



**International Energy Agency
Solar Heating & Cooling Programme**

TASK 24 SOLAR PROCUREMENT

EXPERTS MEETING

**Banff, Alberta, Canada
20 – 21 March 2003**

MINUTES OF MEETING

**Hans Westling
Promandat AB
Operating Agent**

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Hans Westling
25 March 2003, rev. 16 May 2003

MINUTES OF TASK 24 "SOLAR PROCUREMENT" EXPERTS MEETING, 20 – 21 MARCH 2003, IN BANFF, ALBERTA, CANADA

Participants:

Canada	Doug McClenahan (only on 20 March) Michael Noble, EnerWorks Bob Fischer, EnerWorks Bob Argue (specially invited to present the eco Perth Solar Mapping Project, Ontario)
Denmark	Klaus Ellehauge, own consultant
The Netherlands	Peter Out, Ecofys Research and Consultancy
Switzerland	Christian Völlmin, SSES, Swiss Solar Energy Society Markus Portmann, BMP Sanitär und Energie
Sweden	Hans Isaksson, K-Konsult
Operating Agent	Hans Westling, Promandat AB

1. WELCOME & START OF MEETING

Doug McClenahan welcomed all the Experts to the Experts Meeting in Canada, and explained that in Canada, at this latitude, they have a fairly high contribution of solar energy compared to other countries at the same latitude. Michael Noble informed about the arrangements around the meeting.

2. INTRODUCTION AND PRESENTATION OF PERSONS PRESENT

Hans Westling opened the meeting and welcomed all of the participants to the Experts Meeting for Task 24 "Solar Procurement". Excuses had been received from some of the Experts who, unfortunately, were not able to participate at this meeting. This was the case for Lotte Gramkow, Denmark, Matti Nordenström, Sweden, and Luc de Gheselle, Belgium, who had sent an update of the Belgian activities to be presented by Peter Out at this meeting.

3. APPROVAL OF AGENDA

A preliminary Agenda was first sent out on 18 February, followed by a revised version on 10 March 2003, [Appendix 1](#). It was also included in the pre-meeting documentation sent out before the meeting. It was suggested to have the presentations of Canadian Sustainable Energy/Solar Programme and the eco Perth Solar Mapping Project a little earlier during the meeting, if possible.

Consequently, it was agreed to have the Canadian presentations under item 5, after Participation Plans. With this change the preliminary Agenda was approved.

4. PARTICIPATION PLANS

The Experts from the *countries participating at the meeting* informed that they had sufficient funding to participate at this meeting and also for the work on the Final Management Report, that will be produced during the months after the end of Task 24 (31 March, 2003).

For *Denmark* there are enough funds for participation up to and including the month of June, 2003. Hans Westling had also received a confirmation from *Sweden* that funds will be available to finalise the work. This is also the case for *Switzerland*, and for *The Netherlands*. It has earlier been confirmed that enough resources are available for *Canada*. *Canada* has voluntarily assumed responsibility for the work and arrangements to be made on the *website* for the whole of the year 2003.

However, there are some funding problems for *Sweden* for the translation into English of the report on the Swedish projects. There is an urgent need to translate the report about the Swedish projects, from which many interesting experiences have been made. In order to ask for a contribution, this issue will be taken up among the Executive Committee members.

5. PRESENTATIONS OF THE CANADIAN SUSTAINABLE ENERGY/SOLAR PROGRAMME & ECO PERTH SOLAR MAPPING PROJECT

5.1 Canadian Sustainable Energy/Solar Programme

Doug McClenahan gave a presentation of the Canadian sustainable energy/solar programme. It was noted that Canada has a budget of 0.5 million Canadian dollars per year for this programme, and this money should be seen as a kind of “seed” money to achieve leverage of getting more funding from other sources. Quite a large sum of money is allocated to the national testing facility for Solar Systems. Support is also given to EnerWorks. Work is also planned for “Seasonal Storage of Solar Energy”, which is a new area. Another project is “Solar Crop Drying”, where projects are going on in Middle America, in China, and in India. There are also some additional projects about “Solar Purification” using UV radiation and about “Solar Cooling”.

There is also a special programme, “Market- ready”, a deployment programme within the Climate Change activities. There will perhaps be some changes in the Canadian budget for the coming years, and an intense discussion is going on about this. A discussion has also been initiated together with the Canadian Federation of Municipalities.

The “Seasonal Storage” is planned for 50 to 100 homes. Important is also the introduction of the R 2000 Housing standards, which means requirements for half of the ordinary energy use.

Doug McClenahan also mentioned that endeavour is made to include “green” interest groups in the projects.

5.2 Presentation of the eco Perth Solar Mapping Project

Bob Argue presented the eco Perth Solar Mapping Project. (Copies of the presentation are enclosed in Appendix 2.)

Perth is a small town in the Ontario region with about 6,000 inhabitants. It is situated about one hour's drive from Ottawa. Eco Perth is a community-based NGO, which is helping individuals and organisations make the town of Perth an "eco-efficient" community. Perth wishes to create a model community that is environmentally sustainable, economically efficient, and that fosters community health. Included in the project are ECO efficient programmes and ambitious programmes for Green Team, Transportation Team, Communication Team, and Building Team. They have also used the geographical GIS system to make a solar mapping overview.

There is also a programme for "free trees" that are provided and planted to obtain energy-efficiency. An instrument for self-audit of the ECO-level for a family or a house has been worked out, and a very large percentage of people is participating. The project also contains leasing of water heaters in a programme, which includes maintenance. Development of partnerships and follow-up of initial sales are used to speed up creation of networks. Eco Perth work together with other organisations as for example CCAF (Climate Change Action Fund), OSEA (Ontario Sustainable Energy Assoc.), GCA (Green Communities Assoc.), OHCA (Ontario Healthy Communities Assoc.), and PCP (Partners for Climate Protection).

6. MINUTES FROM EARLIER EXPERTS & EXECUTIVE COMMITTEE MEETINGS AND MATTERS FOR EXCO CONSIDERATION

6.1 Minutes from the Experts Meeting in Namur, Belgium, 15-16 October 2002

Unfortunately, the same mistake had been made in section 9.7 (page 9) of the Minutes from the Namur meeting, as in the minutes from the Copenhagen meeting. The wording should have been changed according to section 6.1 of the Namur Minutes. The correct wording in part 9.7 of the Namur Minutes should be: "The goal mentioned of 100 million m² by the year 2010 is for the whole European Union. The correct number here should be 15 million m² by the year 2005 for the Soltherm Europe Initiative." With this clarification the Minutes of the Namur Meeting were approved.

6.2 Minutes from the Executive Committee Meeting in Brussels, Belgium, 18-20 November 2002

Extract about Task X from the Minutes had been included in the pre-documentation, and would be followed up during this Experts Meeting.

6.3 Matters for ExCo consideration

It is important to *update the figures regarding the numbers of systems and costs*, which will be included in the *Final Management Report*. The Operating Agent, Hans Westling, will send out a reminder in order to get current figures from the countries.

The countries that had not yet *updated their Overview of National Projects* were kindly asked to do so - hopefully within a month at the latest - in order to make sure that the overviews could be included in the *Task Status Report* as well as in the *Final Management Report*.

Addendum: The missing Overviews have been received after the meeting. All Overviews have been included in the Task Status Report, which has been sent out to the Executive Committee Members for the upcoming meeting.

7. 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*, which includes both former *ASTIG* and *ESIF* members, 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 Ole Pirgaard from the Danish company *Velux* 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.

8. GENERAL INFORMATION ACTIVITIES FOR TASK 24

The main activity is the work on the *Task 24 website*, which will be updated before the Task is closed. It is important to *establish good links* with other activities, like the “*Soltherm Europe Initiative*”. It was noted that 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. One of the ways this will be done is by transferring relevant project case descriptions and tools to the “*Soltherm Europe*” website too. Some tools and case descriptions have already been transferred to the tools and case databases of *Soltherm Europe*.

The initiative from Task 24 for an *IEA SHC Solar Award* has now proceeded to the presentation of candidates. It may still be possible to present additional candidates, for those who have the opportunity to do so. In that case possible candidates have to be suggested by an Executive Committee member or by the Operating Agent. 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 Hans Westling and Hans Isaksson have been suggested for presentation at the *ISES Conference* and have preliminary been nominated as poster presentations. However, due to lack of funding, no presentations can be given.

Information about the ISES Conference is included in Appendix 3. Further information and registrations details are available at: www.congrex.com/ISES2003.

On 26-27 June 2003, the *ESTEC (First European Solar Thermal Energy Conference)* will take place in Freiburg. Professor Gerhard Faninger, Austria, has asked the *Operating Agent* to give a *presentation*. The *Operating Agent* has, in contact with the Swedish ExCo member, communicated that he is ready to make such a presentation within the available funds. Information about the ESTEC 2003 is included in Appendix 4.

9. SUBTASK A “PROCUREMENT AND MARKETING” PRESENTATIONS BY NATIONAL EXPERTS & COORDINATORS

9.1 Denmark

Klaus Ellehauge gave a presentation of the Danish activities, using material prepared by Lotte Gramkow. Copies of the presentation are enclosed in Appendix 5.

We all know what happened after a new Danish Government came into office in 2001, and decided to substantially reduce the number of national renewable energy activities, including solar activities. However, governmental support has been received for the continued work in Task 24 until the end of spring 2003.

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 3 April 2003. 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.soltilbud.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.

9.2 The Netherlands - including update of “Soltherm Europe”

Peter Out made a short summary presentation about all Dutch activities carried out within the framework of IEA Task 24 and the ongoing activities, especially with reference to the “Soltherm Europe Project”. Copies of the presentation are enclosed in [Appendix 6](#). Attached are also the Case Studies “Essent/Rendo”, “BeldeZon” and “Space for Solar”, [Appendix 7:1-3](#).

Peter Out informed that several international solar procurement activities are going on at present. Following the Swedish initiative to publish material in English in the EU “Official Journal”, some of the Dutch and European projects have published material there.

Peter Out also presented the ongoing projects in The Netherlands with the *Essent/Rendo new housing development* and *market introduction of WWF solar houses* and the *certification work for existing houses*.

He also stated that 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. Also an *Internet monitoring service* (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.

Peter Out will *draft a proposal (1-2 pages) of this monitoring method* to be distributed among the other countries for setting up this monitoring method in these countries too.

9.3 Switzerland

Supported by Markus Portmann, Christian Völlmin gave a presentation about the different ongoing projects in Switzerland. Copies of the presentation are enclosed in [Appendix 8](#).

The 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/, [Appendix 9:1-4](#). 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.

Christian Völlmin also informed about the “*SSES Virtual buyer group (on Internet)*” project, which 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.

9.4 Canada

Michael Noble presented the Canadian activities. 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 for the change of 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 the 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 for 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

goal is to install 3 ½ water-heaters a day and team instead of one 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. *Addendum*: 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.

9.5 Sweden

Hans Isaksson informed about the activities that are now coming to an end in Sweden. Copies of the presentation (in Swedish) are enclosed in [Appendix 10](#). There will be no additional funding. However, the general subsidies will continue for buyers of Solar systems under the new 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, Hans Isaksson pointed out that 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.

Experience from the Swedish project will be included in the Final Management Report.

9.6 Belgium

A summary of the Belgian activities, prepared by Luc De Gheselle, was presented by Peter Out at the meeting. Copies of the presentation are enclosed in Appendix 11.

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 m², about 3,000 m² 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.

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.

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.

10. SUBTASK B “WEB OF TOOLS”

10.1 Update

Klaus Ellehauge presented the updating/revisions needed for the *Task 24 website*, including deadlines. Copies of the presentation “Web of Tools” are enclosed in Appendix 12.

During the last six months the homepage has been updated 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 the Canadian consultant Margarethe Vanderpas.

There is ongoing work on the “Library” about different texts, and more “Cases” and “Lessons Learned” must be uploaded. (An overview will be made by Klaus Ellehauge.) Different conference papers regarding solar projects could be uploaded here as well. Some of the material to be delivered, as decided in Namur, is still missing.

Some more work should be spent on the “Solar Calculator” and the “Tendering Documentation” with reference to brochures as well. Reference was also made to “DO’s and DON’T’s”.

10.2 Work to be done

Klaus Ellehauge had prepared some material, in different colours, for the Experts who will be doing the updating, and he would send out specific material as a help for uploading additional material to the website.

He had also asked Margarethe Vanderpas to open a *parallel secure website* with the marked revisions and with the new revisions as soon as we have them.

Addendum: A parallel website has been opened, see e-mail correspondence attached in Appendix 13.

A “*list of actions*” will be produced and distributed to everyone.

Addendum: See Klaus Ellehauge’s e-mail of 24 March, Appendix 14.

There will be some *proof-reading* to do, which is important. We will *change the word “cases” to “projects”*; we will have *more open material*, and some *improved descriptions* as well as more details about the “Soltherm” project.

It would be of interest to present the case studies in the same format as has been used for the “Soltherm”. There should also be a part with *analyses of the experiences*, and that could perhaps be done for some of the countries. Unfortunately, Sweden lacks the budget for additional work. One page will be presented with an overview of the downloaded material. For this purpose the “*Calculator*” *must be simplified*.

All the material must be ready, including the editing, *by 14 May 2003*, which means that all the material ought to have been supplied on or around *30 April 2003*.

11. ACTIVITIES WHEN CLOSING TASK 24

11.1 Presentations by the Operating Agent and Subtask Leaders to be given at the Executive Committee Meeting in Berlin, 11-13 June 2003

Hans Westling, Peter Out, and Klaus Ellehauge will participate in a *two hours’ technical presentation of Task 24* during the *ExCo Meeting in Berlin 11 – 13 June 2003*.

11.2 Final Management Report

The Operating Agent informed about the *activities for concluding a Task*, which can be seen in the “Policies and Procedures” handbook (paragraph 8.11). In this handbook it is also stated

what will be the main contents of the *Final Management Report (FMR)*. This report is the responsibility of the Operating Agent, who will also give the Experts a possibility to make suggestions regarding the contents. *Technical Reports* should be presented within *6 months* after the closing of the Task, *30 September 2003 at the latest*. The *FMR* should however be presented within *3 months after the closing of the Task, or 30 June 2003*.

Quoted from the “Policies and Procedures”, the FMR should summarise: “The report should summarise activities carried out during the Task, accomplishments and unique contributions, the involvement of industry (end-users), information dissemination, activities completed and yet to be completed, the degree to which objectives were achieved, unresolved technical issues, recommendations for further technical work, and management recommendations which might be useful to others.”

The Experts agreed that Task 24 *already has a lot of material* that can be used here, *including findings from the evaluations*, both the formal Task 24 Mid-term Evaluation Report and the Special Evaluation Report written by Klaus Ellehauge. The website with a summary of experiences with “*DO’s and DON’T’s*” will form a good basis for the contents in the Final Management Report.

The Experts were asked to *formulate three important examples of “Lessons Learned” from this Task*.

A discussion took place about *some more parts to include in the FMR*, which is noted below.

Top level support is very important, as is long and sustainable responsibility for funding and resources. The report from the Swedish projects also provides some important Lessons Learned. *Moral, financial, and political support* is important. It can also be seen that the project has been *under-financed* compared to what was first asked for in person-months. The task-sharing was reduced, and even that number of person-months has not been allocated in some of the countries. An estimate of the total effort in person-months will be transformed into costs by the Operating Agent. In some countries it is difficult to work when you have a community that consists of “*interest organisations*”. You should also early set aside certain resources and expertise for marketing and information.

The quick variations in electricity prices have of course also caused some hesitation among interested consumers whether it is economically advantageous in the long run to invest in solar water heaters. For example, the estimated amount for the Swedish national activities has been SEK 5 million or Euro 550,000. Half of that has been used for testing work in Sweden.

Also *the time-schedule was too short* in order to have time to *organise a number of projects* after having raised the general interest. This takes a lot of time and it also has to be a separate project with its own funding. The creation of projects has been stimulating but also somewhat frustrating. The international collaboration is definitely a very important part as is the transfer of knowledge.

We should have needed to have *Switzerland* included in the Task for a longer period of time. Transferring of behaviour of the market and waiting for reactions from the market takes a long time. This is a *social process*, and not a technical one. We now see in Switzerland that this process has taken time, but is now on its way and it is not as bad as in the beginning.

Above all smaller projects have been started. In Switzerland you see the same general problems as in many other countries.

In *Belgium*, we also see very *ambitious programmes for increasing the trust through information campaigns*, also *involving the installers*. Compared to some other product areas solar projects are not so well established with regard to products and systems. There is a need for *considerable further work to raise the general awareness and to sell the concept*.

In *Canada*, the situation has improved. Organisations and persons interested in investing in this area have been identified, which shows that the sharing of knowledge has been very valuable. A strategy is now being created to go out and find interested buyers.

The development of the *European standards* that have been adopted in parallel with the Task 24 work are now starting to be used, combined with *labelling*, which will be very important for the use of the *procurement mechanism*. We see that there are barriers for marketing, for the installation, and in manufacturing. But the *transfer of knowledge has proven to be a real success*.

Hans Westling pointed out Velux in Denmark and Uponor in Sweden as representatives of industries, which are starting to enter the solar area.

Ecofys is studying *leases* and can also get *fees for the work of organising the projects*. We hope we could accomplish *a creation of self-supporting mechanisms* as the “*Space for Solar*”. There are examples of similar organisations for cooperative purchasing in other areas in Sweden - HBV, Statskontoret, Kommunsamköp - and similar work has also been done for heat pumps. What we need is to have a spreading of various mechanisms, and we need *gatekeepers* and “*champions*”.

We have seen interesting development of *buyer groups* in the region of Värmland, Sweden, and the so-called “*home parties*” in some countries.

An interesting discussion took place about *how to raise the general interest and awareness*. This means that we have to use different tools, as for example:

- articles (in newspapers)
- direct mail
- demonstration
- events
- mailings to selected persons
- priced offers

We see *different means* such as: the Internet, direct mail, help-desk, toll-free telephone numbers, use of “*champions*”, open-house, testimonials, co-branding, energy metering or website referrals from those who have bought and who would be able to recommend the products to others to provide a sort of kick-back; public relations, brochures, governmental subsidies, endorsement and branding, labelling, test procedures, awards.

All these different tools should be used in combination with help-desks, “*champions*”, and “*change agents*” etc.

In the FMR, we could *include a “List of Tools”*.

It was also discussed here *how to keep and maintain the web addresses and pages* after the finalisation of Task 24, for instance to Byggeforskning och Upphandling (“Construction Research and Procurement” in English).

Perhaps we could also *store the material on a CD to be kept in the Archives*.

11.3 Further meetings and telephone conferences

It was discussed to have a meeting or at least a telephone conference. Different alternatives were looked into.

It was decided to have a *telephone conference* between the Operating Agent and the Subtask Leaders on *8 May 2003*, at 9:30 hours (changed to 10.00).

Addendum: A second telephone conference will be held on 26 May at 10 o'clock.

Possibly there will also be a *follow-up meeting after the Executive Committee Meeting*, which will take place *11 – 13 June 2003, in Berlin, Germany*. At this ExCo meeting, a presentation will be made by the Operating Agent and the two Subtask Leaders, as mentioned earlier.

11.4 Final updating of Task 24 website and material for Executive Committee presentation

Hans Westling will send an e-mail asking for up-dates of the national programmes, including information about the number of systems and indications of cost reductions.

Addendum: An e-mail regarding data on number of systems, etc. was sent on 15 May.

It should be remembered regarding the costs that they include:

- different VAT levels
- subsidies
- installation
- transportation
- different volumes of tanks and collector area

Regarding the Overview of National Projects, updates from Canada and Denmark had not yet been received. *Addendum*: The update from Denmark has been received after the meeting.

12 CHECKLIST OF ACTIONS

A checklist of actions decided at the meeting is included in Appendix 15.

This Task 24 could also inspire to a new *Marketing Task*, which will actually be discussed in connection with the ExCo Meeting in Berlin 11-13 June and at the ESTEC conference in Freiburg 26-27 June.

Hans Westling plans to have the Final Management Report ready in a first draft version by *10 June 2003*.

13. END OF MEETING

Hans Westling expressed his thanks to the hosts for their excellent arrangements at this Experts Meeting in Banff, Alberta, Canada. He also thanked all the participating Experts for their work on this Task during all these years. It has been a pleasure to work with every one and to develop contacts, both on the technical level for the Task and on the personal level. The meeting was then adjourned.

APPENDICES

1. Preliminary Agenda for the Task 24 Experts Meeting, 19-21 March 2003. Revised 10 March 2003.
2. *“eco Perth Solar Mapping Project”*. Presentation at the meeting by Bob Argue, Perth.
3. Information about the *ISES Conference*, Gothenburg, Sweden, 14-19 June 2003.
4. Information about the *First European Solar Thermal Energy Conference, ESTEC 2003 Conference*, Freiburg, Germany, 26-27 June 2003.
5. *“Presentation of the Danish Initiatives, Autumn 2002 – Spring 2003”*. Presentation prepared by Lotte Gramkow and presented by Klaus Ellehauge at the meeting.
6. *“IEA 24 Status The Netherlands”*. Presentation by Peter Out at the meeting.
7. *Case Studies, The Netherlands:*
 1. Essent/Rendo Solar Water Heater New Housing Project
 2. BeldeZoon “Call the sun” Solar Water Heater Campaigns
 3. Space for Solar
8. *“Activities in Switzerland”*, presentation by Christian Völlmin and Markus Portmann at the meeting.
9. “Here comes the sun” information package for the *“solarbegeistert” campaign:*
 1. *“Here comes the sun - Sonnenkollektoren für Warmwasser und Heizung”*, leaflet.
 2. Kantonale Förderung
 3. Anbieterliste
 4. Die Solarprofis liste
10. *“Från nischmarknad till serieproduktion av solvärmesystem”* /From a niche market to series production of solar heating systems/, presentation (in Swedish) by Hans Isaksson at the meeting.
11. *“IEA Task 24 – Belgium”*, presentation prepared by Luc De Gheselle and presented by Peter Out at the meeting.
12. *“Web of Tools”*, presentation by Klaus Ellehauge at the meeting.

13. E-mail from Klaus Ellehauge 24 April informing about the *parallel site* for Task 24.
14. E-mail from Klaus Ellehauge 24 March about “*work to do to complete our website*” including overview.
15. Checklist of Actions (as decided at the meeting). Hans Westling, 26 May 2003.
16. Task 24 Address List (updated March 2003).

DISTRIBUTION

These Minutes are distributed to the Task 24 Experts and Executive Committee Members in accordance with the Task 24 Distribution List, Appendix 16.