The International Energy Agency
Solar Heating and Cooling Programme

TASK 24
Solar Procurement

TASK STATUS REPORT

May 2002

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 is 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 will be completed 31 March 2003. It is suggested that the Task be extended with 6 months, to 30 September 2003.

Participation

Canada, Denmark, The Netherlands, Sweden and Switzerland take part in Task 24. Belgium has taken part in Task 24 as an Observer since the autumn of 2001 and is just about to become a full member. The formal Letter of Participation has been drafted and is being sent in to the IEA Secretariat. Since Task 24 is approaching its end, no more time or efforts will be spent on trying to include more countries in the work.

Subtasks

Task 24 is 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 are:
- To raise general interest in active solar thermal solutions, and
- To form buyer groups to purchase state-of-the-art and innovative systems.

The procurement activities consist of two rounds. The First Round with small national projects and a low degree of joint international collaboration has now ended. The Second Round with larger projects and a higher degree of collaboration has started.

Subtask B: Creation of Tools (Lead Country: Denmark)
The objectives of Subtask B are:
- 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 is Task Leader of Subtask A, in which procurement and marketing activities are included.

The First Round of Task 24 is now ending. Intensive work has been spent on analysing the market situation in the countries, identifying buyers, and forming national buyer groups (consisting of municipalities, utilities, housing corporations, construction companies, NGOs and other organisations). Specifications and competition documents have been drawn up and national procurements and competitions have been launched.

Overviews of different national projects are included in Appendix 1:1-6 and summaries are given below.

**Belgium**

In Belgium, formally still a Task Observer, some initiatives have been started. The call for tenders in the “Brussels Solar Water Heater Promotion Campaign”, with tenders grouped for 2 medium size installations (100 m² each), is planned for May this year and the deadline for submitting tenders is September 2002. The “Soltherm” 10-year-campaign is ongoing in the Walloon Region of Belgium. It is both for residential customers and for tertiary sector sub-groups with demonstration projects. Buyer groups are being prepared and 14 suppliers are participating. The call for tender is planned for 2003. Further information is available at www.soltherm.be. Preparation for another project, “VLAZON”, has just started with the Belgian Solar Industry Association and the Flemish Regional Government. A strategic plan for market development for the Flemish region position of buyer groups is to be defined.

**Canada**

In the two phases of the “Peterborough Green-Up and EnerACT” projects about 40 systems have been installed so far. The projects were not totally successful. The costs have not been lowered because the projects were too small. Installation schemes were not met. Deregulation may have prevented utility participation in marketing. Inspection and monitoring with integrating heat meters has begun on 20 of the systems.

A new project, “TEAM Advanced Low Flow Solar Water Heater”, has begun with Toronto Hydro and Kingston Hearthmakers as buyer groups, and Enerworks handling the supplier contacts. The planned Climate Change Fund will be involved in the financing. The plan is to install 10,000 systems in 3 years and to reach a cost reduction down to 2,000 Canadian dollars. Initial testing has been completed at the National Test Facility. 16 Beta test units have been installed up to now. 100 units are planned to be installed by December 2002, and 1,000 by March 2004.
Canada, now planning to work more actively in Task 24 with two experts, will contribute more work to the Task web-site and will initiate a research activity for residential solar water heating solutions. The work aims at offering a package of lightweight, very much ready-made and easy-to-install equipment, and at installing a whole solution. Energy meters may be included in the delivery. In Canada, installation is regarded as the biggest challenge.

**Denmark**

There is now a new situation in Denmark. The new Danish Government that came into office in the autumn of 2001 decided to substantially reduce the number of national renewable energy activities, including solar activities. When informed about this, the SHC Chairman and the Task 24 Operating Agent sent a letter to the Danish Energy Agency, stressing the importance of continued active participation from Denmark in the Task. In the letter, the formalities in accordance with the Policies and Procedures for the SHC Agreement were also pointed out. According to information received, an answer could be expected by the middle of May, but no positive signs have been given so far. The activities of the new Danish Government have also resulted in many officers, who have been working with renewable energy issues in different Government agencies, being dismissed from their jobs. This is the case for two of the Danish Task 24 Experts.

No funds were allocated for the Danish work on Task 24 for 2002. There may still be some funding left from 2001 to sponsor a minor part of the work, however most projects and ongoing contacts have had to be discontinued, at least for the time being.

The Danish procurement buyer group project on the Internet, www.soltilbud.dk, run from August 2001 and only to the end of December 2001 since new funding was not supplied for this project. For private house owners, three systems with fixed installation prices were offered with prices down to 18,000 Danish crowns, or 1,600 Euro. Although there have been few buyers since people are not ready yet to buy from the Internet – but about 6,000 “hits” – the web-site can be regarded to have been a success as a price-list, and it has improved competition.

One campaign that may continue is the “Thy and Mors” campaign, started in 1999 with two electric utility companies in Northwest Jutland. 30 systems have been sold: 10 larger 12 m² systems, 16 systems of 8 m² and 4 systems of 6 m². A fusion between the utilities is coming up, and they will probably continue to offer solar heating systems to their 42,000 customers.

**The Netherlands**

All of the solar projects in The Netherlands for domestic systems (in existing dwellings and new housing development) and medium size systems are proceeding.

The “Soltherm Europe Initiative” now includes 11 countries (one of them being Belgium). The performance specifications have not been specified yet, but will be based on EC quality standards. The supplier organisations ASTIG and DFS are partners in the project. An EU Altener contract was signed in January 2002. The goal is to have 100 million sq.m. installed by 2010. Further information is available at www.soltherm.org.
In the “Solar Energy in the Essent Supply Region” project for domestic systems for new houses, three suppliers have been selected. They are companies that also sell heating equipment. 1,500 systems have been contracted. The “Space for Solar” project, for medium-sized systems and with a buyer group consisting of housing associations, offers a framework turn-key delivery contract with good price/performance ratio: a 6-year guarantee, which is extendible to 15 years with result guarantee. For 3,400 m² quick scans have been conducted, and conversion to individual contracts is ongoing.

Preparations for the “Solhas” survey project for domestic systems for existing dwellings are ongoing. Buyer groups will be housing associations in The Netherlands and 9 other European countries. A questionnaire on how to build up buyer groups will be looked into. An Altener proposal for international tender in the Second Round of Task 24 is foreseen, and the international tender is planned to be launched this year. In the “Call the Sun” project with the ASN Bank, WWF and SOL*id, the systems are mainly sold through campaigns and there has been little direct web sales. The project will be broadened to more energy saving measures and local municipality campaigns.

The buyer group in the “WWF Solar Dwellings” project consists of 19 property developers. The feasibility study was based on the WWF solar dwelling quality certificate. Performance specifications were set up for solar thermal, PV and heat pumps, and the call for tender was launched in March 2002. The tenders submitted will be evaluated in June 2002.

Sweden

Two projects were launched in Sweden in 2000 – a procurement for medium sized systems (10,000 m²) and a competition for small systems (5,000 – 10,000 m²). The calls for tender were published both nationally and internationally in the EU “Official Journal”. Information about the projects is available at http://soluphandling.bfr.se. All the documents in the Requests For Proposals (RFP) were available in English and easily downloadable from this web-site.

In the project for solar collectors in larger systems, entries from 11 manufacturers (4 international ones) were received. This project could however not be fulfilled since sufficient volumes for signing contracts with successful suppliers were not achieved. The favourable lower costs had been guaranteed only on condition that there would be a specified amount of guaranteed deliveries.

In the small systems project, 14 entries were received (3 international ones). Uponor AB, a Swedish company within the Finnish industry group Uponor, was selected winner. The introduction of the small systems project has been delayed after material problems had been identified in the first constructed 5 test installations. Additional development and testing was required. The supplier had to further develop their solution using material of increased quality. Complete re-testing has taken place, including both field testing in Australia and laboratory testing in Sweden of components and systems. The testing also included the full “P-label” certificate. The testing was finalised with good results and at the beginning of April this year, decision was taken by the jury to approve the system for start of deliveries.

There are 1,850 remaining interested members registered on the buyer group list. 400 wanted to leave the original list when the project was delayed. There is no deposit to be paid for
appearing on the list. To be on the list is to demonstrate interest in participating, but it is not a commitment. It has been noted that the web-site has had 32,000 “sessions” of about 2 minutes or more, and totally 500,000 “hits”. It can also be noted that the supplier, Uponor, has compiled an additional list of their own with about 3,000 interested buyers.

**Switzerland**

The work in Switzerland is somewhat behind schedule because of the referendum, which was not in favour of supporting renewable energy work, and which also influenced the Task work.

The “SSES Virtual Buyer Group” project has being prepared, but the financing is not ready yet. Contacts have been established with the World Wildlife Fund and SGU to get them involved in the project. The “50 Solar Roofs in Burgdorf” project has been approved. Personal resources are however lacking and therefore the project has been delayed. The “Action Flum-rock/Rüesch Solar” project has been prepared, but has been delayed due to different changes in the company. Preparations have recently started for the “Solar Roofs for Zürich” project. Partners are Swissolar and the Canton authorities. Individual households can go from oil to gas and then combine this with solar. In some areas there are examples of very good subsidies, both from the central government but also from regional and local ones on certain conditions.

The “Manual for Buyer Groups” is ready, and is now being used in the “100 Solar Roofs in Lucerne” project, which is coached by the Swiss Task 24 representatives and the local energy department. The deadline for submitting tenders is June 2002, and the whole project will end in the summer of 2003. According to the evaluation made, a subsidy is not the only factor for a successful programme. There must also be follow-ups, change agents (“Solar Proffis”) and the best results are obtained with good local campaigns. The quality guidelines and guarantees will be important for the Lucerne campaign.

Another idea in Switzerland is to introduce a new concept – the “Solar Jacuzzi”. People could really get some extra value: solar-heated hot water and an upgraded bathroom with Jacuzzi.

### 3.2 Creation of Tools

Denmark is Task Leader of Subtask B, which includes 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.

Due to the present situation in Denmark described above, there has been no updating of the web-site since 2001. If some remaining funding from 2001 can be used, the Subtask B Leader will try to update the site with current tender documents, market research material, etc, and will find out if any further funding can be available.
At last Experts Meeting, Canada however offered to contribute more to the work on the Task 24 web-site. The work could include uploading more material and maintaining and upgrading the web-site.

3.3 Contacts with suppliers

The importance of having a dialogue with suppliers, including manufacturers, retailers and distributors, has been stressed by Task 24. At various meetings, international and national conferences and workshops, the market parties have been informed about the Task work. Brochures have been sent out and information has been supplied on the different national websites and on the Task 24 homepage.

A draft Guide for Tender has been compiled. It is a model document with quality requirements based on the CEN Standards for solar water heaters accepted in 2001. It contains generic text, which could be applicable in most tenders, while paragraphs that will be specific for the specific project in a country are left out. So far, two draft example tender documents have been drawn up and have been inserted on the Task 24 web-site.

A dialogue had been initiated with the two European supplier organisations ASTIG and ESIF, and the Task 24 draft example tender documents were sent to them for their comments. After formal contacts with ESIF, information was given that no answer could be expected from them. There have been no further contacts with ESIF during the last few months.

Comments on the tender documents were received from ASTIG. A letter was sent from the ASTIG President to the SHC Chairman, in which concern was raised with regard to the activities of Task 24. At the Executive Committee Meeting in November 2001, it was decided that the SHC Chairman would send a response letter to ASTIG. Material for a formal letter had been handed over to the SHC Chairman and the Executive Secretary as a draft from the Swedish group. A meeting was held with ASTIG in The Netherlands in March 2002, during which the draft letter was informally presented by the Dutch Subtask A Leader, Peter Out.

At this March meeting, it was also communicated to ASTIG that the tender documents are no “ready” documents, but more of a model for forming a background. Naturally, they should be further worked on for actual concrete projects and completed with concrete details and the exact procedure for evaluation. The Quality Guidelines, drawn up jointly by ASTIG and Ecofys, will be an important part. Furthermore, many of the suggestions from ASTIG had already been included in the revised Task Work Plan.

As suggested at last ExCo Meeting, the Operating Agent has sent a letter to the Subtask A Leader, Peter Out, formally designating him as contact person with ASTIG, as he already has established good contacts with this organisation.

3.4 Information activities

The Task 24 members earlier proposed an ‘IEA SHC Award of Excellence’. It would be a prestigious recognition for good performance in competitions and procurements and could be used for the Second Round of Procurements, as well as for other projects within the Solar Heating & Cooling Agreement. An Award Committee formed by some Executive Committee members is now working further on this proposal.
3.5 Task meetings

Since last Executive Committee Meeting, one Task 24 Experts Meeting has been held – in Copenhagen, Denmark, 21-22 March 2002.

Next Experts Meeting will be held 16-18 September 2002 in Belgium, probably in Namour.

The following Experts Meeting will take place in March 2003 in Canada, two days either in week 11 or week 12.

4. WORK PLANNED FOR THE NEXT SIX MONTHS

During the next 6 months, intensive efforts will be made in order to prepare for the Second Round of Procurements, which will include a larger degree of international co-ordination of specifications and principles for evaluation. The Experts have identified concrete areas for further joint work. It includes international procurement for national groups as well as for international groups. With The Netherlands as co-ordinator, some countries prepare for collaborative work based on housing associations on a European scale. Eleven European countries will take part in the project. Other countries, like Switzerland, will work on the creation of buyer groups, using Internet mechanisms. Some Task participants also take inspiration for their future tenders from the Swedish initiative with advertisements in the EU “Official Journal”, tender documents in an international language and easily downloadable from a public web-site. The Task 24 participating countries are in favour of using an “IEA SHC Award of Excellence” for international competitions in collaboration with the Executive Committee. The work with model processes and contract documents will continue for further international exchange and suggestions also from suppliers. The web-based “Business Tools” will be further updated for an international context with experiences from projects fulfilled. Findings from the Special Evaluation of the First Round and the Standard Midterm Evaluation have influenced the more detailed Work Plan.

5. ISSUES FOR THE EXECUTIVE COMMITTEE

5.1 Follow up of decisions at last Executive Committee Meeting regarding Task 24

At the November Meeting, the Executive Committee approved the Task Evaluation and the Work Plan for the 2nd Round with the deletion of the suggested 6-month extension. An amended Work Plan (without this extension) was distributed to the ExCo by the Operating Agent after the meeting.

Furthermore, the ExCo had commissioned the Operating Agent to readdress the extension issue at the June 2002 ExCo Meeting, presenting the reasons for such an extension, outlining key arguments and funding possibilities. The arguments are provided below (item 5.3).

The Operating Agent had also been asked to provide quantitative figures on numbers of systems installed due to the Task, price and other qualitative characteristics. At the Task 24 Experts Meeting in March, it was decided that The Netherlands would translate an existing
Dutch form into English and send it to the Operating Agent. Such a form would facilitate for the countries to fill in the figures requested. Unfortunately, this has been delayed and the Operating Agent received it just recently. A form has now been sent out to the countries. Hopefully, answers can be accounted for at the coming Executive Committee Meeting. Results from some of the procurement projects in Denmark, The Netherlands and Sweden indicate possible 30% price reductions when a sufficiently large purchase volume is offered.

The Operating Agent had also been asked to consider in what way Task 28 work could be added to the Dutch World Wildlife Fund (WWF) activity. Contacts have been established between the Dutch Experts of Task 24 and Task 28, and initiatives have been asked from the Task 28 Experts whether there could be co-operative activities concerning the WWF activity.

As requested by the ExCo and accounted for above, the Operating Agent has sent a letter to Peter Out, formally assigning him to act as liaison between Task 24 and ASTIG.

5.2 Issue 1: Assurance of adequate funding and representation through Experts

It is essential that every participating country nominates and secures funding for an Expert during the whole duration of a Task. With active and continuous participation of Experts, best value will be created for all Task participants, especially for the country in question. This issue is raised since, so far, this has not always been the case, which has had a negative influence on the Task. The situation for Denmark has been presented earlier in this Report and a letter has been sent to Denmark by the ExCo Chairman and the Operating Agent.

Recommendation for resolution

It is once more recommended that the Executive Committee state that it is essential that all countries allocate adequate funding and expertise for Task work during the whole agreed duration of the Task.

5.3 Issue 2: Extension of Task 24

It is suggested that Task 24 be extended with six more months - to 30 September 2003.

Possible funding

Preliminary information from the participating countries shows that an extension of Task 24 to the end of year 2003, or at least to the end of September 2003, is definitely dependent on allocation of funding. Funding can be available for Canada and Switzerland. Belgium and Switzerland joined Task 24 late, but are interested in an extension in order to get the most out of Task 24. The Netherlands also see a possibility for an extension, especially as they have many other ongoing projects, which are already financed. For Sweden, the possibilities for funding Operating Agent and experts during an extension are presently being examined. For Denmark the situation has been described earlier.

Evaluations

The two Midterm Evaluations come to the conclusion that Task 24 has inspired to more collaborative work and that the Second Round of Procurements would create added value to
the Task, in particular for Switzerland and Belgium, which countries joined the Task at a later stage.

**Raising international awareness takes time**

It takes time to increase international awareness and collaboration. Now there is increased interest in drawing up documents in international languages, announcing tender competitions, inviting companies from abroad to take part in tender competitions, etc.

**Examples of promising international collaborative activities**

Several collaborative activities have been started. Some examples:

- Collaboration between The Netherlands and Canada about solar house certificates and the “ER 2000 Canada” initiative.
- Collaboration between the WWF, Task 24 and Task 28, including also Switzerland.
- The “Space for Solar” project in the Walloon Region between Belgium and The Netherlands.
- The “Soltherm Europe” initiative, especially the tertiary part.
- “Virtual buyer groups”, especially in Switzerland, Denmark, and Sweden.

The possibility of having some activities for *components* has been discussed. It has been identified that pumps are really “international”, and therefore an initiative for suppliers and installers of new pumps will be further discussed. There will also be joint activities with the housing associations.

**With an extension more lessons learned can be included**

As can be seen in the detailed report about projects in the individual Task 24 countries, some projects are planned to end by mid-2003. It is of value to include the experiences in the Final Management Report for Task 24.

Many unique lessons learned can be presented, which would be of value for Solar projects, but would also be of general value for innovation projects in general.

Reference is also made to the detailed Work Plan for the Second Round, which was included in the October 2001 Task Status Report for Task 24.

**Recommendation for resolution**

It is recommended that an extension of Task 24 with six months, to 30 September 2003, be approved.

**Appendices:**

1. Milestones tables, 1-3.
2. Overviews of national projects, 1-6.
## Task Status Report – May 2002

### Subtask A: Procurement and marketing

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May 2002
## Subtask B: Creation of Tools

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May 2002
## Appendix 1:3 - Milestones Table – Comments - Task 24 “Solar Procurement” Task Status Report – May 2002

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<tr>
<th>Activity</th>
<th>Resp. Country</th>
<th>Milestones achieved Last 6 months</th>
<th>Milestone</th>
<th>Comment</th>
<th>Recommendation</th>
<th>Impact</th>
<th>Milestones next 6 months</th>
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<tr>
<td><strong>Subtask A: Procurement &amp; Marketing</strong></td>
<td>NL</td>
<td>A4 Deliveries in the 1st Round started in all countries.</td>
<td>A5 Distribution of invitations for tender 2nd Round.</td>
<td>May 2002 – June 2003. Start delayed, will give new countries possibility to join.</td>
<td>Intensified preparatory work for more international procurement.</td>
<td>May require more activities also during 2003.</td>
<td>A6 Delivery start 2nd Round</td>
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May 2002
| Country: **BELGIUM**  
| Contact person: Luc De Gheselle  
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<tr>
<th>Updated April 2002</th>
<th>Name of project: Brussels Solar Water heater Promotion Campaign</th>
<th>Name of project: SOLTHERM</th>
<th>Name of project: VLAZON</th>
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<tbody>
<tr>
<td>1. Preliminary status</td>
<td>Ongoing</td>
<td>Ongoing</td>
<td>Just started</td>
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<tr>
<td>2. Feasibility study</td>
<td>Tenders grouped only for 2 medium size installations (100 m² each)</td>
<td>Ongoing both for residential customers as for tertiary sector subgroups with demo-projects</td>
<td>Strategic plan for market development for Flemish Region Position of buyer groups to be defined.</td>
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<tr>
<td>3. Performance specifications</td>
<td>None specified yet.</td>
<td>None at this time</td>
<td></td>
</tr>
<tr>
<td>4. Buyer groups: Name: None realised</td>
<td>Under preparation</td>
<td>None yet</td>
<td></td>
</tr>
<tr>
<td>Type of buyers:</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6. Supplier contacts</td>
<td>None</td>
<td>14 participating suppliers in 2001 <a href="http://www.soltherm.be">www.soltherm.be</a> for list of suppliers.</td>
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<td>7. Call for tender</td>
<td>Publication planned for May 2002</td>
<td>Planned for 2003</td>
<td>None defined yet.</td>
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<td>8. Deadline for submitting tenders</td>
<td>September 2002</td>
<td>Not fixed yet</td>
<td>None defined yet.</td>
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<td>10. Products on market</td>
<td>31 brands represented on Walloon market in total. 3 brands have 55% of total market in Walloon region in 2001</td>
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<td>11. Comments and remarks; problems, if any</td>
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<td></td>
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<tr>
<td>12. Other information</td>
<td>Demo for 3 x 55 social houses in preparation (tender definition phase) in Brussels campaign.</td>
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<table>
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<tr>
<th>Country: <strong>CANADA</strong></th>
<th>Name of project: <strong>Peterborough Green-Up and EnerACT (Energy Action Council of Toronto)</strong></th>
<th>Name of project: <strong>TEAM Advanced Low Flow Solar Water Heater</strong></th>
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</thead>
</table>
| **Contact person:** Doug McClenahan | **Phase I:** Peterborough Green-Up installed 8 systems. EnerACT installed 9 systems.  
**Phase II:** Peterborough Green-Up installed 10 systems (plus 3 more purchased). EnerACT installed 17 systems.  
Plan to install 10,000 systems in 3 years. Initial testing completed at National Test Facility. 16 Beta test units installed to date. 100 planned by Dec. 2002. 1000 planned by Mar. 2004. | **Updated April 2002** |

| **1. Preliminary status** | **2. Feasibility study** | **3. Performance specifications** | **4. Buyer groups:**  
**Type of buyers:**  
-Peterborough Green-Up and EnerACT  
-NGOs in partnership with utilities, municipal governments, and federal government  
- initial installations with Toronto Hydro and Kingston Hearthmakers |
|--------------------------|--------------------------|---------------------------------|-----------------------------------------------------------------|
| **Phase I:** Systems must supply >35% of annual energy load. Scores based on cost, energy performance, and quality  
**Phase II:** Systems must supply >40% of annual energy load. Scores based on cost/energy, warranty, and quality. Heat transfer fluid degradation concern addressed by pass/fail. | No | N/A |  |

|-----------------------------|-------------------------|-----------------------|--------------------------------------|-----------------------------|
| -Phase I Subsidy: 50% (this is an exception)  
-Phase II Subsidy: 25% | N/A | Phase II: September 21, 2000 | Phase II: October 6, 2000 | Phase II: October 9-29, 2000 |

<table>
<thead>
<tr>
<th><strong>10. Products on market</strong></th>
<th><strong>11. Comments and remarks; problems, if any</strong></th>
<th><strong>12. Other information</strong></th>
</tr>
</thead>
</table>
| Phase I: Thermodynamics, Solcan & Daystar Energy Systems  
Phase II: Thermodynamics & Solcan | 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). | Independent inspection and monitoring with integrating heat meters, on 20 of the systems has begun. |
## Appendix 2:3


| Country: **DENMARK**  
| Contact persons:  
| Torben Esbensen, Klaus Ellehauge, Lotte Gramkow  
| Updated April 2002 | Name of project:  
| KFS-Houses | Name of project:  
| [WWW.soltilbud.dk](http://WWW.soltilbud.dk) | Name of project:  
| “Sol over Thy og Morsø” (Sunshine over Thy and Mors – regions in Northwest Jutland) |

### 1. Preliminary status
- Will unfortunately not continue, due to stop for subsidies.
- 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
- No

### 3. Performance specifications
- 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:
- KFS and a solar heating company are offering solar systems to new house owners. House buyers Solar heating in new, single-family houses.
- Organisation of buyers and installers by means of the Internet. [www.soltilbud.dk](http://www.soltilbud.dk) Owners of one- or two family houses.

### 5. Official information
- [www.soltilbud.dk](http://www.soltilbud.dk), 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
- Local panel and a local boiler manufacturer is used.
- 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
- No June 2001. Tender (call for offers).

### 8. Deadline for submitting tenders

### 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.
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<tr>
<td><strong>10. Products on market</strong></td>
<td>Very good offers are received from 12 groups of manufacturers and installers, which have resulted in 20% price reductions.</td>
<td>Djurs Solvarme has two tank units (180 litre and 260 litre) and two solar collector modules 3 m² and 4 m². 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>.</td>
</tr>
<tr>
<td><strong>11. Comments and remarks; problems, if any</strong></td>
<td>Will be taken up with other housing companies.</td>
<td>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 pricelist 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 has 28,000 customers of which approximately 1,000 are electrical heated dwellings, a greater potential for sold systems for these types of customers.</td>
</tr>
<tr>
<td><strong>12. Other information</strong></td>
<td><a href="http://www.soltilbud.dk">www.soltilbud.dk</a>, where all the offers can be sent and an instruction for buyers is given.</td>
<td>The campaign has until now sold 30 solar systems: 10 larger 12 m² systems, 16 systems of 8 m² and 4 systems of 6 m². 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.</td>
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<tr>
<th>Country: NETHERLANDS</th>
<th>Name of project:</th>
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<tr>
<td>Contact person: P.G. Out</td>
<td>“Space for Solar”</td>
<td>“Solar energy in the ESSENT supply region”</td>
<td>“Solhas”</td>
<td>“The Soltherm Europe Initiative”</td>
<td>”Call the Sun”</td>
<td>”WWF Solar Dwellings”</td>
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<tr>
<td>Updated April 2002</td>
<td>Running</td>
<td>Running</td>
<td>Running</td>
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1. **Preliminary status**
   - 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 – June 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
   - Not specified yet, will be based on EC quality standards
   - In tender documents.
   - In tender documents. For Solar thermal, PV and heat pumps.
4. **Buyer groups:**
   - Name: Space for Solar
   - Type of buyers: Housing associations
   - Essent for property developers & housing assoc.
   - Property developers & housing associations
   - Housing associations
   - Housing assoc. in The Netherlands & 9 other European countries
   - Various, to be defined in the feasibility study
   - Various, to be defined in the feasibility study
   - Call the sun
   - -ASN Bank for clients,
   - -WWF for members,
   - -SOL*id for installers
   - -Home owners in municipalities
   - Various property developers (19 in total)
5. **Official information**
   - Dec 2000-Mar 2001
   - n.a.
   - Altener proposal for International tender in 2nd Round of the Task foreseen
   - n.a. yet
   - National tender
   - March 2002
6. **Supplier contacts**
   - Sept 2000-Mar 2001
   - March-April 2000
   - n.a.
   - Since April 2001, ASTIG, DFS are project partners
   - 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
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<tr>
<td>11. Comments and remarks; problems, if any</td>
<td>Framework turn-key delivery contract with good price/-performance ratio (6-year guarantee, extendible to 15 years with result guarantee. For 3400 m² quick scans have been conducted; conversion to individual contracts ongoing.</td>
<td>3 suppliers selected; companies that also sell heating equipment; 1500 systems contracted.</td>
<td>Europe wide initiative, 11 countries involved. Altener contract signed January 2002.</td>
<td>Sales mainly through campaigns (little direct web sales); will be broadened to more energy saving measures and local municipality campaigns. Two campaigns in 2001: 200 SWH and 2150 PV modules.</td>
<td>Market introduction project for WWF solar dwelling quality certificate</td>
<td></td>
</tr>
<tr>
<td>12. Other information</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>See <a href="http://www.Soltherm.org">www.Soltherm.org</a></td>
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<tr>
<td><strong>Contact person:</strong> Hans Isaksson</td>
<td>Ongoing competition activities for 1,000-2,000 systems (approx. 5,000-10,000 m² collector area)</td>
<td>Called off procurement activities (10,000 m²)</td>
</tr>
</tbody>
</table>

1. Preliminary status
   - **Country:** SWEDEN
   - **Contact person:** Hans Isaksson
   - **Updated April 2002**
   - **Name of project:** “Competition – Systems for solar-heated domestic hot water supply in detached houses”
   - **Name of project:** “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 m² collector area)
   - **Called off procurement activities (10,000 m²)**

2. Feasibility study
   - Yes

3. Performance specification
   - Yes, available on: http://solupphandling.bfr.se

4. Buyer groups:
   - **Name:** Chairman Matti Nordenström, MAV, matti@einfo-s.org
   - **Type of buyers:** House owners, detached houses.
   - **Name:** Chairman Björn Johansson, AB Enköpings Värmeverk, bjorn.johansson@varmeverket.enkoping.se
   - **Type of buyers:** Facility owners

5. Official information
   - 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
   - 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 m². The tendering document stated a total area of 10,000 m² and a minimum of 4,000 m².

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.
    - 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.

### Country: SWITZERLAND

**Contact person:** Christian Völlmin  
*Updated April 2002*

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<th>Name of project:</th>
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<tbody>
<tr>
<td>“Lucerne”</td>
<td>“Solar for Flumroc”</td>
<td>“SSES virtual buyer group (on Internet)”</td>
</tr>
</tbody>
</table>

### 1. Preliminary status

- **Started**
  - Preparation (Due to different changes within the company the project is delayed)
  - Preparation (Still looking for the Partner to run the action)

### 2. Feasibility study

- Yes
- Yes
- Yes

### 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

### 4. Buyer groups:

- **Name:**
  - City of Lucerne
  - Not yet available
  - Employees of Flumroc
  - Not yet decided (work name: “Virtual Buyer Group”)
  - Private house owners
- **Type of buyers:**
  - Owners
  - Employees of Flumroc
  - Private house owners

### 5. Official information

- Yes, through the regular information channels of the City.
- Internal information only.
- Organised

### 6. Supplier contacts

- Yes
- Yes. Own supplier
- Yes

### 7. Call for tender

- According to the Task 24 guidelines
- No
- Will be according to the Task 24 guidelines

### 8. Deadline for submitting tenders

- June 2002
- Individually per project
- Not yet known

### 9. Evaluation of tenders

- -

### 10. Products on market

- Standard Hot Water Installations
- Fuel switch Oil - Gas
- Yes. Hot water installations of the own company.
- Yes

### 11. Comments and remarks; problems, if any

- The project will be coached by the Swiss representatives of Task 24 and the local responsible of the energy department
- The SSES currently changes status to a consumer oriented organisation. This causes delays for the buyer group.

### 12. Other information

- The buyer group will be formed with the new established tools and manuals presented at the last Task meeting.
- 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
  - [www.solarpooler.ch](http://www.solarpooler.ch)
  - (soon)