



**The International Energy Agency  
Solar Heating and Cooling Programme**

**TASK 24  
Solar Procurement**

**TASK STATUS REPORT**

**May 2003**

**Formas, The Swedish Research Council for Environment,  
Agricultural Sciences and Spatial Planning**

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## **TASK 24 SOLAR PROCUREMENT - TASK STATUS REPORT**

### **1. TASK DESCRIPTION**

#### **Objectives**

The main objective of Task 24 *has been to create a larger and sustainable market for active solar water heating systems (mainly domestic systems).*

This will be achieved through major cost and price reductions for all cost elements, including marketing and installation, as well as performance improvements and joint national and international purchasing.

#### **Duration**

Task 24 was started 1 April 1998 and was completed 31 March 2003. A suggested extension with 6 months was not approved.

#### **Participation**

The following countries have participated in Task 24: Canada, Belgium, Denmark, The Netherlands, Sweden and Switzerland.

#### **Subtasks**

Task 24 has been divided into two Subtasks, each co-ordinated by a lead country:

*Subtask A: Procurement and Marketing (Lead Country: The Netherlands).*

The objectives of Subtask A have been:

- To raise general interest in active solar thermal solutions, and
- To form buyer groups to purchase state-of-the-art and innovative systems.

Within the Procurement and Marketing Subtask, a First Round with small national projects and a low degree of joint international collaboration has taken place. A Second Round has been planned with more international collaboration and tendering. It has however not been possible to fulfil these extended international activities within the time-frame of Task 24. The initiatives will partly continue within the EU "Soltherm Europe Project".

*Subtask B: Creation of Tools (Lead Country: Denmark)*

The objectives of Subtask B have been:

- To collect, analyse and summarise experience
- To create tools to facilitate the creation of buyer groups and the realisation of projects and procurements. The tools will be included in a manual, "Book of Tools".
- To define a process for prototype testing and evaluation, using existing methods.

## 2. TIMETABLE AND MILESTONES

See Milestones table, [Appendix 1:1-3](#).

## 3. NEW DEVELOPMENTS, ONGOING AND PLANNED WORK

### 3.1 Procurement, competition and marketing activities

The Netherlands has been Task Leader of Subtask A, in which procurement and marketing activities are included.

Overviews of the different *national projects* are included in [Appendix 2:1-6](#) and summaries are given below.

*Data concerning number of solar systems installed, development of costs, etc.* in the Task X participating countries will be supplied later in the “Final Management Report”. Statistics about the solar thermal situation, mainly in Europe, is being prepared by the new supplier organisation ESTIF (see further below) and will be published in a report “Sun in Action II”.

#### ***Belgium***

There is a growing volume of initiatives in the Flemish, the Walloon and the Brussels regions. In the “*Soltherm Market Development Programme Wallonia*”, quality charter for suppliers and installers has been elaborated in cooperation with the Walloon Region and the solar supplier branch organisation, Belsolar. 150 installers and 40 architects have been trained so far and about 2,500 systems have been installed. The goal for 2004 is a total of 12,000 m<sup>2</sup>, about 3,000 m<sup>2</sup> of which have been completed. The “*Soltherm 2003 Programme*” is on the verge of starting and will focus on large-scale promotion, tertiary sector demonstration and support to the supply chain. There will be increased efforts for large systems and continued efforts on quality initiatives for installers and suppliers. Twenty free solar audits for large systems are scheduled as well as free support/help-desk, technical and administrative support. Seminars and guided tours to existing installations will be organised. Further information is available at: [www.soltherm.be](http://www.soltherm.be).

The “*VLAZON Solar Strategic Plan*” for the Flemish Region is performed by the Belgian branch organisation, Belsolar, and the Flemish Regional Government. A strategic plan for market development for the region will be drawn up and the position of buyer groups will be defined. A final draft is now ready. Buyer groups will only be part of the implementation phase after finalisation of the strategic plan. A list of suppliers will be available at [Belsolar@3E.be](mailto:Belsolar@3E.be).

The “*Solar Water Heater Campaign Brussels*” is a new campaign, directed towards the tertiary sector. A comprehensive market potential analysis study for relevant sub-sectors will be followed by the realisation of a series of solar audits. In a second phase, several demonstration projects will be realised and monitored.

## **Canada**

The *Canadian activities have been connected to other programmes going on*. Solar energy is seen as a “building” product, which is of special interest to new construction, and when changing from electric water-heaters in existing buildings. Endeavours have been made to connect to already existing groups using the established channels to create alliances and work with companies selling home appliances and hardware, as for example the GSW Water Heating Company. There are companies that wish to have a “green” product line, but it is very important to have support for this from the top level within an organisation.

The *price goal* for EnerWorks at present is to reach down to 1,500 Canadian dollars in total for the solar water heater system. The future goal is to reach down to 1,000 Canadian dollars. Work is now going on with *demonstration of the performance* in order to try to maintain the confidence in the systems. Some more demonstration projects may be planned, and there are “soft” orders in the magnitude of 1,000 systems. A *turnkey process* will be developed. One of the goals is to install 3½ water-heaters a day and team, instead of 1 water-heater per day, which is the case at present. There will be information sessions, installation videos, and attempts will be made to solve the problem with electricity price fluctuations and to put a price-cap on electricity. The price of electricity was increased to 11 Canadian cents per KWh, and then the price went down to 4.5 Canadian cents per KWh, which will probably not be kept for very long, as it includes enormous subsidies from regional governments.

*Task 24 provides large assistance in the Canadian work*, especially by the transfer of knowledge. Very important is also teambuilding and the development of lease arrangements in cooperation with Toronto Hydro.

A business plan has been developed for the “*TEAM Advanced Low Flow Solar Water Heater*” project with Toronto Hydro and Kingston Hearthmakers. The plan is to install 10,000 systems in 3 years. Initial testing has been completed at the National Test Facility. 16 Beta test units have been installed to date and 40 systems have been contracted for installation this spring. Commercial production is planned, including a manufacturing tender by August 2003. As of May 2003, 5 dealer channels have been established, focussing on a builder supply retailer with national coverage, new construction, First Nations Communities, Renewable Energy Products Distributors and Government Buildings. A turnkey workshop plan will be developed in June to support dealer training and assist in installation barriers. Sales objectives for 2003 are 1,000 units.

## **Denmark**

Preparation has been ongoing for a new project: to connect more solar heating systems to local heating plants – “*Joint purchasing of solar collectors for district heating plants*”. An invitation was sent out to 28 district heating plants in December 2002 with sketch-project for 33 projects in total. The objective is to coordinate the effort to install more solar heating systems, and the idea is that a consulting team will assist in preparation, installing, supervision and delivery. The solar manufacturers have been informed about the project, and an article has been inserted in the March 2003 issue of the magazine “Fjernvarmen”. A national meeting with interested Danish parties was held on in April. However, so far, only a few of the district heating plants approached are positive – possible due to the Danish solar energy situation and policy – so joint purchasing will probably not be initiated.

The “*Thy & Mors*” project, which started in 1999 with an electric utility company in Northwest Jutland, is still going on. The company merged in March 2003 with another local electricity company and together they now have about 45,000 customers. They will continue offering solar heating systems to their customers. No direct mail campaign is planned for the future, but they will have advertisements on their website.

The successful *virtual buyer group project on the Internet*, [www.soltibud.dk](http://www.soltibud.dk), offering a unit price for the whole of Denmark, had to be finalised in December 2001, as all subsidies and other information support were removed. The prices shown today on the website are no longer valid. However, later in 2003, the concept will be changed and included in the *EU “Soltherm Europe Project”*.

Recently, a *survey of barriers for solar heating systems* has been carried out, funded by the previous government. Private customers, housing associations, installers and manufacturers have been interviewed. The most distinct conclusion was that prices were too high, especially after the subsidies had been removed.

### ***The Netherlands***

In The Netherlands, part of the remaining Task 24 activities is focussed on further market development together with housing associations. Ongoing projects include the *Essent/Rendo new housing development*, *market introduction of WWF solar houses* and the *certification work for existing houses*.

The logistics and marketing efforts of the local campaigns are much more efficient and better focussed now compared to the approach used before. All campaigns are now co-ordinated by one national marketing service company called *Ecostream*. Ecostream takes care of mailings, it is a dedicated call centre and they control logistics, like making appointments for advisers and installer and the distribution of PV-panels. For solar water heaters and PV-panels, campaigns are run with the slogan – “*Call the Sun*” – in various municipalities and regions.

Nowadays, the campaigns are linked to “*energy performance advice*” for existing houses. In these campaigns, an adviser inspects a house and includes energy performance advice in a report. The cost for this advice is subsidised by the Dutch Government. If a home-owner follows the advice and installs e.g. a solar water heater, he receives an extra subsidy for the solar water heater. In these campaigns, Ecostream co-ordinates the visits of the advisers and the follow-up visits of suppliers, installers and the distribution of do-it-yourself PV-systems.

In the first projects of the Task, the medium-size systems projects have also included solar leasing and an introduction of the mechanisms for selling solar heat. The “*Space for Solar*” is a project together with a buyer group of housing associations and it includes turnkey deliveries.

Several *websites* have been produced, which can be seen on the following address: [www.solarservices.nl](http://www.solarservices.nl). Also an *Internet monitoring service* ([www.zonnewijzer.info.nl](http://www.zonnewijzer.info.nl)) for solar water-heater owners has been introduced. A uniform method has been established since 1991 and is further developed up to now. Performance-in-practice-monitoring has been carried out on 162 systems of more than 25 different brands and types in 5 countries. Because the monitoring method used has not changed since 1991 various systems can be compared easily and results of product innovation can be observed. The monitoring projects have also

proven to be an important tool for checking the quality of the installation work. A number of countries are now interested in this Internet monitoring service, which could prove to be a very good tool to check if the system functions according to its specifications and to see how the performance is.

### ***Sweden***

The Task 24 activities in Sweden are now coming to an end since there will be no additional funding. However, the general subsidies will continue for buyers of solar systems under the new Swedish National Energy Programme.

*A complete report on the Swedish project* is now available – unfortunately only in Swedish. It would be of great interest to have an English translation of the report on the Swedish projects, where many interesting experiences have been made. However, there are problems in finding funding for such a translation.

Some resistance has been noted from a couple of manufacturers in Sweden. The winning system in the *small systems competition*, which came from Uponor and which now includes a tank of stainless steel of very high quality, has been subjected to comprehensive testing activities. Several other systems have also been tested. The Uponor industry group has the aim to fully industrialise their manufacturing and to develop equipment for facilitating installation and training of installers.

According to the first contract, 1,000 orders were promised, which has been no problem to fulfil. Now about five new orders per day are coming in. *The total number of orders is in the magnitude of about 4,000.* The price will be slightly higher for the additional deliveries compared to the original contract (SEK 17,000-18,000 including VAT and after deduction of the subsidy). Uponor has also noted interest in the new system through their subsidiary companies in France, Portugal, Spain, Germany, and Italy, where they will now start introducing the system.

To summarise, the *pay-back period* including the subsidy is *3-7 years*. Many buyers decide to buy two extra panels because of the subsidy system. There has been additional development and accelerated testing. The quality now is good, the price is good, and the installation is in good order.

### ***Switzerland***

The Swiss information leaflet “*Solar? – Ja klar*” (in German) is being followed up by an information package “*Here comes the Sun – Sonnenkollektoren für Warmwasser und Heizung*” /Solar collectors for hot water and heat/. This information package has been produced for the “*solarbegeistert*” campaign and it includes also a brochure and a small leaflet with information about the “*Solarprofis*”. There are also plans to adapt the Solar Manual earlier produced to this campaign.

The project “*100 Solarroofs in Lucerne*” will end in the summer of 2003. The information project started in Baselland with the Basel District Government, “*Solar Dusche*” (Solar Showers) includes free consultancy for 200 participants. About 60 installers have been instructed as consultants and 10 of them have become so called “*Solarprofis*”. 5 installations have been implemented so far. The project will end in October.

The “SSES Virtual buyer group (on Internet)” project seemed to have been planned too early in time and has been postponed. In the “Flumroc/Rüesch Solar Action” there was unfortunately a lack of promoters inside the organisations and the project will not be carried out.

The conclusions derived from the work in Switzerland are that *many manufacturers were against, or reluctant to the procurement projects*. Without any subsidies for the moment and the high costs, no more projects are possible. Installers must also be well-informed about the advantages of solar energy and be in favour of solar solutions.

### **3.2 Creation of Tools**

Denmark has been Task Leader of Subtask B, which has included the creation of tools to facilitate the realisations of projects.

#### ***Task 24 homepage with the “Book of Tools/Business Tools”***

The Task 24 homepage, [www.ieatask24.org](http://www.ieatask24.org), was opened at the beginning of 2001. It includes the Task 24 Manual “Book of Tools/Business Tools”. These Tools have been created to assist buyer groups in the tendering process, marketing, financing, installation and quality control.

During the last six months the homepage has been updated by the Danish Subtask B Leader with Minutes from Experts Meetings, Task Status Reports, conference presentations, Newsletter, etc.

Canada has offered to contribute to the final updating of the website and contacts have been re-established with a Canadian consultant. A parallel secure website has been opened for the inclusion of revisions and updates.

Work is ongoing with the final editing. The “Library” will be updated with more conference papers, “Lessons Learned”, “Cases” etc. The word “Cases” will be changed into “Projects” and there will be more material uploaded on the public site. A section with *analyses of the experiences* will hopefully also be included.

The final updating will be completed by the end of June 2003.

### **3.3 Contacts with suppliers**

Regarding contacts with the *ASTIG* organisation, a letter had been drafted by the Task 24 Experts and handed over to the Chairperson of the Executive Committee for distribution to *ASTIG*. By mistake, the letter was never sent, which has caused some irritation.

The new European solar thermal organisation *ESTIF* has a secretariat at present in Brussels. *ESTIF* is now working hard on the “*Sun in Action II*” report, which is mainly about European solar thermal statistics. It can be noted that their chairperson is a person from a large Danish company working with roof window systems. *ESTIF* will continue work on system quality in the *Solar Keymark* project. This project is strongly linked to the international product database that was aimed to be developed in Task 24.

It can also be noted that there are *difficulties in defining and recognising good test systems and quality and performance labelling* for solar water heaters, which takes time because of trade barriers.

Some of the national solar thermal programmes have been working in close contact with their national solar industry, which has also created hesitation in some countries regarding participation in Task 24, as for example in Austria and Germany. There is also some suspicion among some of the suppliers in Switzerland and Sweden regarding coordinated procurement activities.

### **3.4 Information activities**

The main activity is the work on the *Task 24 website*, which is presently being updated. It is important to *establish good links* with other activities, like the “Soltherm Europe Initiative”. A new *Task 24 Newsletter* has been produced and uploaded to the public section of the website. It will be important to establish how all material can be transferred and kept alive, and with actual links and addresses as well, after the closing of this Task.

The initiative from Task 24 for an *IEA SHC Solar Award* has now proceeded to the presentation of candidates. If the arrangements for this first round of Solar Awards can be fulfilled, the plan is to present the first Award and the first Award Winner at the ISES Conference in Gothenburg, Sweden, 14-19 June 2003.

*Papers* by the Operating Agent and one of the Experts from Sweden have been suggested for presentation at the *ISES Conference* and have preliminarily been nominated as poster presentations. However, due to lack of funding, no presentations can be given.

On 26-27 June 2003, the *ESTEC (First European Solar Thermal Energy Conference)* will take place in Freiburg, Germany. The Operating Agent has been asked to give a presentation.

### **3.5 Task meetings**

One *Experts Meeting* – the last one in Task 24 – has been held 20 – 21 March 2003 in Banff, Alberta, Canada. During this meeting, presentations were also given about various Canadian Solar Programmes.

*Telephone conferences* have been held in May between the Operating Agent and the two Subtask Leaders to discuss the “Final Management Report”.

## **4. WORK TO COMPLETE THE TASK**

- The *Final Management Report* will be drawn up by the Operating Agent in collaboration with the Task Experts. The contents will be in accordance with the “SHC Policies & Procedures”.
- The *Task 24 website* including the “Business Tools” will be completed by 30 June 2003.



## **5. ISSUES FOR THE EXECUTIVE COMMITTEE**

### **Issue**

How to keep a website for a completed Task alive.

### **Suggestion**

Funding must be set aside early in a Task in order to make this possible, or a general organisation should be commissioned with this work.

### **Appendices:**

1. Milestones tables, 1-3.
2. Overviews of national projects, 1-6.

Appendix 1:1 – Milestones Table - Task 24 “Solar Procurement” Task Status Report – May 2003

Subtask A: Procurement and marketing																																																														
▼ ▲	1999												2000												2001												2002												2003													
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D		
A1: Buyer groups formation/ goals								▼ <sup>1</sup>																																																						
								▲ <sub>1</sub>																																																						
A2: Distribution of invitation for tenders 1st Round																																																														
A3: Delivery start 1st Round																																																														
A4: Delivery start 1st Round																																																														
A5: Distribution of invitation for tenders 2nd Round																																																														
A6: Delivery start 2nd Round																																																														
A7: Delivery start 2nd Round																																																														

**Appendix 1:2 – Milestones Table - Task 24 “Solar Procurement” Task Status Report – May 2003**

Subtask B: Creation of Tools																																			
▽ ▲	1999					2000					2001					2002					2003														
	J	F	M	A	M	J	F	M	A	M	J	F	M	A	M	J	F	M	A	M	J	F	M	A	M	J	F	M	A	M	J	F	M	A	M
<b>B1:</b> Book of Tools content 1st draft Chapt. 13 / outline Chapt. 4				▽ <sup>1</sup>	▲ <sub>1</sub>																														
<b>B2:</b> Book of Tools - 1st edition in draft						▽ <sup>2</sup>																													
<b>B3:</b> Book of Tools - Updated 2nd edition in draft																▽ <sup>3</sup>																			
<b>B4:</b> Evaluation of 1st Round																▽ <sup>4</sup>					▲ <sub>4:1</sub>	▲ <sub>4:2</sub>													
<b>B5:</b> Book of Tools - 3rd edition in draft																															▽ <sup>5</sup>				
<b>B6:</b> Evaluation of 2nd Round																															▲ <sub>5:1</sub>				

**Appendix 1:3 - Milestones Table – Comments - Task 24 “Solar Procurement” Task Status Report – May 2003**

Activity	Resp. Country	Milestones achieved Last 6 months	Milestones not achieved				Milestones next 6 months
			Milestone	Comment	Recommendation	Impact	
<i>Subtask A:</i> Procurement & Marketing	NL	A4 Deliveries in the 1 <sup>st</sup> Round started in all countries.	A6-A7 Delivery start of 2 <sup>nd</sup> Round.	A 2 <sup>nd</sup> Round will not take place within Task 24	Experience from Task 24 is used within other national and international procurement projects		Additional procurements will take place within the “Soltherm Europe Initiative”
<i>Subtask B:</i> Creation of Tools	DK	B5:1 “Book of Tools” (“Web Tools”) has been partly updated	B5:2 Final updating  B6 Evaluation of 2 <sup>nd</sup> Round	With the help of additional funding from Canada the final updating is ongoing.  Will not take place within Task 24.		The final updating will be ready by 30 June 2003.	Task 24 is closing.

## Task 24 Solar Procurement – Overview of National Projects – May 2003

Country: <b>BELGIUM</b> Contact person: <b>Luc De Gheselle</b> <i>Updated May 2003</i>	Name of project: <b>Brussels Solar Water heater Promotion Campaign 2002</b>	Name of project: <b>Brussels Solar Water heater Promotion Campaign 2003</b>	Name of project: <b>SOLTHERM 2003</b>	Name of project: <b>VLAZON</b>
1. Preliminary status	Tenders published	New campaign directed towards tertiary sector applications launched as of 1/2/2003	New Soltherm action plan 2003 on the verge of starting. New main axes of focus for 2003: (large scale) promotion, tertiary sector demonstration, support to the supply chain.	Finalising stages. Strategy document to be published in spring.
2. Feasibility study	Tenders grouped for 2 medium size installations (100 m <sup>2</sup> each) Tenders closed. Supplier selection ongoing.	A comprehensive market potential analysis study for relevant sub-sectors will be followed by the realisation of a series of solar feasibility scans (solar audit). In a second phase several demonstration projects will be realised and monitored.	20 solar feasibility studies scheduled, general support for project developers and pre-feasibility guidance will be made available free of charge. Realisation of demonstration projects in the interesting sectors identified in the Soltherm 2002 project will be stimulated. Communication on sample installations will be combined with (technical) information seminars for professionals and building owners	Strategic plan for market development for Flemish Region. Position of buyer groups to be defined.
3. Performance specifications	One of the above 2 projects has a tender document with Guaranteed Solar Results contracting.	In the frame of this campaign a Belgian Guaranteed Solar Results contracting scheme will be developed and implemented where applicable.	General guidelines for project concepts and tender documents will be developed. GSR	Not finalised yet; will be based on quality system derived from EN standards.
4. Buyer groups: Name:  Type of buyers:	None realised  Professional customers	None realised; campaigning only starting  Professional customers	Integration in Soltherm program not yet concrete  Professional customers	Will only be part of the implementation phase after finalisation of the strategic plan.

5. Official information	Brussels Institute for Environmental Management and City Government of Brussels	Brussels Institute for Environmental Management and City Government of Brussels	Walloon Regional Government – Minister of Energy and Transport	Belgian Solar Industry Association and Flemish regional Government – Ministry of Economic Affairs
6. Supplier contacts	None	None	13 participating suppliers in 2002 <a href="http://www.soltherm.be">www.soltherm.be</a>	<a href="mailto:Belsolar@3E.be">Belsolar@3E.be</a> for list of suppliers.
7. Call for tender	None	Publication of tenders for realisation (with and without GSR) planned for late 2003 – early 2004	Calls for tender for the realisations in the tertiary sector planned for 2003	None defined yet.
8. Deadline for submitting tenders		September 2002	Not fixed yet	None defined yet.
9. Evaluation of tenders	Ongoing	Waiting	Autumn – Winter 2003	None defined yet.
10. Products on market	45 brands represented on Belgian market in total. Under 10 brands together have 75% of Belgian market.	Idem	Idem	Idem.
11. Comments and remarks; problems, if any				
12. Other information	Demo project with 3 collective systems each for 55 social houses on 1 location are being retrofit; now in construction phase.			

## Task 24 Solar Procurement – Overview of National Projects – May 2003

Country: <i>CANADA</i> Contact Persons: <b>Mike Noble / Doug McClenahan</b> <i>Updated May 2003</i>	Name of Project: <b>Peterborough Green-Up and EnerACT (Energy Action Council of Toronto)</b>	Name of Project: <b>TEAM Advanced Low Flow Solar Water Heater</b>
1. Preliminary status	<p><b>Phase I:</b> Peterborough Green-up installed 8 systems. EnerACT installed 9 systems.</p> <p><b>Phase II:</b> Peterborough Green-up installed 10 systems (plus 3 more purchased) EnerACT installed 17 systems.</p> <p>Additional 16 systems installed through Toronto Hydro Energy Services and Kingston Hearthmakers</p>	Plan to install 10,000 systems in 3 years. Initial testing completed at National Test Facility. 16 Beta test units installed to date. 40 systems contracted installation by April 2003. Commercial production to go to manufacturing tender by August 2003.
2. Feasibility study	No	Business plan developed
3. Performance specifications	<p><b>Phase I:</b> Systems must supply &gt;35% of annual energy load. Scores based on cost, energy performance, and quality</p> <p><b>Phase II:</b> Systems must supply &gt;40% of annual energy load. Scores based on cost/energy, warranty, and quality.</p> <p>Heat transfer fluid degradation concern addressed by pass/fail.</p>	N/A
4. Buyer groups:  Type of Buyer:	<ul style="list-style-type: none"> <li>- Peterborough Green-Up and EnerAct</li> <li>- Utilities – Toronto Hydro Energy Services</li> <li>- Builders – R2000 Builders – organized through EnerQuality Corporation</li> </ul>	<p>- Additional 16 installations with Toronto Hydro and Kingston Hearthmakers. Further 40 installations are contracted with same groups, as well as new home builders.</p> <p>As of May 2003, 5 dealer channels have been established for the Canadian market. These are focused on: a builder supply retailer with national coverage, new construction (R2000 home builders), First Nations Communities, Renewable Energy Products Distributors and Government Buildings.</p>
5. Official information	<ul style="list-style-type: none"> <li>- Phase I Subsidy: 50% (this is an exception)</li> <li>- Phase II Subsidy: 25%</li> <li>- First 5 beta systems were delivered at no cost, balance sold at OEM pricing.</li> <li>- Next 40 systems sold at \$1600 CAD with no subsidy.</li> </ul>	
6. Supplier Contacts	N/A	Enerworks – managing contract manufacturers
7. Call for tender	Phase II: September 21, 2000 Commercial manufacturing: August 2003	
8. Deadline for submitting tenders	Phase II: October 6, 2000	

9. Evaluation of tenders	Phase II: October 9-29, 2000	
10. Products on Market	Phase I: Thermodynamics, Solcan & Daystar Energy Systems Phase II: Thermodynamics & Solcan	See status above
11. Comments and remarks: problems, if any.	Installation schedules were not met. Deregulation may have prevented utility participation in marketing. Systems retailing for almost \$5000 sold well with subsidies approaching 50% (Phase I) proved difficult to sell with subsidy of approximately 25% (Phase II). Utility partners have changed their operations to reduce service focus, more focus on “marketing”	Product adoption through building products channels appears to be gaining much interest. Adoption by traditional energy utility channels is still slow to advance.  A turnkey workshop plan will be developed in June to support dealer training and assist with installation barriers. Sales objectives for 2004 are 1000 units.  Anticipated barriers are installation costs and lack of trained trades persons.
12. Other Information	Independent inspection and monitoring with integrating heat meters, on 20 of the systems has begun. Detailed monitoring of beta systems will be implemented by January 2003.	



## Task 24 Solar Procurement – Overview of National Projects – May 2003

Country: <i>DENMARK</i> Contact persons: Torben Esbensen, Klaus Ellehauge, Lotte Gramkow <i>Updated May 2003</i>	Name of project: Joint purchasing of Solar collectors for district heating plants	Name of project: <a href="http://www.soltilbud.dk">www.soltilbud.dk</a>	Name of project: “Sol over Thy og Morsø” (Sunshine over Thy and Mors – regions in Northwest Jutland)
1. Preliminary status	We have had the first meeting on October 2, 2002 with other consultants to try and formalise the project.	Has run from August 2001. Project period stopped 31. December 2001. No new funding	The tendering material for solar systems was sent out to Danish solar heating manufactures in March 2000. Campaign started in May and ended in November 2000.
2. Feasibility study	A total of 28 district heating plants have received a report on the suitability of connecting solar collectors to their district heating system. Only a few of these are positive – possible due to the Danish solar energy situation/politic, and a joint purchasing will probably not be initiated.	No	No
3. Performance specifications	The systems will all have undergone the testing in terms of theoretical and practical matters.	Tender called for systems in 3 categories. Tested in accordance with the Danish Government requirements at the Solar Test Lab.	The systems have been tested in accordance with the Danish Government requirements at the Solar Test Laboratory.
4. Buyer groups:  Name: Type of buyers:	A number of the 28 district heating plants having already shown interest in solar heating. We were first going to concentrate on the smaller plants, since the larger can manage themselves. Smaller plants are normally under 5.000 m <sup>2</sup> , however they will all be asked, if such a joint purchasing project is of interest.	Organisation of buyers and installers by means of the Internet. <a href="http://www.soltilbud.dk">www.soltilbud.dk</a> Owners of one- or two family houses.	Customers of the electrical utilities: Thy Højspændingsværk and Morsø Elforsyning. Individual customers. Customers of the utilities.

5. Official information	Not yet known, but properly involve the association of district heating plants in Denmark.	<a href="http://www.soltilbud.dk">www.soltilbud.dk</a> . price list and buyer instructions on this Internet page.	Information “Sprængfyldt med energi”. Informs about solar energy, economy, financing plan and some price examples, etc.
6. Supplier contacts	Not yet know.	All Danish suppliers were invited to give their best offers.	The supplier has mainly been: Djurs Solvarme. Also the solar system Velsun was available for the customers.
7. Call for tender	Not yet	June 2001. Tender (call for offers).	March 20, 2000.
8. Deadline for submitting tenders	-	July 2001.	April 10, 2000.
9. Evaluation of tenders	-	Offers judged by a committee, and points given with respect to certain criteria, choice of best offer.	The bids were submitted to Kildemoes Solvarme and Thy-Mors Energy. Djurs Solvarme and Velsun were chosen as suppliers.
10. Products on market	-	Very good offers are received from 12 groups of manufacturers and installers, which have resulted in 20 % price reductions.	Djurs Solvarme has two tank units (180 litre and 260 litre) and two solar collector modules 3 m <sup>2</sup> and 4 m <sup>2</sup> .  For Velsun please see <a href="http://www.velsun.dk">www.velsun.dk</a> or <a href="http://www.velux.com/">http://www.velux.com/</a>
11. Comments and remarks; problems, if any	We will have to wait to see the responses and the interests from the district heating plants.  Only a few of these were positive – possible due to the Danish solar energy situation/politic, and a joint purchasing will therefore not be initiated.	5,800 hits on the WEB-site – but very few buyers.  It is estimated that buyers will not commit themselves via the Internet. It is also estimated that the Website has been a success as price list and has improved competition.	The campaign material was sent out to the customers of Thy-Mors Energy at the end of May 2000. Thy-Mors Energy had at the time 28,000 customers of whom approximately 1,000 are electrical heated dwellings; a greater potential for sold systems for these types of customers.  In March 2003 the company merged with another local electricity company and they have together 43.000 customers.

12. Other information		<a href="http://www.soltilbud.dk">www.soltilbud.dk</a> , where all the offers can be sent and an instruction for buyers is given.	The campaign has until now sold 32 solar systems: 10 larger 12 m <sup>2</sup> systems, 18 systems of 8 m <sup>2</sup> and 4 systems of 6 m <sup>2</sup> . More than 70 customers have shown interest in the campaign and over 50 customers have been visited by the utilities. The campaign will most likely continue.
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## Task 24 Solar Procurement – Overview of National Projects – May 2003

Country: <b>THE NETHERLANDS</b> Contact person: <b>F. Zegers</b> <i>Updated May 2003</i>	Name of project: “Space for Solar”	Name of project: “Solar energy in ESSENT supply region”	Name of project: “Solhas”	Name of project: “The Soltherm Europe Initiative”	Name of project: ”Call the Sun”	Name of project: ”WWF Solar Dwellings”
1. Preliminary status	Running	Running	Running	Running	Running	Running
2. Feasibility study	January-June 2000	n.a.	For tender specifications: based on enquiries in 9 EC countries, Sep 01	Jan – Nov 2002	June-December 1999	Based on the WWF solar dwelling quality certificate
3. Performance specifications	Oct. 2000	In tender documents. For new suppliers without references a 10-year guarantee is demanded	Not specified yet, will be on many aspects, technical as well as non-technical	based on EC quality standards, Solar Key mark	In tender documents.	In tender documents. For Solar thermal, PV and heat pumps.
4. Buyer groups: Name:  Type of buyers:	Space for Solar  Housing associations	Essent for property developers & housing assoc. Property developers & housing associations	Housing associations  Housing assoc. in The Netherlands & 9 other European countries	Soltherm Europe  Various, to be defined in the feasibility phase	Call the sun  -ASN Bank for clients, -WWF for members, -SOL*id for installers - Home owners in municipalities	WWF Solar Dwellings  Various property developers (19 in total); currently 600 houses contracted (Feb 2003).
5. Official information	Dec 2000-Mar 2001	n.a.	Altener proposal for International tender in 2 <sup>nd</sup> Round of the Task foreseen. Not submitted, follow-up planned in Soltherm project.	n.a.	National tender	March 2002

6. Supplier contacts	Sept 2000-Mar 2001	March-April 2000	n.a.	Since April 2001, ASTIG, DFS are project partners. From Dec. 2002 ESTIF.	November 1999 – May 2000	March 2002
7. Call for tender	Dec 2000	March 2000	See 5.	From 2002	30 Nov. 1999	March 2002
8. Deadline for submitting tenders	Feb 2001	March 2000	See 5.	Not known yet	10 Dec. 1999	April 2002
9. Evaluation of tenders	Feb – Mar 2001	April 2000	International tender 2002	Not known yet	December 1999 – February 2000	May-June 2002, second negotiation round Oct 2002
10. Products on market	July 2001	August 2000	2002	From 2002	Since February 2000	Nov 2002
11. Comments and remarks; problems, if any	<p>Framework turn-key delivery contract with good price/-performance ratio. For 3400 m<sup>2</sup> quick scans have been conducted. Conversion to individual contracts ongoing but laborious process. Currently 11 systems with a total area of 747 m<sup>2</sup> realised.</p> <p>Update framework contract February 2003.</p> <p>End date project August 2005.</p>	<p>3 suppliers selected ; companies that also sell heating equipment; Registered were 33 new housing projects with in total 2223 dwellings in which 1240 SWH will be realised. Current status: 710 systems realised, 530 systems planned to be realised in 2003-2004.</p>		<p>Europe wide initiative, 11 countries involved. Altener contract signed January 2002. National implementation planning currently ongoing.</p> <p>15 campaigns in 10 countries in preparation or ongoing.</p>	<p>Sales mainly through 2 campaigns <u>2001</u>: 200 SWH and 2150 PV modules. <u>2002</u>: 5 municipality campaigns finished: Apeldoorn, Tilburg, Gouda, Emmen Houten. Total: 450 SWH, 100 PV panels.</p> <p>Ongoing 2003: Ridderkerk (40 PV panels so far), Gooi-Vecht region (9 municipalities), Amstelveen region (7 municipalities), Rotterdam, Amsterdam, Den Haag.</p>	Market introduction project for WWF solar dwelling quality certificate
12. Other information	-	-	-	See www. Soltherm.org	-	

## Task 24 Solar Procurement – Overview of National Projects – May 2003

Country: <i>SWEDEN</i> <b>Contact person:</b> <b>Hans Isaksson</b> <i>Updated May 2003</i>	<b>Name of project:</b> “Competition – Systems for solar-heated domestic hot water supply in detached houses”	<b>Name of project:</b> “Procurement – Solar collectors for use in large solar heating systems”
1. Preliminary status	Ongoing competition activities for 1,000-2,000 systems (approx. 5,000-10,000 m <sup>2</sup> collector area)	Called off procurement activities (10,000 m <sup>2</sup> )
2. Feasibility study	Yes	Yes
3. Performance specification	Yes, available on: <a href="http://solupphandling.bfr.se">http://solupphandling.bfr.se</a>	Yes, available on: <a href="http://solupphandling.bfr.se">http://solupphandling.bfr.se</a>
4. Buyer groups:  Name: Type of buyers:	Chairman Matti Nordenström, MAV, <a href="mailto:matti@info-s.org">matti@info-s.org</a>  House owners, detached houses.	Chairman Björn Johansson, AB Enköpings Värmeverk, <a href="mailto:bjorn.johansson@varmeverket.enkoping.se">bjorn.johansson@varmeverket.enkoping.se</a>  Facility owners
5. Official information	EU “Official Journal” 28 January and 3 March 2000	EU “Official Journal” 14 April 2000
6. Supplier contacts	Regular meetings and contacts with SEAS	Regular meetings and contacts with SEAS
7. Call for tender	Announcement sent 21 January 2000 to “Official Journal”	Announcement sent 5 April 2000 to “Official Journal”
8. Deadline for submitting tenders	31 March 2000	31 May 2000
9. Evaluation of tenders	Testing started 16 May, ended 31 July 2000. The winner, UPONOR, was announced 16 March 2001.	June-October 2000
10. Products on market	The system is planned to be on the market in the spring of 2002.	The procurement has been called off.
11. Comments and remarks; problems, if any	After examining the test installations in the summer of 2001, the start of delivery was postponed. Further improvements, P-marking, etc. will have to be approved before deliveries can start.	The total ordered-purchased area reached 2,000 m <sup>2</sup> . The tendering document stated a total area of 10,000 m <sup>2</sup> and a minimum of 4,000 m <sup>2</sup> .
12. Other information	The date for approved P-marking, etc. was 31 March 2002. The additional testing of the improved system was finalised and the system approved by the jury for start of delivery 5 April 2002. During the period May – September 150 systems have been delivered. Remaining 850 systems will be delivered up to April 2003. No complaints have been heard after field testing during an extreme warm Scandinavian summer. Only positive comments about simple mounting and good instruction manual.	A jury report has been published. The report mentions 2 international and 3 Swedish collectors to fulfil the specifications in the best way. Altogether there were 11 offers.

## Task 24 Solar Procurement – Overview of National Projects – May 2003

Country: <b>SWITZERLAND</b> Contact person: <b>Christian Völlmin</b> <i>Updated May 2003</i>	Name of project: “Lucerne”	Name of project: “Solar for Flumroc”	Name of project: “SSES virtual buyer group (on Internet)”	Name of project: “Solar Shower”
1. Preliminary status	Running	Preparation (Due to different changes within the company the project is delayed)	Preparation (Still looking for the Partner to run the action)	Finished Will probably be continued during 2003
2. Feasibility study	Yes	Yes	Yes	No
3. Performance specifications	Solar hot water according to the regulation for subsidies. Start of implementation planned for March 2002.	Product of the newly integrated Solar company must be used.	SSES members will get their own solar hot water installation	Solar shower show with equipped trailer. Installer information and instruction to become executive partners as "Solarprofis"
4. Buyer groups: Name:  Type of buyers:	City of Lucerne  Owners	Not yet available  Employees of Flumroc	Not yet decided (work name: “Virtual Buyer Group”) Private house owners	No special buyer group.
5. Official information	Yes, through the regular information channels of the City.	Internal information only.	Organised	Yes. Through the district government.
6. Supplier contacts	Yes	Yes. Own supplier	Yes	Yes
7. Call for tender	According to the Task 24 guidelines	No	Will be according to the Task 24 guidelines	No
8. Deadline for submitting tenders	June 2002	Individually per project	Not yet known	
9. Evaluation of tenders	Yes		-	
10. Products on market	Standard Hot Water Installations Fuel switch Oil – Gas	Yes. Hot water installations of the own company.	Yes	Yes. All standardized and certified hot water systems.
11. Comments and remarks; problems, if any	The decisions need much time. Usually the project time is too short	Among the employees is a certain demand, but there is no "managing" person among the officials to bring the project to move.	The SSES currently changes status to a consumer oriented organisation. This causes delays for the buyer group.	From 60 installers attending the course more than 10 became "Solarprofis". As far almost 100 interested called for offered consultation.

12. Other information	Inquiries 114 Consultations 62 Disposals 23 Installed 7	The buyer group will be established among the employees of the Flumroc company (Insulation).	We will form a local project team with PR specialist, computer internet expert from SSES, suppliers, contractors and the local IEA Task 24 representatives <a href="http://www.solarpooler.ch">www.solarpooler.ch</a> (soon)	The interested solar buyers will get a voucher for a consultation with one of the trained installers with special knowledge. Solarprofis
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