organisations that would co-finance the effort. Therefore, the failure of several approaches has been due to lack of money for information such as campaigning, advertising, logistics etc

The conclusion in Denmark is that it will be necessary to find means for carrying out the whole campaign including advertising and logistics, and that the size of the potential buyer group must be enlarged (nation wide).

In Sweden the pooling of buyers via internet registration has been a success. Here there has been no business to business between buyer and seller, as the buyer registers over the internet and shall establish the installation with his own installer – but there is clearly an economical advantage for the buyers as the plant is an inexpensive plant – and even a high-quality plant.

The new manufacturer Uponor with a new type of collector was introduced to the market. The first systems were installed in May. Even though the final amount of systems sold is not known yet, the campaign can be considered a success. It is founded on a well-working net of local energy advisers, a broad co-operation, national media interest, etc. Another new element in the Swedish campaign is that the systems will be sold directly to the users, who are responsible for getting the systems installed. The Campaign and Uponor which has a great installers network can support the customer in this process. During the evaluation of the systems in the Swedish tender special attention has been paid on how easy it was to install the system

A large electricity utility in Denmark has been able to reduce prices for systems through agreements with one installer to install the plants.

In Switzerland it is highly recommended that the organiser of the campaigns perform a quality check upon all installations. The Swiss participants recommend this narrow contact.

In the Netherlands the buyer groups projects includes everything from the planning of all activities from preparation to evaluation and tendering on system level and turn key installation level. The main reason for success is that experience is transferred from one project to another.

Main recommendations are:

- Define not only buyer groups, but complete projects from preparation, tenders, campaigning, quality control in design, installation and evaluation, and: Obtain commitment and finances for the whole project, preferably through a formally financed project proposal.
- Focus on buyer groups with a potential size large enough for large sales so that price reductions are possible.
- Try to keep a continuity of specialists and champions through the whole period of project life.

## 5 Procurement activities

The objective of the buyer groups is of course to increase the potential for solar water heaters to penetrate the market (the procurement process) through price-reductions and/or technology development. The aim is to create a sustainable market - meaning a market that will continue after the end of task 24 activities. In order to create such a market there has to be a fair output/price-ratio, or other benefits for the buyer. This - in combination with other technical refinements of the SHS - is what the procurement process shall create.

In all participating countries projects have been realised and new sustainable market development mechanisms like the Swedish internet campaign and the Dutch Sol\*id company are introduced.

In Denmark the procurement activities have resulted in minor price-reductions and no technology development as the amount of buyers was too small. A large Danish manufacturer claims: We need a fixed delivery of e.g. 200 plants delivered at the same place in order to be able to give substantial price reductions.

In Sweden there has been technology development in the competition for small system buyers organised on the internet. Here a special SHS has been developed in accordance to specifications in the tendering material. A jury evaluated the competing systems. This has created an inexpensive system from a new actor on the market marketed in an innovative way through the internet.

Through the extensive testing in Sweden of many different systems that were offered the general quality is expected to increase.

Many of the different national procurement projects have created larger attention among international manufacturers. A number of international suppliers have submitted tenders. The techniques for facilitating the transfer of information about launched procurement projects have been developed as result of task 24 work.

The participating countries have exchanged model specifications which will facilitate the further internationalisation of the solar market.

## 6 Inspiration and exchange of experience

It is evident that that the participants of the task have been inspired by each other and have exchanged experience.

Examples are:

- Sweden has used material and inspiration from the Netherlands in their project or large plants.
- Switzerland has been inspired in by the Netherlands and Denmark in approaching companies.
- The Netherlands has used material from other countries, for instance used parts of the tender documents.
- Switzerland has tried to transfer a brochure from Denmark although without success, whereas inspiration concerning requirements to quality installers has been successful.
- Denmark has obtained inspiration from Sweden's WEB site bargain in the build up of a new buyer group on the internet. Remark that the inspiration is not used to copy the Swedish success, rather to modify it for Danish conditions.
- Sweden has discussed with the other countries how to avoid crucial problems in the logistic of signing contracts with buyers, deliveries etc. Even though the Swedes have not faced such problems yet the discussions might have been helpful to cruise around and avoid the problems before they arise.
- Denmark has tried to use experience from the Netherlands to contact WWF – unfortunately this has not brought results in Denmark.
- Canada has got inspiration for their procurement specifications from Denmark and Sweden
- The Netherlands has received documents for developing their international procurement activities further. See also chapter 4.

Furthermore, there has been much advice and exchange of experience from discussions at expert meetings etc.

In the figure below examples are shown of areas where two or more countries have initiated collaborative work for procurement documents or models for more efficient processes.

	CAN	DK	FIN	NL	CH	SE
<i>Small systems</i>	●			●		
<i>Medium sized systems</i>		●				●
<i>Company</i>				●		●
<i>Internet buyer group</i>		●			●	
<i>Website</i>	●	●				
<i>Tender doc.</i>	●	●		●	●	●
<i>Buyer tool</i>	●	●		●	●	●
<i>Manual</i>		●			●	

Experience submitted from Sweden about procurement activities in refurbishing and energy efficiency has contributed to other countries avoiding problems during their solar projects.

## **7 Response from the manufacturers**

The response from the manufacturers varies from a positive to a negative attitude to procurement.

In the Netherlands and Sweden manufacturers have participated positively in tenders. In Switzerland there have been no real tenders since the manufacturers were not positive about this. Here there has been done much effort to inform the manufacturers about the procurement idea, and all the same their response was negative: They want to remain independent. So, in Switzerland the main job in the task is to convince the manufacturers that procurement will help them to sell solar equipment.

In Denmark some manufacturers are not in favour of the idea of decreasing prices of solar heating systems. The manufacturers are also afraid that pooling of the buyers will stop the market in the ongoing period.

Other manufacturers show with their participation in competitions that they see future possibilities for further internationalisation.

## **8 Prototype evaluation and testing**

Only in Sweden a written specification with mandatory requests in connection with standards was the basis of the tender – and it has worked out satisfactorily.

In The Netherlands, Denmark and Switzerland already existing certified equipment has been used according to actual standards. This has worked satisfactorily, so prototype testing is only necessary if new and special equipment is developed and offered by the competitors.

The Swedish efforts included the opportunity to test the offered systems as an important part of the evaluation of proposals, and have already contributed to further developing of the quality of the individual systems and so the quality level for the whole solar market.

## 9 2<sup>nd</sup> round activities

Sustainable market development is a main target - and not only price reductions, but also creation of buyer groups, which represent parties who didn't buy other wise, can be the basis for such a sustainable market. It is the aim in the second phase to use the experience from the first phase to create such large volume buyer groups. One tool to do this can be substantial price-reductions of the solar water heaters. Other tools are efficient international marketing, tendering material etc., such as standard contracts decreasing costs for engineering and marketing on the international level. That is the basis of the increased international co-operation in the second round. This effort will contribute to the further development of an international solar market.

At the moment the following 2<sup>nd</sup> round procurement and buyer group activities are foreseen:

There are plans in several countries also to create buyer groups for small plants (virtual buyer groups in Denmark, the Netherlands and Switzerland) and for large plants with a beginning international touch – for instance international internet buyer group. The approaches will be closely connected to national circumstances, for instance in Denmark the medium-sized systems will be promoted in connection with a new bill for solar heating in publicly funded buildings.

The International buyer group "SolHas" will tender during the second round. During the survey, national projects, especially in the Netherlands, will take place in co-operation with Aedes and the utility EDON.

The 2<sup>nd</sup> Space for Solar tender for medium sized systems will take place in this round. The initiative already has a portfolio of 100 projects and 20.000 m<sup>2</sup> to be realised. In the 2<sup>nd</sup> round the participants (buyers) in the Space for Solar will be sought outside The Netherlands also.

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*IEA SHC Task 24 – Grosseinkauf von thermischen Solaranlagen. Paper by Hans Westling for the “Gleisdorf Solar 2000” 5. Internationales Symposium für thermische und photovoltaische Sonnenenergienutzung, Gleisdorf, Austria, 2000.*

*IEA Task 24 Solar procurement - Subtask B: The Book of Tools*. Paper by Klaus Ellehauge and Iben Østergaard for the Eurosun Conference, Copenhagen, Denmark, 2000.

*Swedish SDHW System Procurement Competition – Description and Experiences.* Paper by Jan-Olof Dalenbäck and Peter Kovacs for the Northsun 2001 conference on Solar Energy in Buildings, Leiden, The Netherlands, 2001.

More information about Task 24 is available at the Task 24 home-page:  
<http://www.ieatask24.org>

## Appendix A: Completed general evaluation forms for every country

### Canada

Missing

### Denmark

#### A. Analysis of strategies for the organisation of buyer groups

what has been tried?

*Company employees, House building companies, environmental organisations, utilities, restaurant chains*

what was successful and what was not?

*Limited success at utility and maybe house building company*

why?

*Utility: good involvement but small buyer group means no dramatically decreased prices*

*Large utility has had success mainly because of large buyer potential and decreased prices, however, had no competition (has an agreement with only one company)*

recommendations etc. ?

*Organisation of a large buyer group by internet.*

#### B. The procurement activities and quality control systems used during the design and realisation of the project

what has been tried?,

*Utility: competition,*

*House building company: agreement with one supplier.*

*Both projects no new developments, use already type approved components.*

*No follow up yet.*

what was successful and what was not?

-

why?

*Competition and agreement has not decreased prices enough to get a very attractive economy for the buyer.*

recommendations etc.?

#### C. Examples of inspiration from other countries work

Inspiration

*website bargain inspiration from Sweden*

*Creation of buyer group in utility and WWF inspired by the Netherlands*

Use of material

*Not yet*

Co-operation

*Advice and discussions with the Netherlands and learn from experience from Sweden*

#### **D. Analysis of manufacturers' response to and participation in procurement activities**

what has been tried?,

*all manufacturers were invited for utility projects - some did not give offers.*

their response:

*some manufacturers not in favour of the idea of decreasing prices on solar heating systems.*

*manufacturers afraid that pooling will stop the market in the ongoing period.*

recommendations etc. ?

#### **E. Prototype evaluation and testing**

what has been tried?

*No prototype development.*

what was successful and what was not?

-

why?

-

recommendations etc.?

#### **F. Analyses of (other) active solar projects, which include large-volume purchasing.**

*No analysis elaborated (yet).*

what has been tried?

-

what was successful and what was not?

-

why?

-

recommendations etc.?

#### **G. Most important lessons learned and recommendations**

*Difficult to find and motivate organisations to participate in forming buyer groups.*

*Danish utilities, if involved in solar, want to run the project themselves and generally want to work together with one manufacturer (without tendering).*

*Difficult to get real progress without means for running the entire projects (logistics, call centre, marketing etc). Therefore dependent on goodwill from manufacturers and installers.*

*The funding administration is afraid of conflicting with manufacturers and installers.*

*Decision-makers believe everything has been tried and are therefore not very positive.*

#### **H. Plans for the next round**

*Organising countrywide buyer group via internet. First without pooling, next with pooling and technology development (international tendering).*

*Dependent on new bill from buyer groups on middle-sized installations (international tendering).*

## Sweden

*A: Small DHW system*

*B: Large solar collectors*

### **A. Analysis of strategies for the organisation of buyer groups**

what has been tried?

*A: Collecting buyers via e-mail invitations/information to all 280 municipal energy advisers, via regional campaigns, advertisements, letters, brochures, homepage and an internet registration.*

*B: Collecting buyers through big organisations, letters, phone calls, etc. Interested buyers had to fill in a written form and send it for registration by postal mail or by an internet registration.*

what was successful and what was not?

*A: A successful number of interested buyers in favour of helpful local energy advisers, etc.*

*B: A successful number of “interested” buyers, but a difficult way to go from “interested” to “actual decision to finance the projects”.*

why?

*A: Since energy prices have escalated during the last year, many people have consulted their local energy adviser and then become aware of the possibility of installing solar heating at unusually good conditions. Furthermore Governmental subsidies during 2000 and 2001 have increased the public “solar” interest. For people with Internet possibilities, the homepage has been a suitable resource with opportunities to gather information and easy means to register.*

*B:-*

recommendations etc.

*A: A success! Internet has made it practicable for only one employee to do most of the work in collecting 2000 registrations from interested buyers all over Sweden.*

*B: Necessary to get a stronger commitment from the buyers.*

### **B. The procurement activities and control systems used during the design and realisation of the project**

what has been tried?

*A: A written specification with mandatory requests in combinations with standards. During the evaluation phase the controls were made by laboratory testing together with a jury evaluation.*

*B: A written specification with mandatory requests in combinations with standards. During the evaluation phase the controls were kept up by an evaluation group.*

what was successful and what was not?

*A: A good experience.*

*B: It was difficult to evaluate the mounting cost*

why?

*A: -*

*B: It became hard to separate the offers according to the mounting cost.*

recommendations etc.

*A:*

*B: It would have been better to use specific mounting locations and alternative*

### **C. Examples of inspiration from other countries work**

Inspiration

A: *Active inspiration from successful projects in the Netherlands.*

B: *Active inspiration from successful projects in the Netherlands.*

Use of material

A: *Examples given during the experts meetings*

B: *Examples given during the experts meetings.*

Co-operation

A: *The Netherlands and Sweden have co-operated in formulating an Altener application. Exchange of ideas in designing a suitable Internet information.*

B: -

### **D. Analysis of manufacturers' response to and participation in procurement activities**

what has been tried?

A: *Meetings with the national manufacturers organisation.*

B: *Meetings with the national manufacturers organisation.*

their response:

A: *Positive, but some remarks according to the cost limits that was given in the mandatory request*

B: *Positive, but some remarks according to the cost limits that was given in the mandatory request*

recommendations etc.

A: -

B: -

### **E. Prototype evaluation and testing**

What has been tried?

A: *A written specification with mandatory requests in combinations with standards. During the evaluation phase the controls were made by laboratory testing together with a jury evaluation.*

B: *A written specification with mandatory requests in combinations with standards. During the evaluation phase the controls were kept up by an evaluation group.*

what was successful and what was not?

A: *see # 2*

B: *see # 2*

why?

A: *see # 2*

B: *see # 2*

recommendations etc.

A: *see # 2*

B: *see # 2*

### **F. Analyses of (other) active solar projects, which include large-volume purchasing**

what has been tried?

-

what was successful and what was not?

-  
why?

-  
recommendations etc.

### **G. Most important lessons learned and recommendations**

*A: So far, a successful way.*

*B: Hard to find committed buyers that can “push” the purchasing process. More active buyers are needed and more resources related to information are also necessary.*

### **H. Plans for the next round**

-

## **Switzerland**

### **A. Analysis of strategies for the organisation of buyer groups**

what has been tried?

*The installers have to pay a certain amount of money to take part in the action*

*Pre-qualification of installers on a neutral base.*

*Additional subsidies for buyer groups.*

what was successful and what was not?

*The demand to pay a "entrance fee" to take part at the action for the installers is not at all successful.*

*A helpful way is to have a pre-qualification of the installers who want to take part.*

*The installers/manufactures are perhaps willing to contribute to the action according the number of sold installations.*

why?

*The professionals are not willing to invest money in an action but they contribute on a success base of realised installations.*

*Pre-qualification of installers gives the buyer the guarantee of a good product.*

recommendations etc.

*A manual to organise buyer groups is helpful.*

*There should be a general tender for the whole action.*

### **B. The procurement activities and quality control systems used during the design and realisation of the project**

what has been tried?

*Use of only qualified equipment according the specifications.*

*The organiser of the action accompanies every member of the buyer group until the installation is ready for use and checked.*

what was successful and what was not?

*Quality check after the commissioning of the installations by the persons responsible for the action.*

why?

*Narrow contact to the buyer group members gives good results.*

recommendations etc.

*Well-controlled activities according a manual with check list etc. After sales checking.*

*Quality guarantee on the basis of a national accepted level according to the European standards.*

### **C. Examples of inspiration from other countries work**

Inspiration

*The project work of the leading country: the Netherlands.*

*Simple solar installations.*

*Creation of buyer groups within companies like in Denmark (Thy)*

*Space for solar*

Use of material

*The leaflet from Denmark to announce task 24. No success.*

*Requirements to qualify installers.*

Co-operation

*So far - none.*

### **D. Analysis of manufacturers' response to and participation in procurement activities**

what has been tried?

*The manufacturers should be in favour of the procurement.*

*Workshops for information about the aims of procurement.*

*Offering the chance of collaboration.*

their response:

*Negative. No positive response to the procurement activities.*

*The manufacturers want to remain independent.*

recommendations etc.

*The manufacturers have to be convinced that the procurement will help them to sell solar equipment.*

*Good tools for organisation of buyer groups.*

*Guaranteed results for the installers and the manufacturers.*

### **E. Prototype evaluation and testing**

what has been tried?

*No support for prototypes.*

*Use of already existing certified equipment according to the actual standards.*

what was successful and what was not?

*Proven quality of existing equipment.*

why?

*No trails within procurement project, except if the documentation material was not available.*

recommendations etc.

*Special prototype testing only if new and special equipment is offered by the competitors.*

### **F. Analyses of (other) active solar projects, which include large-volume purchasing.**

what has been tried?

*Not yet under discussion in Switzerland*

what was successful and what was not?

-

why?

-

recommendations etc.

*Large volume purchasing only with tender and evaluation according to conformity.*

### **G. Most important lessons learned and recommendations**

*The important manufacturers have to be convinced and fully integrated into the task aims.*

*The professionals (Installers and Manufacturers) should be used to finance the buyer groups but only on a success base and not under investment conditions.*

### **H. Plans for the next round**

*Virtual buyer group within the Swiss solar energy society.*

*New buyer groups within city works already under discussion.*

*Build up and professionalise the Manual to organise the buyer groups.*

## **The Netherlands**

### **A. Analysis of strategies for the organisation of buyer groups**

what has been tried?

*Organise large, preferable (inter)national buyer groups*

what was successful and what was not?

*Success:*

*New housing developments: Essent supply region*

*Renovation domestic heating systems: SOL\*id, WWF, ASN, Essent housing associations*

*Medium-sized systems: Space for Solar*

*Start up international buyer groups' housing associations: Solhas*

why?

*Business to business approach of potential key players/buyer group members.*

*Clear and simple project proposal with clear benefits for the buyers and the intermediary organisation if present. Not only financial benefits but also in the field of technical and marketing support.*

*Formalisation of buyer commitment, i.e. contracts (Essent), participation in a foundation (space for solar), company (sol\*id)*

recommendations etc.

*see the whys*

### **B. The procurement activities and quality control systems used during the design and realisation of the project**

what has been tried?

*Project approach for the project of each buyer group, including planning of all activities from preparation til evaluation.*

*Tenders on system level and turn-key installation level.*

what was successful and what was not?

*all*

why?

*Using experience from previous projects.*

recommendations etc.

*Define complete projects from preparation, tendering, quality control during design and installation and evaluation. Get commitment and finances for the whole project, preferably through a formally financed project proposal.*

### **C. Examples of inspiration from other countries work**

Inspiration

*Ideas from the medium-sized Swedish procurement for collectors only was a new and good idea, but after considering its current form difficult to apply, but must not be completely forgotten.*

*Swedish internet buyer group*

Use of material

-

Co-operation

*Willing, in 2<sup>nd</sup> round*

**D. Analysis of manufacturers' response to and participation in procurement activities**

what has been tried?

*e-mails, letters, phone calls, meetings*

their response:

*all activities necessary to make them aware of the tenders. Response as usual in tender procedures - they all want to win.*

recommendations etc.

**E. prototype evaluation and testing**

what has been tried?

*Not tried in 1<sup>st</sup> round*

what was successful and what was not?

-

why?

-

recommendations etc.

**F. Analyses of (other) active solar projects, which include large-volume purchasing.**

what has been tried?

*We used experience from many previous projects in NL and results of project evaluations from projects within the EU (like the medium/large system project in GE/S/DK).*

what was successful and what was not?

-

why?

-

recommendations etc.

-

**G. Most important lessons learned and recommendations**

*Formulate concrete projects with planning, budget and formal commitment per buyer group.*

**H. Plans for the next round**

*International: Space for solar, Solhas buyer group, international internet buyer group.*