Solar Keymark Network

Experience exchange circle of test labs and certifiers
working according to the Solar Keymark scheme rules

Minutes
9. Solar Keymark Network Meeting
October 7th – 8th, 2010; Graz, Austria

Item 1: Opening of the meeting

The chairman of the Solar Keymark Network (SNK), Harald Drück, opened the meeting and welcomed the participants. He thanked Jan Erik Nielsen as the Secretary of the Solar Keymark Network for the excellent preparation of the meeting and especially for choosing the hotel "daniel" with it's fancy design as meeting location.

As introduction Harald Drück gave a short explanation about the Solar Keymark Network. The main task of the SK-Network is to agree on uniform procedures between the different institutions (accredited solar thermal test labs, certifiers, inspectors and manufacturers) working according to the Solar Keymark scheme rules as well as the further development of Solar Keymark certification.
The working rules of the Solar Keymark Network (SKN) are described in the "Solar Keymark Network Internal Regulations" (Document SKN_N0102.R3)

The meeting took place from Thursday, October 7th, 2010, 9:00 hrs till Friday October 8th, 2010, 11:15 hrs in the hotel "daniel" at Graz, Austria.

The first invitation including the draft agenda (version zero) of the meeting was sent out by email from Jan Erik Nielsen dated July 30th, 2010.

Item 2: Introduction of participants

The participants introduced themselves and mentioned their nominating organisation or institution respectively. The list of participants that attended the meeting is attached as Annex A.

As a result of the spectrum of participants present the voting preconditions according to clause 4.2 of the Solar Keymark Network internal regulations (Document SKN_N0102R3) are fulfilled.

Item 3: Approval of the agenda

Following the first draft agenda send out on July 30th, 2010 in the last weeks updated versions of draft agendas were send out and were also available via the Solar Keymark

Internet site. The latest version of the agenda was named “Final draft agenda revision (version “5” 5/10 2010)” (File SKN_N0134R5.doc).

The draft agenda was shortly discussed but no need for changes was seen. Hence this agenda was transferred in the final agenda. The final agenda is available via the Solar Keymark Internetsite as document number SKN_N0134R6 (File: SKN_N0134R6.doc).

Item 4: Final approval of the minutes of the 8. meeting

Harald Drück mentioned that the minutes of the 8th Solar Keymark Network meeting (File: SKN_N0133R0.pdf) were sent out by email dated March 26th, 2010 by Jan Erik Nielsen.

No comments were received within 30 days after sending out the minutes. Hence the minutes can be considered as approved. In accordance with the “SKN internal regulations” Harald Drück asked for final approval of the minutes.

The minutes of the 8th Solar Keymark Network meeting (File: SKN_N0133R0.pdf) as sent out by email dated March 26th, 2010 by Jan Erik Nielsen were unanimously finally approved by the participants present.

Item 5:Review of Solar Keymark Network decision list

Harald Drück mentioned that the current version of the Solar Keymark Network decision list is document N0100R3 (File SNK_N0100R3.PDF). This version is dated April 17, 2010 and contains all decisions made by the SKN until the end of Mach 2010 (including the decisions from the 8th meeting held in Rapperswil, Switzerland in March 2010).

Harald Drück mentioned that in the decision list, below decision D6.M8, a part of the minutes of the 8th SKN meeting is included that is not subject of the decision. It was agreed that Jan Erik Nielsen shall delete this part in the context of the next revision of the SKN decision list.

Note: The Solar Keymark decision list is available via www.solarkeymark.org.

Item 6: Review of Solar Keymark Network document list & Solar Keymark Network distribution list

Jan Erik Nielsen presented the **SKN document list** (SKN_N0000) and the **SKN distribution list** (document SKN_N0001; file SKN_N0001.xlsx) and mentioned that the intention of usage is in the way that the document list (SKN_N0000) has to be downloaded from www.solarkeymark.org on the personal computer. By clicking on the links included in the SKN document list the corresponding documents can be accessed (opened and downloaded) from www.solarkeymark.org.

Item 7: Inspectors participation in the Solar Keymark Network

At the 8th SKN meeting it was agreed under item 31 that the certifiers present a common proposal for an approach that ensures appropriate Solar Keymark specific know-how transfer to their inspectors and an uniform inspection methodology. For that purpose a working group of the certifiers led by Sören Scholz was created.

Sören Scholz presented a proposal for a “Solar Keymark Inspection Group” (Document SKN_N0141.R0). At the beginning he mentioned that he was not able to involve his other colleagues representing certifiers in the discussion of the elaboration of the document and excused himself for the fact that he did send out the document relative lately.

Note: Due to the fact that the document was send out only one week prior to the meeting no decision related to this topic was made.

The document was discussed and it was agreed that the group should be a “Solar Keymark Inspection Working Group” within the Solar Keymark Network and not a separate “Solar Keymark Inspection Group”. Furthermore it was agreed that the “Solar Keymark Inspection Working Group” will have no voting rights. The way how the “Solar Keymark Inspection Working Group” organises its work is up to the group.

Sören Scholz will still be in charge of this activity.

The “Solar Keymark Inspection Working Group” will, under the lead of Sören Scholz, come up with a proposal how to transfer Solar Keymark specific knowledge to the inspectors and how to ensure that inspections are performed in a uniform way.

Item 8: Durability of certificate

Sören Scholz mentioned that according to the internal Keymark regulations part 3 clause A1.8.3 (version 2006) the certificate is in general valid for 5 yeas . After this period the certificates are automatically renewed provided the conditions are still fulfilled.

Note: The link on www.solarkeymark.org related to the internal Keymark regulations has to be updated (after the meeting link has been checked; no need for update).

Item 9: How to manage the “Decision list”

Jan Erik Nielsen mentioned that decisions from this list should be incorporated in the relevant parts of the SKN internal regulations, in the Solar Keymark scheme rules and in the tables of inter-changeable sub components.

Due to this he proposed to prepare revised version of the SKN internal regulations and Solar Keymark scheme rules taking into account these decisions.

Decision D1.M9 – Update of Solar Keymark internal regulations and Solar Keymark scheme rules

The Solar Keymark internal regulations and Solar Keymark scheme rules should be updated once every year taking into account the decisions made in the meantime. Since the decisions are already agreed on by the Solar Keymark Network no voting on the Solar Keymark internal regulations and Solar Keymark scheme rules is required.

This decision was taken unanimously.

Concerning the handling of the information related to interchangeable sub-components of collectors the following procedure was proposed by Jan Erik.

Decision D2.M9 – Interchangeable sub-components of collectors
Lists of interchangeable sub-components of collectors will be prepared by Jan Erik Nielsen according to the format given SKN_N0137R0 (with reference to the corresponding decision number). This list will be published in the public area of www.solarkeymark.org.

This decision was taken unanimously.

In the context of this topic also a discussion of the document SKN_N0138R0 entitled “Equivalent collector glazing” took place. It was agreed to review and maybe revise the document by the following working group:

Ralf Köbbeman-Rengers (Chair), Andeas Bohren, Wolfang Eisenmann, Franz Helminger, Carsten Lampe, Stephan Fischer, Korbinian Kramer
The result of the activity of the working group shall be presented at the next meeting.

Item 10: Proposal of revision of D1.M5

The discussion at the 8th SKN Meeting under item 21 showed that a revision of decision D1.M5 (Validity of Solar Keymark certificates in case of absorbers selective coated by different manufacturers are used) is needed.

For that propose the following **working group** was created:
Andreas Bohren (WG-leader), Korbinian Kramer, Stephan Fischer, Carsten Lampe, Christian Stadler, Franz Helminger, Costas Travasaros and Hannes Zannantoni.

The task of the working group was to elaborate a proposal as basis for a decision at the next meeting. The working group was active but did not create a harmonised draft up to now.

Since the topic is not extremely relevant it was agreed to postpone the topic to the next meeting.

Item 11: Thermal insulation material – Criteria for considering different types of thermal insulation material for solar collectors as equivalent

At the 8th SKN Meeting (in the context of item 21) Stephan Fischer and Andreas Bohren offered to prepare a proposal describing under which conditions different types of collector insulation material can be considered as equivalent. In this context the document SKN_N0139R0 was circulated. Since this document is only including the title of the activity and no content for discussion it was decided to postpone the discussion and decision to the next meeting.

Item 12: Collector annual output in data sheets - validation

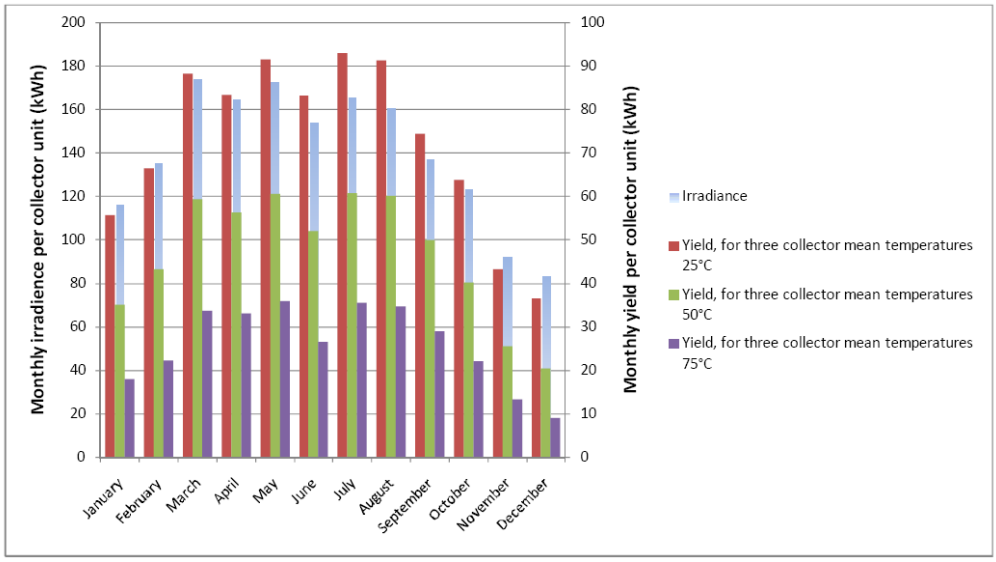
At the 8th SKN meeting it was decided under item 13 that the Excel based tool for the calculation of the annual collector output elaborated by Peter Kovacs from SP needs to be validated. For that purpose a working group consisting of the following persons was created:

> Peter Kovacs (chairman), Andreas Bohren, Stephan Fischer, Korbinian Kramer, Maria João Carvalho, Giorgos Panaras

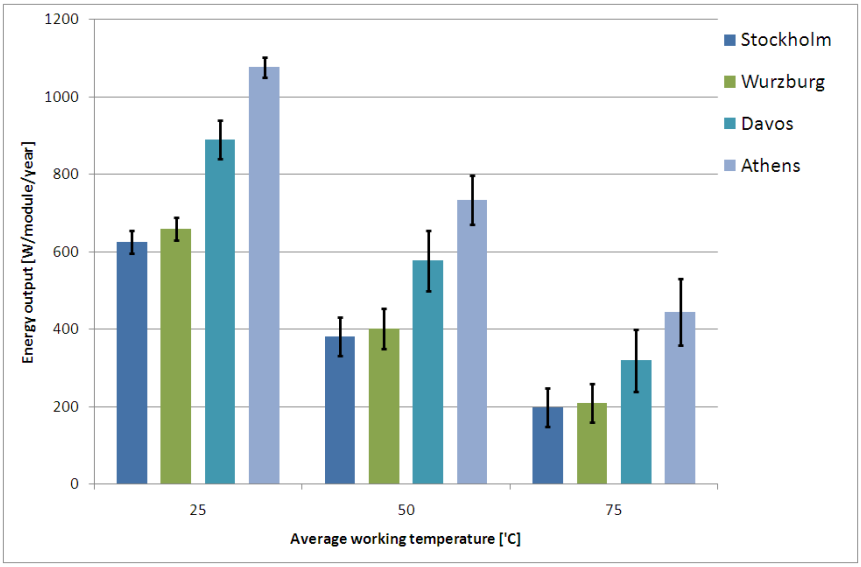
The task of the group is / was to present a document describing the validation prior to the next Solar Keymark Network meeting.

Peter Kovacs mentioned that the group was quite active but did not manage to prepare a document describing the validation of the Excel based tool for the calculation of the annual collector.

He demonstrated and explained the tool. An example of calculated results is shown in the following:



Furthermore he presented an example of the calculated outputs including their uncertainties (for a standard deviation of 2 σ)



Wolfgang Eisenmann raised the question if it is still appropriate to include the Excel based tool for the calculation of the annual collector output in the Solar Keymark scheme rules or if this is confusing e.g. with regard to the calculations required in the context with the Eco-Design-Directive.

The discussion led to the result that the method proposed by Peter Kovacs is appropriate to be included in the Solar Keymark scheme rules since it is used for the comparison of the collector performance only (and not for system performance as the Eco-Design-Directive calculation procedures do).

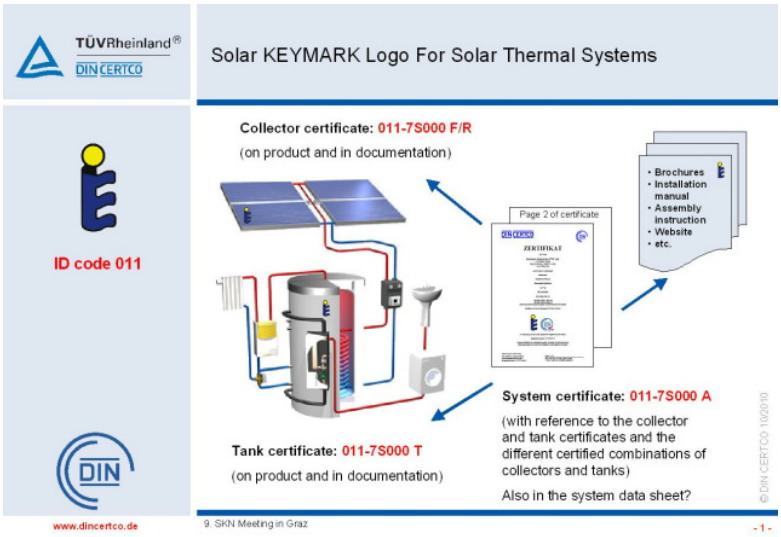
After a short discussion it was agreed that the working group shall present a document describing the validation prior to the next Solar Keymark Network meeting.

Provided the validation is successful the tool shall be included in the Solar Keymark scheme rules.

Item 13: Keymark logo and number on systems, reference to data base in the web

Sören Scholz mentioned the fact that the Solar Keymark logo has also to be displayed together with the Solar Keymark licence number (Decision D7.M8) and mentioned the problems resulting for systems from this requirement e.g. with regard to the aspect that two Solar Keymark logos exist: One for the collector and one for the system.

In this context he also presented the following slide proposing a solution for this problem



The discussion of the topic lead to the result.

Decision D3.M9 – Labelling of systems

The participants present decided that the requirement stated in EN 12976-1:2006, clause 4.7 “Every system shall have the following information durably marked on a plate or label to be visible at installation” can be considered as fulfilled if
- the label is included in the documentation supplied with the system
and
- in the documentation it is stated that the label (or corresponding page of the documentation with the label) has to be placed at the systems or the site where the system is installed
and
- an appropriate way for providing a durable fixing and display of the label is provided

The requirement mentioned above is relevant for the system label required according to EN 12976-1:2006, clause 4.7 and for the Solar Keymark system label

This decision was taken unanimously.

Item 14: New CEN Keymark database

Hoang Liauw reported about the new Keymark data base established by CEN. The motivation of the activity was that a general data base for all Keymarked certified products is missing. Hence the activity of a general database was started.

During a first meeting with CEN and the persons operating the different product specific Keymark databases, thoughts and ideas were exchanged. The main problem is that the level and structure of the information required for the various Keymarked products is quite different.

As a result of this it is expected that the CEN Keymark database and the Solar Keymark database have to be operated in parallel in order to provide the detailed information already available in the Solar Keymark database.
A discussion related to the parallel operation of the two data bases took place. Most, but not all, of the persons present see the parallel operation of two data bases critical. Main arguments were the possible inconsistency of data and the additional effort to maintain both databases.

Since the Solar Keymark database under www.solarkeymark.org is working quite well the majority of the persons present does not see any need for a CEN Keymark database.

However, it was agreed to follow the process of the implementation of the CEN Keymark database. A decision how to proceed with the CEN Keymark database will be made at appropriate time.

Item 15: System data sheet – new version

Since no new version of the system data sheet prepared by Jan Erik was available, this topic was not discussed.

Item 16: System to be included in database

Jan Erik Nielsen presented a prototype of a database for systems. The effort was appreciated. Some comments for further improvement were provided. It was agreed that Jan Erik Nielsen will update the database by including all relevant system information within the coming moths.

Item 17: Withdrawing licence from a collector in a certified system

In case a licence from a collector being part of a certified system is withdrawn it has to be ensured that also the licence of the specific systems can be withdrawn.

In order to ensure this Jan Erik Nielsen proposed that the certification bodies inform each other if they withdraw a licence.

A discussion of this proposal took place and showed that a decision requiring this will not be accepted by the certification bodies.

Note: Related to this context see also D4.M8.

Item 18: Procedure for database updating from the scheme rules

Jan Erik Nielsen reminded the certification bodies to inform him about new issued certificates at least once a month.

Furthermore he reported about requests from manufactures asking directly after they received the certificate from the certification body why their certificate is not directly available.

It was agreed to included a note on the side of the database mentioning that it is only updated every two weeks.

Decision D4.M9 – Procedure for updating the data base

The certification bodies shall inform the Solar Keymark secretariat every two weeks about the Solar Keymark certificates issued and withdrawn for updating the Solar Keymark database every two weeks.
This decision is partly updating Decision D4.M7

This decision shall be included in the Solar Keymark specific scheme rules.

This decision was taken unanimously.

Item 19: List of document required by certification bodies

At the 8th SKN meeting it was agreed under item 9 that Costas Travasaros will prepare a draft proposal for a list of documents required by the certification bodies. This list was circulated as document SKN_N0142R0.

The document was discussed and it was concluded that the document is mainly containing requirements already specified in the standard EN 12975-1 and EN 12976-1.

In order to keep the validity of the document in case of an update of the standard the document should only include references to the standard wherever possible. Furthermore this approach makes it more easy to identify aspects required additionally to EN 12975-1 and EN 12976-1.

Since Costas Travasaros was not present no decision related to this list was made. It was agreed to ask Costas Travasaros to updated the list as mentioned above and to postpone a decision on this topic to the next meeting.

Item 20: Harmonised detailed technical input format to be used when applying for Solar Keymark

In case of collector certification (both single collectors and a collector family) and in case of system certification (both single system and especially for a system family) the test institutes need detailed information.

Related to this the Document SKN_N0136R0 entitled (Parts list, drawings and specifications, Solar Keymark Systems) elaborated by Danjana Theis was presented.

The document was discussed and it was agreed to use the document as a guidance document. In order to make the document accessible it will be paced in the public area of www.solarkeymark.org.

Since the document is containing a reference to SKN_N120 Annex A this document will also be made available for download.

Item 21: Approval of latest version of specific scheme rules Annex D

A revision of Annex D of the specific scheme rules was done after the last Solar Keymark Network meeting. Jan Erik Nielsen asked to have this document approved by the Network.

After a short discussion of the document the following decision was made

Decision D5.M9 – Revised version Solar Keymark Scheme Rules, Annex D
The participants present decided to accept the document N0106R6AnnexDR5.

This decision was taken unanimously.

Item 22: Flexible collector certification

Jan Erik Nielsen asked if there were any news concerning interchangeable collector sub components such as absorber coatings, thermal insulation materials or glazing. Since this was not the case no further discussion took place.

Item 23: Keymark for solar tanks (stores) – EN 12977 –3

Jan Erik Nielsen mentioned the idea of proposing a project for writing Solar Keymark scheme rules for the certification of hot water stores based on EN 12977-3 to the SKF.

Note : SKF: Solar Keymark Network Fund; see item 31.
New wording is: Solar Certification Fund (SCF)

It was agreed that the group operating the SCF shall include the topic of writing Solar Keymark scheme rules for the certification of hot water stores based on EN 12977-3 in their next call of project proposals.

Harald Drück mentioned in the context of this topic that the correct term is store and recommended to use this term in the future.

Item 24: Keymark for Custom Built Systems – EN 12977

The standards CEN/TS 12977-1, -2, -4 and –5 are expected to be accepted as EN-Standards by summer 2011.

Based on this fact Jan Erik Nielsen mentioned the idea of proposing a project for writing Solar Keymark scheme rules for Custom Built Systems based on the EN 12977 standard series to the SKF.

Note : SKF: Solar Keymark Network Fund; see item 31.
New wording is: Solar Certification Fund (SCF)

It was agreed that the group operating the SCF shall include the topic of writing Solar Keymark scheme rules for Custom Built Systems based on the EN 12977 standard series in their next call of project proposals.
Gerard van Amerongen additionally recommended to elaborate a long term strategy how to include also back-up heaters into the EN 12977 series.

Item 25: Technical Documentation – Thermal Solar Collectors and Factory Made Systems

João Santos mentioned the following aspect

Standards EN 12975-1 (Clause 7.3) and EN 12976-1 (Clauses 4.6.2 and 4.6.3) specify the minimum information that shall be included in the “Installer Instruction Manual” (for Solar Collectors) and “Documents for the Installer and for the User” (in the case of Factory Made Systems). However, it seems that, an harmonized judgment of the specified requirements in the standards is not always applied by the Institutions which examine the Technical Documentation and grant the Certification of the Products. So, it would be

most helpful if a common standing on this situation could be achieved. Our proposal is that no SK Certificate is issued, unless the Technical Documentation complies fully with the requirements of the applicable standard. Also, we suggest that a WG is created to harmonise the criteria that is used in the evaluation of the Technical Documentation.

The topic was discussed and as a result of the discussion it was decided to create a working group for the elaboration of a guideline for the assessment of the solar collector and thermal solar systems technical documentation.

Members of the group are:
João Santos (chair), Maria João Carvalho, Enric Mateu Serrats, Peter Kovacs, Malte Kottwitz

The working group shall prepare a first proposal of a “guideline for the assessment of the solar collector and thermal solar systems technical documentation” for discussion at the next meeting.

Item 26: Solar Keymark Certification of Solar Thermal Products (Collectors and Systems)

João Santos mentioned the following aspect

Some enquiries have been presented to CERTIF by manufacturers and laboratories, concerning the possibility of SK Certification of products which have been subject to complete tests with positive results or have already started a testing process. Unfortunately, the manufacturers, at the beginning of the testing process, had not planned on certifying their products and so, no selection of samples according to SKN Scheme Rules was carried out by a Certification Body or another Institution on its behalf.
Our proposal is that this situation could be surpassed if a new selection of samples was carried out according to SKN Rules and these new samples were subject to:

- a Performance Test;
- a Visual Inspection;
- (Eventually) a Rain Penetration Test.

During the Factory Inspection, special attention should be taken, concerning the introduction of any changes in the products when compared with the ones which have been subject to tests or are already undergoing a testing process. The results of the Performance Test of the new sample which has been selected should be compatible with the values of the test performed on the original sample prior to the certification process.

The topic was discussed and it was agreed that no changes will be made in the current procedures related to this aspect.

Item 27: Solar Keymark Certification of flat plate thermal collectors with absorbers of different pipe diameters

João Santos mentioned the following aspect

In the situation that the collectors present the same constructional characteristics and so could be considered as belonging to the same family according to SK Scheme Rules, but differ only in the diameter of absorber ducts which guide the flow of the heat transfer fluid, should the collectors with the different diameters of pipes be subject to the complete tests of EN 12975? Or should Annex C of EN 12975-1 be taken in consideration for the changes in the design of the Absorbers (which implies that all the tests should be performed, with the exception of Rain Penetration, External Thermal Shock and Mechanical Tests)? Or, simply, if one of the families with certain dimensions of the internal pipes is considered as reference and is subject to complete tests (for example, with 24 mm / 12,7 mm diameter pipes), then families with other dimensions of the internal pipes (for example, with 22 mm / 10 mm and 18 mm / 8 mm diameter pipes) also need to be fully tested?
Our proposal is that, due to the different technical options which have been mentioned above and may be in use by the Organizations involved in SK Certification, a common standing is reached.

The topic was discussed and there was a consensus that collectors with different absorber materials are not part of one collector family.

Concerning the question if collectors only differing with regard to the diameter of the absorber pipes (same absorber material) are considered as part of one collector family it was decided to establish a working group consisting of the flowing persons:

Franz Helminger (chair), Harald Dehner, Ralf Köbbeman-Rengers, Maria João Carvalho, Peter Kovacs

The task of this working group is to prepare a proposal under which conditions collectors with absorbers with different pipe diameters, different pipe distances and different fin thickness can be considered as part of one collector family.

Item 28: Interim Solar Keymark

Rainer Koch (not present at the meeting) expressed the need for a procedure allowing interim Solar Keymark certification.

The topic was discussed but no urgent need for a interim Solar Keymark certification is seen at present since enough testing, certification and inspection capacity is available.

Item 29: Requirements on OEM-certification

Susanne Hansson mentioned the increasing number of OEM manufactures (Original Equipment Manufacturer). Due to this rules are required where and what has to be inspected. A proposal for this was elaborated by Susanne Hansson.

After discussing and modifying the proposal there was an agreement on the following:

Requirements for holders and manufacturers concerning Solar Keymarked certified collectors.

#	CASE 1	CASE 2		CASE 3	
	License holder and manufacturer same	License holder	Manu-facturer	OBL[1]	OEM[2]
Sample selection	X		X		X
Initial Inspection	X		X		X
- Receiving control	X		X		X
- Production procedures	X		X		X
- Control	X		X		X
- Complaints management	X		X		X
- Records	X		X		X
Tests	X		X		X
- Manual	X	X		X	
- Marking	X	X		X	
Surveillance Insp (Ann or ev 2nd y)	X		X		X

[1)] Own Brand Labeller

[2)] Has a Solar Keymark license for the product and therefore already sample and insp and tests are carried out

Item 30: Solar Keymark Secretariat – financial issues

Concerning the financing of the Solar Keymark Secretariat, activities of ESTIF and the chairman of the Solar Keymark Network Jan Erik Nielsen presented a budget as specified in Document SKN_N0135R1.
With regard to the services provided by ESTIF for the SKN and Solar Keymark in general, the ESTIF related part of document SKN_N0135R1 was presented by Pedro Dias.

The proposals were discussed and the following decision was made.

Decision D6.M9 – Fees for the SKN operation in 2010 & 2011

The participants present decided that the budget of the SKN secretariat (including chairman) for 2010 is in total 56.721 €.
Note: With regard to the budget of the SKN secretariat (including chairman) for 2010 this decision replaces decision D3.M7.

The budget of the SKN secretariat (including chairman) for 2011 is in total 63.620 €.
Furthermore the activities of ESTIF described in document SKN_N0135R1 for an amount of 20.360 € are accepted.

This decision was taken unanimously.

Item 31: Solar Certification Fund

Harald Drück mentioned that due to the reduced fees and the only slightly reduced payments from industry, money for the Solar Keymark Network will be generated (see minutes of last meeting item 7 and 38 related to revised Solar Keymark scheme rules). For the year 2010 an amount of approx. 100.000 EURO and for 2011 of 120.000 EURO is expected. The intention is to use this money for the further development certification of solar thermal products and activities closely related to this. This money should be managed by a “Solar Certification Fund”.

At the 8th meeting it was agreed under item 38 to establish a working group to elaborate a first proposal for the implementation of the “Solar Certification Fund ”.

This working group is consisting of the following persons:
Jan Erik Nielsen (lead), Harald Drück, Korbinian Kramer, Stephan Fischer, Costas Travasaros, Joakim Bynström, Xavier Noyon, Sebastian Laipple, Gerard van Amerongen or Teun Bokhoven, Christian Stadler, João Santos and Sören Scholz.

Jan Erik presented the document SKN_N0145R1 related to the Solar Certification Fund. The document was discussed and from Jaime Fernandez Gonzalez-Granada it was mentioned that the composition of the SCF SG (Solar Certification Fund Steering Group) is not balanced.

At the end of the discussion the following decision was made

Decision D7.M9 – Solar Certification Fund (SCF)

The participants present decided to accept the document SKN_N0145R1 as basis for operation of the Solar Certification Fund.
Representatives for the SCF Steering Group shall be nominated by the specific groups of manufacturers, test labs, certification bodies, ESTIF and CCB until Oct 20st, 2010. The nomination shall be performed by means of an Email to the Solar Keymark secretary Jan Erik Nielsen.

The first meeting of the Solar Certification Fund Steering Group will take place on October 25, 2010 at 13:00 hrs at Stuttgart.

This decision was taken unanimously.

Note (Jan Erik Nielsen): The nomination took place in the coffee break just after the decision was taken, the result was:
Manufacturers:

- *Ralf Köbbemann-Rangers, BDH/Bosch*
- *Rob Meesters, Solahart*
- *Wolfgang Eisenmann, BSW/Wagner*

Test labs:

- *Enric Mateu Serrats, CENER*
- *Andreas Bohren, SPF*

Certification bodies:

- *João Santos, CERTIF*
- *Sören Scholz, DIN CERTCO*

CCB:

- *Hoang Liauw*

ESTIF

- *Teun Bokhoven, Chairman of ESTIF S&C WG*
- *Pedro Dias, ESTIF Secretariat*

Solar Keymark Network

- *Harald Drück, Chairman*
- *Jan Erik Nielsen, Secretary*

Item 32: Information from TC 312

Jan Erik Nielsen reported about the unanimously election of Costas Travasaros as the new chairman of TC 312 at the TC 312 meeting on Oct. 5, 2010 at Graz. He also motioned that the TC 312 secretariat with Vassiliki Drosou as secretary is working very well.
Harald Drück added that the next TC 312 will take place on September 2, 2010 at Kassel Germany in conjunction with the ISES solar world congress.

Item 33: Information from QAiST-Project

The Project QAiST (Quality assurance in solar thermal heating and cooling technology – keeping track with recent and upcoming developments) started officially on June 1st, 2009 and has a duration of 3 years. Project co-ordinator is Pedro Dias from ESTIF.

He presented the project by using the presentation attached as Annex B.
After the presentation a few questions were asked and answered.

Item 34: Eco-design and energy labelling

Gerard van Amerongen mentioned that intensive activities related to the aspects of eco-design and energy labelling of solar thermal systems and components have been performed financed by ESTIF during the past years.

He presented the topic with the presentation attached as Annex C.
During and after the presentation short discussions took place related to specific topics.

Xavier Noyon mentioned the document elaborated by ESTIF entitled “Guiding the solar thermal industry through the working documents on eco design and energy-labelling of water heaters and hot water storage tanks”. This document is attached as Annex D.

Item 35: Information on CE marking

Jan Erik Nielsen reported that a proposal for CE-marking of solar collectors was submitted to the EC

He also mentioned that according to Amilcar da Costa, EU Programme Manager an official reply form the EC can be expected by the end of October 2010.

Item 36: IEA SH&C Task 43 on “Rating and Certification Procedures” and Global Certification

With the Solar Heating and Cooling Programme (SH&C) of the International Energy Agency (IEA) new Task named “Solar Rating and Certification Procedures - Advanced Solar Thermal Testing and Characterisation for Certification of Collectors and Systems” was officially launched on June 1, 2009.

The operating agents of the Task are Les Nelson for the US and Jan Erik Nielsen for Europe. Jan Erik Nielsen mentioned the relevance to the activities to be carried out within Task 43 for Solar Keymark Certification. Furthermore he emphasised that Task 43 provides and excellent basis to agree on a global approach for certification of solar thermal products.

The latest meeting was held at Graz, Austria on Oct. 5 & 6, 2010.

The next meeting will be on combined with the ASES (American Solar Energy Society) National Solar Conference, on May 16-21, 2011 at Raleigh North Carolina (NC), USA. In combination with this meeting an industry workshop will take place

With regard to **global certification** Jan Erik Nielsen mentioned that he will prepare first draft scheme rules for a global certification procedure of solar thermal collectors.

Hoang Liauw reported about considerations of CEN to open the Solar Keymark towards a global certification scheme.

Jaime Fernandez Gonzales-Granada proposed the idea of preparing an overview related to the globally acceptance of the Solar Keymark. The idea was appreciated.

Rob Meesters mentioned also www.solarthermalworld.org as a good source for all kind of information related to solar thermal heating and cooling.

Item 37: Change in structure for SKN and its structure

At the last Solar Keymark network meeting approx. 40 to 50 persons were participating. In order to ensure that Solar Keymark Network meetings can also in the future be performed in an effective way the current structure of the meetings might have to be changed. Hence it was decided at the 8th SKN meeting under item 37 that the Solar Keymark Chairman and Secretary should propose a new structure of the Solar Keymark network to be presented by the next meeting.
A fist proposal was prepared and distributed on Sept, 23, 2010 as document SKN_N140R0.

Jan Erik Nielsen proposed not to discuss the document because his impression is that there is no actual need of changing of the Solar Keymark network structure.
A short discussion took place related to this aspect and also led to the result that the Solar Keymark network structure does not need to be changed.

It was proposed by some participants that specific groups could also meet before the meetings in order to discuss relevant topics and to exchange information. The Solar Keymark chairman and secretary mentioned that this is already done by some groups and encouraged others to do this as well.

As a result of the discussion it was finally agreed to change only the structure of the meetings in such a way that all topics where a decision is required are placed at the top of the agenda.

Item 38: Experience with the misuse of the Solar Keymark

Sören Scholz reported about problems related to the misuses of Solar Keymark especially in China. If DIN CERTCO gets aware of a misuse they usually try to take action. With regard to this the main problem is that DIN CERTO only has limited means since they are not the legal owner of the Keymark (this is CEN).

It was agreed that examples of misuses should be send to Sörenz Scholz until March 1st, 2011 for presentation by him at the next SKN meeting. Furthermore Hoang Liauw will report about the experience and approaches of CEN related to this aspect.

Item 39: Listing of accreditation certificate in case of empowered lab

The question was discussed if it is necessary to list test labs accreditation certificates when the test lab is already approved by an empowered certification body.

The topic was discussed and there were several statements that this is still considered as necessary.

Item 40: Rain penetration & exposure test

Korbinian Kramer mentioned that he has elaborated a proposal related to rain penetration and exposure testing an is ready to present this proposal.

There was a consensus within the participants present that the topic should be postponed since the document was not circulated in advance and hence it would be quite difficult to make a decision.

Item 41: Date and place of next meetings

The spring 2011 meeting is scheduled for

March 22nd 13:00 hrs to March 23rd 14:00 hrs

at Brussels. Hoang Liauw from CEN will investigate the possibilities to host the meeting.

The autumn 2011 meeting is scheduled for

October 5th 9:00 hrs to October 6th 12:00 hrs

at Madrid, Spain in the premises of AENOR

Item 42: Any other business

Item 42.1: Recognition of test reports based on different versions of EN 12975

Rob Meesters mentioned the problem that some public authorities or organisations require a collector test according to a specific version of the EN 12975(e.g. 2006) and do not accept test report based on an other version of the same standard.

Harald Drück proposed to solve the problem by using decision D1.M1. related to test results based on / new (revised) standards.

Item 42.2: Harmonised inspection check list

Korbinian Kramer asked the question if the “Solar Keymark Inspection Working Group” will be able to prepare harmonised inspection check lists within the next months.

Schören Scholz mentioned that he thinks that draft versions of the lists will be available for a discussion and decision at the next meeting.

Item 43: End of meeting

Harald Drück thanked the participants for attending the meeting and for their constructive discussions. He closed the meeting at 11:15 hrs.

The minutes were prepared by Harald Drück (Chairman of the Solar Keymark Network) in assistance with Jan Erik Nielsen (SKN Secretariat) and Maria João Carvalho (proof reading)

Stuttgart October 17th, 2010

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Annex A: List of participants

9th Meeting, GRAZ, OECOBER 7TH & 8th, 2010

NAME	ORGANISATION
Alexandar Prodanov	Solar Test Center in Skopje
Alfred Brunger	EXOVA
Allard Slomp	KIWA
Andreas Bohren	SPF
Bardo Schettini	CCMC
Carsten Lampe	ISFH
Danjana Theis	IZES/TZSB
Emanuel Godal	TSU Piestany
Enric Mateu Serrats	CENER
Francois Xavier Ball	CERTITA
Franz Helminger	AIT
Gerard van Amerongen	vA Consult / Holland Solar
Giombattista Traina	ISTITUTO GIORDANO S.p.A.
Hanspeter Weiss	Swissolar
Harald Dehner	ASiC
Harald Drück	ITW
Hoang Liauw	CEN/CMC
Jaime Fernandez Gonzalez-Granda	AENOR
Jan Erik Nielsen	SKN
Jim Huggins	FSEC
João Santos	CERTIF
Julien Heintz	CETIAT
Kevin DeGroat	Antares
Korbinian Kramer	ISE
Malte Kottwitz	TÜV Rheinland
Maria João Carvalho	INETI-LECS
Mark Thornbloom	SRCC
Patrick Hauser	TiSun / Austria Solar
Pavel Vanek	ITC Zlín
Pedro Dias	ESTIF
Peter Kovacs	SP
Radek Matějka	ITC Zlín
Ralf Koebbemann-Rengers	BDH
Rob Meesters	Solahart
Roman Dlabaja	ITC Zlín
Sebastian Laipple	SPF

NAME	ORGANISATION
Stamatios Babalis	Demokritos
Stephan Fischer	ITW
Susanne Hansson	SP CERT
Sören Scholz	DIN CERTCO
T. Panou	ELOT
Thomas Rouweler	KIWA
Wolfgang Eisenmann	Wagner /BSW
Xavier Noyon	ESTIF

Annex B:
Presentation related QAiST

QAiST
Quality Assurance in Solar Heating and Cooling Technology

ESTIF Standard & Certification Working Group meeting

Graz, Austria
7-8 October 2010

Intelligent Energy Europe

Work in Progress

- Update on the status of the WP
- Tasks on the running period

D 2.1 Performance of mid temperature collectors (CENER lead)

D 2.2 Durability of collectors and materials (ISE lead)

Broad consensus revision proposals for the EN12975 standard which is to be revised in two steps:

- **First step** driven by EC request for CE marking. Draft for public inquiry ready in spring 2011, implemented in 2012
  - Contents are e.g. harmonized annex ZA, tracking collectors in the scope, improved exposure and rain penetration tests, “classes approach”
- **Second step** an EN ISO standard? Draft for public inquiry in 2012
  - Contents are e.g. Task X method on selective coatings integrated, focus on ETC:s

D 2.3 Guide to EN 12975 (SP lead, Due June 2011)

- Distribution of work and agreement on contents concluded
- Five main partners working on two deliverables --->>
  - LNEG-Durability
  - ISFH- SS testing of unglazed collectors
  - DEMOKRITOS- SS testing of glazed collectors
  - AIT- Definitions and interpretation of test results
  - SP –Quasi dynamic testing and the rest
- All remaining partners provide additional input and review

WP 2: Solar thermal collectors

T2.3 Performance calculation tool
- Presented (#12) at SKN meeting
- Fine tuning
  - Inclusion of uncertainty remains
- Extension to unglazed and tracking/concentrating
- Foreseen for June 2011

WP 3: Solar thermal systems

Improvement of the standards:

Factory Made Systems / Custom Built Systems
(EN 12976 Part 1 and 2) / (CEN/TS 12977 Part 1,2,4 and 5 and EN 12977 Part 3)
- **Clear separation of REQUIREMENTS and TEST METHODS**
- **Clarification of applicable reliability tests (DIFFERENT TYPES of SYSTEMS); Need of additional reliability tests.**
- **Clarification of the aspects related to documentation (USER; INSTALLER)**
- considering the possibility of future certification of Storage tanks and complete systems according to improved standards

WP 3: Solar thermal systems

Improvement of the standards (cont.):

Factory Made Systems / Custom Built Systems

Outcomes

- First proposals for above aspects on Factory Made Systems were prepared and presented in CEN TC 312 WG2/WG3 Meeting in Munich (June 2010);
- Profiting from the ongoing Round Robin for Systems (QAiST – WP4), some aspects related to clarification of tests and of analyses of documentation are being addressed

WP 3: Solar thermal systems

Development of an extrapolation procedure

- that proves to be valid for different types of systems allowing for flexibility in the definition of families of systems and reducing test costs for the manufacturers

Outcomes:

- Two different methodologies now available in Solar Keymark Scheme Rules;
- Application of these methodologies by Labs;
- Proposals for future revision expected ;

WP 3: Solar thermal systems

Development of a procedure for converting the test result into results valid for the “EU reference tapping cycles”

- necessary for Labeling of systems according to European Directive for Eco-Design
  - How to apply this procedure to tests performed with DST/CSTG test methodologies?

Outcomes:

- First application with DST for Factory Made and Custom Built

WP 3: Solar thermal systems

Definition of the concept of **Hot Water Comfort** for Solar Thermal Systems

Outcomes:

- First document with the revision of the existing test methods for assessment of Hot Water Comfort was prepared
- Presentation and discussion at CEN TC 312 WG2/WG3 meeting / some additional methods suggested.

WP 4: Quality assurance of testing

- T 4.1 Solar Keymark Network
- T 4.2 Round Robin performance testing thermal collectors according to EN 12975
- T 4.3 Round Robin testing of factory made systems according to EN 12976

WP 4: Quality assurance of testing

- T 4.1 Solar Keymark Network
  - Support the work of the SKN
    - Rapperswil March 15th and 16th 2010
    - Graz, Austria October 7th and 8th
    - Brussels (?), March 22nd and 23rd

WP 4: Quality assurance of testing

- T 4.2 Round Robin Collector
  - Organization, managing and evaluation by independent body (IfEP GmbH)
  - 13 flat plate and 13 evacuated tubular collectors with CPC collectors
  - Each participant test 2 collectors of both types (4 tests)
  - Report to IfEP by 31.12.2010
  - Rotation of the test collectors in winter 2010/2011
  - Final results expected October 2011
  - Participants: ***CENER, CSTB, DEMOKRITOS, AIT, LNEG, IPIEO, ISE, ISFH, ITC, IZES, SP TÜV, ITW***

WP 4: Quality assurance of testing

- T 4.2 Round Robin Collector
  - Additional participants
    - ASIC
    - Bosch Solarthermie GmbH
    - 6 North american test labs
  - Collectors, transport, evaluation and all other expenses caused by the Round Robin will be covered by the additional participants
  - In order not to influence the result of the QAiST Round Robin the evaluation will be done in parallel by IfEP

WP 4: Quality assurance of testing

- T 4.3 Round Robin System
  - Managing and evaluation by independent body (IfEP GmbH)
  - 9 thermosyphon and 9 forced circulation systems
  - Each participant will test 2 systems (4 tests)
  - Report to IfEP by 31.12.2010
  - Rotation of the test collectors in winter 2010/2011
  - Final results expected October 2011
  - Participants: ***CENER, CSTB, DEMOKRITOS, LNEG, ISE, ISFH, IZES, TÜV, ITW***

WP 5: New areas for quality assurance systems

Objectives

– To develop a basic set of requirements and test methods for emerging areas of solar thermal energy

Application is already on the market => need for quality assurance measures not covered by any standards so far e.g. large solar thermal systems, solar cooling

OR

Application is new on the market => no quality assurance measures existent yet e.g. combined solar & heat pump systems

WP 5: New areas for quality assurance systems

Structure of the WP

WP 5: New areas for quality assurance systems
Leader: Ivan Malenkovic, AIT

Task 5.1	Task 5.2	Task 5.3
Performance references and test methods for HP+ST Leader: Ivan Malenkovic, AIT	Function and yield controlling of large solar thermal systems Leader: Klaus Vanoli, ISFH	Quality requirements for solar cooling systems Leader: Pilar Navarro, ITC

WP 5: New areas for quality assurance systems

Planed outcome (1)

Task 5.1: Performance references and test methods for HP+ST

- Market survey on available data about combined systems
- Elaboration of a system overview of combined systems
- Survey on available testing standards
- View and comparison of the existing testing standards

- Classification of different systems
- Development of quality enquiries on combined systems based on the previous research results

D5.1: Technical report on combined ST+HP systems with system overview and quality requirements

WP 5: New areas for quality assurance systems

Status and outlook Task 5.1

– A questionnaire for the unified system description has been developed and distributed to the system manufacturers.

– After collecting and analysing the feedback, the work on the system classification will start. First concepts are expected until the end of the year.

WP 5: New areas for quality assurance systems

Status and outlook Task 5.1

– The collection of relevant standards and other normative documents has started. The documents will be analysed and used as a starting point for the development of test method proposals. A list of all documents will be available on the project web page until the end of the year.

– A workshop on system classification and test methods will be organised early next year

WP 5: New areas for quality assurance systems

Planed outcome (2)

Task 5.2: Function and yield controlling of large solar thermal systems

- Updating the market survey on available data on F&YC based on previous work by contacting major stakeholders in each participating country
- Exchange of technological descriptions and technical discussion on various F&YC systems in a workshop

- Objective redefinition: Strategic FYC planning?

D5.2: Setting up basic requirements for a FYC Roadmap?

WP 5: New areas for quality assurance systems

Status and outlook Task 5.2

– Currently available function and yield control concepts have been collected and reviewed in a document available on the project web page (restricted area).

– The new VDI 2169 guideline is available as a draft version (Gründruck). An internal discussion (workshop) between project partners will be initiated.

WP 5: New areas for quality assurance systems

Status and outlook Task 5.2

- was concluded in the group, that the final goal of this task – harmonized technical approach on F&YC – cannot be reached within the project, also due to the fact that only one product is currently commercially available. A new task objective is currently being defined in an ongoing discussion. One possible objective would be to set the basis for the strategic roadmap for the development and implementation of F&YC.

WP 5: New areas for quality assurance systems

Planed outcome (3)

Task 5.3: Quality requirements for solar cooling systems

- **Definition of requirements for durability and performance evaluation for solar cooling systems**

D5.3: Technical report on the requirements for durability and performance testing for solar cooling systems

WP 5: New areas for quality assurance systems

Status and outlook Task 5.3

- A standardised questionnaire has been developed and distributed to collect the data on running solar cooling systems in participating countries.
- The collected data including qualitative assessment of the installations in terms of performance and quality will be analysed until the end of the year.

WP 5: New areas for quality assurance systems

Status and outlook Task 5.3

- The collection of relevant standards and other normative documents has started. The documents will be analysed and used as a starting point for the development of test method proposals
- Early next year, a definition of best practice and lessons learned will be published on the project web page (restricted area)

WP 6&7: Communication and Dissemination

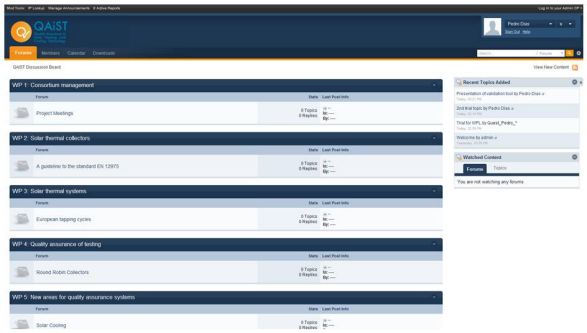
T6.1 Distr. dissemination of project results

- Prepare initial info-release for 2010
- Previously: update of national reports from SK II
  - AT , DK, FR, DE, GR, IL, IT, PL, PT, SP, SE

T6.3 Project Website

- New website (ESTIF) & intranet (discussion board): October

WP 6&7: Communication and Dissemination



WP 6&7: Communication and Dissemination

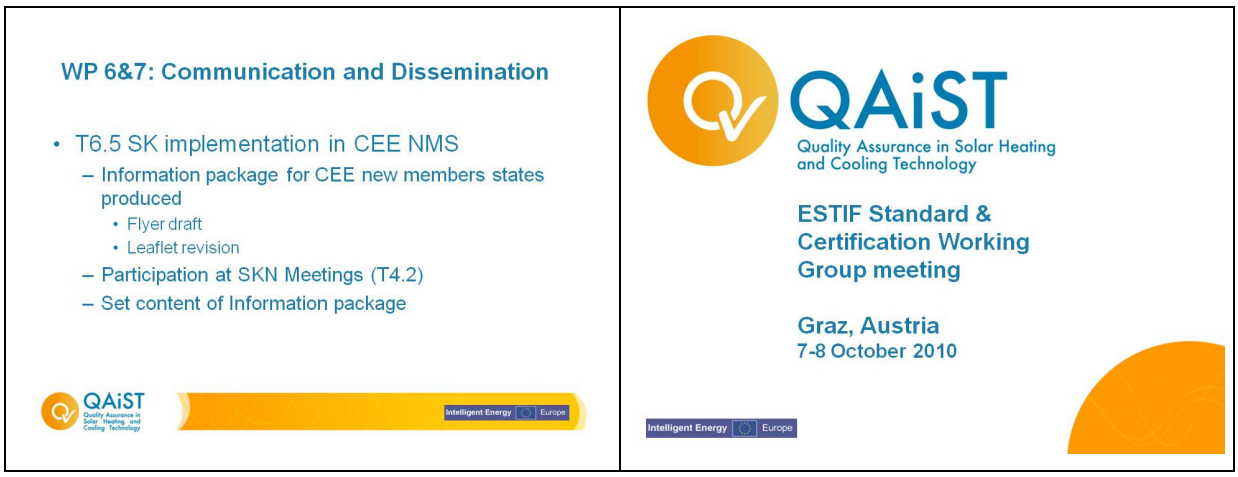
T6.5 WP6/ International harmonization

- Broad European participation in IEA SH&C Task 43 on global standards and certification--> Harmonization in practice!
- Agreed with ISO/TC 180 to have the ISO 9806 revision follow closely that of EN 12975

WP 6&7: Communication and Dissemination

T6.5 SK implementation in CEE NMS Workshop with IPIEO

- Workshop Northern Europe
  - Proposal IPIEO – Spring 2010
  - Implications of current issues in Poland?
- Negotiations for workshop in SEE
  - End November 2010
    - Romania: REECO


WP 6&7: Communication and Dissemination
• T6.5 SK implementation in CEE NMS
– Information package for CEE new members states produced
• Flyer draft
• Leaflet revision
– Participation at SKN Meetings (T4.2)
– Set content of Information package
QAiST
Quality Assurance in Solar Heating and Cooling Technology
ESTIF Standard & Certification Working Group meeting
Graz, Austria
7-8 October 2010
Intelligent Energy Europe

Annex C:
Presentation related to Eco-design and energy labelling

vAConsult

Renewable energy in the built environment consultancy

Eco-design
- Update -

Gerard van Amerongen
ESTIF

Eco-design

vAConsult

Short introduction

- Scope of Eco-design
  - Solar thermal system in combi with backup heater
- It will not be the same as Solar Keymark
  - (for solar) only performance
  - No certification scheme needed
  - No third party testing
- It does use some of the same standards
  - Only aimed at performance
  - Sometimes somewhat improved
  - Main difference: Eco-design reference conditions

Eco-design

vAConsult

Short introduction

- Two relevant developments:
  - Space heating (“Lot 1”)
  - Water heating (“Lot 2”)
  - Combi systems (“Lot 1 & Lot 2”)
- Space heating:
  - Last inputs February 2010, since then nothing new
  - Seems good for us, Will be picked up
- Water heating:
  - Documents June 2010 have our proposals included:
    - Installer label en better applicable methods
  - Extra: energy label for heat storages

Eco-design

vAConsult

Currently relevant

- Water heating (lot 2) must be concluded:
  - ESTIF three main proposals / comments
    - Methods for backup heater
    - Efficiencies
    - Installer label issue with ‘minimum values’
  - And a lot of small corrections and improvements

Eco-design

vAConsult

What do we have?

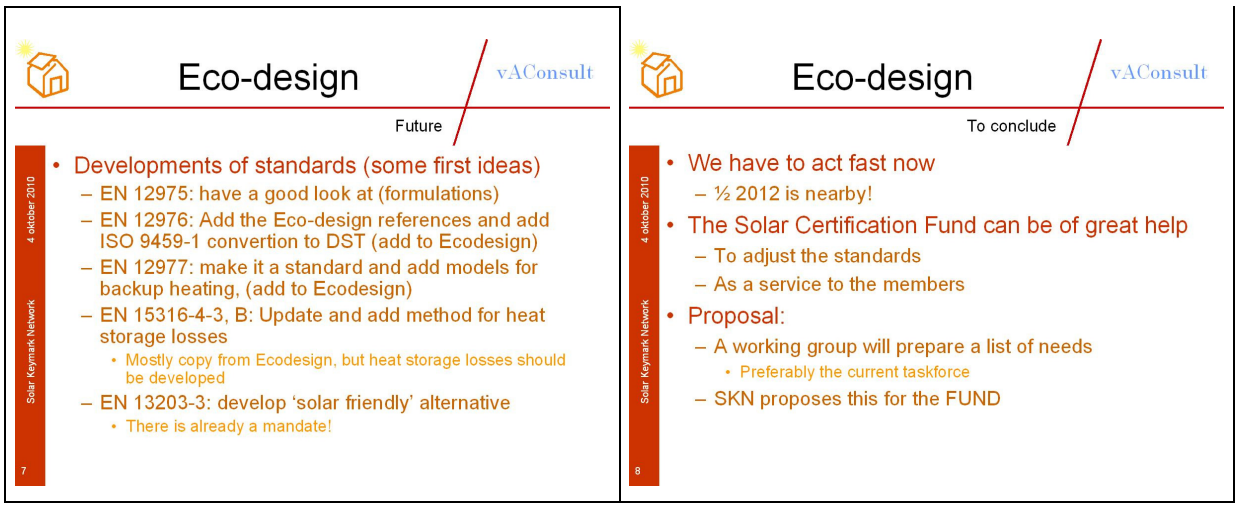
- Test methods are (mostly) according to our standards:
  - EN 1297.. series
  - EN 15316-4-3, B (somewhat improved)
- And a ‘foreign’ standard: EN 12302-3
- Main differences:
  - Eco-design references (climate and load)
  - Some improvements
  - EN 12302-3 was never used and is new

Eco-design

vAConsult

Future

- Eco-design is mandatory
  - At the earliest: ½ 2012
  - We have to prepare ourselves!
- ESTIF will help her members
  - Communication
  - Support
- The Solar Keymark can help:
  - Incorporate the requirements of Eco-design and presents the results in the correct form
  - Or develop tools to help the license holders as service


Eco-design
vAConsult
Future
Solar Keymark Network 4 oktober 2010
• Developments of standards (some first ideas)
– EN 12975: have a good look at (formulations)
– EN 12976: Add the Eco-design references and add ISO 9459-1 convertion to DST (add to Ecodesign)
– EN 12977: make it a standard and add models for backup heating, (add to Ecodesign)
– EN 15316-4-3, B: Update and add method for heat storage losses
• Mostly copy from Ecodesign, but heat storage losses should be developed
– EN 13203-3: develop ‘solar friendly’ alternative
• There is already a mandate!
7
Eco-design
vAConsult
To conclude
Solar Keymark Network 4 oktober 2010
• We have to act fast now
– ½ 2012 is nearby!
• The Solar Certification Fund can be of great help
– To adjust the standards
– As a service to the members
• Proposal:
– A working group will prepare a list of needs
• Preferably the current taskforce
– SKN proposes this for the FUND
8

Annex D:
ESTIF “Eco-design and energy labelling guideline”

European Solar Thermal Industry Federation

Guiding the solar thermal industry through the working documents on eco design and energy-labelling of water heaters and hot water storage tanks

Energy labelling is certainly one European initiative, which has gained high visibility with end consumers all over Europe. The European solar thermal industry has naturally welcomed the fact that after fridges, washing machines and other product families, water heaters and space heating systems have been identified as eligible for this energy labelling.

However the Commission’s initial proposals were ill conceived. The “system approach” adopted by the Commission for water heaters and space-heating systems’ definitions ignored the solar thermal market condition. It would have allowed labelling only for those products placed on the market as a combination of a solar system and another (fossil fuel) heat generator from the same supplier, thus excluding the solar thermal specialists’ distribution channel.

Moreover, the methodology put forward for measuring solar systems’ energy performance was based on a standard, which is not used by our industry and would have required a considerable amount of extra work and costs from solar thermal specialists.

Less than a year after ESTIF established a special task force and appealed to his members for a special financial contribution, the current documents reflect the considerable progress achieved since then.

This document aims at providing simple answers to the most Frequently Asked Questions (FAQ) that we have received on the topics of eco design and energy labelling.

This document differs from:

- The official ESTIF comments on the working documents, which have to be submitted by 3 September to the Commission on behalf of ESTIF. These comments will be elaborated by the ESTIF task force consisting of Gerard van Amerongen (Holland solar and ESTIF expert); Christian Stadler (General solar), Wolfgang Eisenmann (Wagner & Co.), Xavier Noyon (ESTIF Secretary General)

- The ESTIF Reference document on the eco design and energy labelling of water heaters and space heating systems which will be elaborated by the ESTIF standard & certification working group (planned publication: October 2010)

European Solar Thermal Industry Federation

FREQUENTLY ASKED QUESTIONS

What is the overall purpose of the European legislation on eco design and energy labelling?

The eco design process relates to a framework directive adopted in 1992, which aims at reducing the environmental impact of “mass” products, especially their energy consumption. Eco design covers the energy consumption throughout the whole life cycle (manufacturing - in use - end of use) of products as well as the nitrogens oxides (NOx) emissions.

The eco design process is as follows:

1. In a first phase, preliminary studies identify which product families present a significant potential for improvement in their energy consumption.

2. In a second phase, the products families identified in phase I are the subject of additional studies to establish the level energy efficiency improvement which can be achieved with the technologies available, at what costs and if the industry and the consumers can bear these costs

3. Finally, as in the current case, legislation introduces energy efficiency requirements for products sold across the EU. Those mandatory minimum efficiency requirements will encourage those products’ manufacturers to improve product design with the view to lower the energy consumption in use.

As another means of reducing energy consumption, the energy labelling obligations rely on the fact that household appliances such as water heaters are highly visible to the consumer, labelling is designed to increase consumer awareness of products’ true energy consumption through reliable and clear information at the points of sale.

Which products are covered by these new eco design and/or labelling obligations?

Energy efficiency and labelling requirements apply to water heaters using gas, oil and electricity; heat pumps and solar thermal as well as to hot water storage tanks.

European Solar Thermal Industry Federation

It is specified that these legislations do not apply to district and central heating, solid fuel boilers, bio fuel boilers and components such as burners, heat exchangers and controls. These products are either covered by separate legislations (lots) or not at all.

Space heating and combi-systems are not within the scope of these texts; with respect to eco design and energy labelling they will also be the subjects of similar working documents to be circulated for comments by the end of 2010.

How are water heaters and hot water storage tanks defined?

A water heater is defined as a system:

- *"…connected to an external supply of drinking sanitary water;"*
- which *"…generates and transfers heat to deliver drinking or sanitary hot water…"*
- *"…has one or more than one heat generators…"*
- -*" …does not provide heat for room heating…"*

A "hot water storage tank" is a (tank) "*vessel for storing hot water including with additives…"*

Which solar thermal products are included within the scope of these legislations?

These legislations define:

- A solar water heater as *"a water heater, which uses solar heat for heat generation".*
- A solar pre heat system as "*a device consisting of as solar collector and other components including storage tank for the delivery of thermal energy to preheat water prior to its entry into a further heat generator".*
- A solar collector as *" a device designed to absorb solar irradiations and to transfer the resulting thermal energy to a fluid passing through it"*

Concretely the legislations will apply to two families of products:

- Thermal solar energy systems, in combination with the conventional heaters or heat pumps
- Hot water storage tanks

European Solar Thermal Industry Federation

Who will be affected by these legislations (manufacturers, distributors, installers)?

The eco design requirements affect manufacturers, since water heaters and tanks will have to reach a certain level of energy efficiency to be marketed in the 27 EU members. They also affect the rest of the distribution chain (distributors, dealers and installers) but only to the extent that they will no longer be allowed to distribute, sell and install certain products, which do not meet the standards imposed by eco design.

The energy labelling obligations are information obligations. For all water heaters and hot water tanks marketed in Europe, information on their energy performance will have to be made available. The most visible part, of course, is the energy label but more importantly, background information must be provided in a document entitled "product fiche" (Annex 111 working document on energy labelling) which sums up the measurement (tests) results and methodology used.

This information obligation affects differently "supplier" and "dealer". The supplier is responsible for providing the information and dealers are responsible for ensuring that this information is made available to consumers.

The "suppliers" and "dealers" are defined in the labelling framework directive (2010/30/EU published on May 19th 2010).

- *A "dealer" means a retailer or other person, who sells, hires, offers for hire purchase or displays {water heaters and hot water storage tanks} to end-users,*

- *A "supplier" means the manufacturer or his authorized representative in the Community or the person, who places the {water heaters and hot water storage tanks} on the Community market,*

- *"Placing on the market," means making a product available for the first time on the Union market (27 EU members)*

Which additional requirements will be introduced for manufacturers, distributors, and installers?

Eco design requirements will demand that the water heaters and hot water storage tanks placed on the market in Europe reach gradually (1, 3 and 5 years deadline) a given level of energy efficiency in use.

Energy labelling and standard product information will require that suppliers and dealers of water heaters and hot water storage tanks provide information on the energy consumption

and/or energy efficiency of their products. This information can take the form of an energy label indicating the energy class of the products and must be complemented by information on the measurement of the energy performance under specific conditions of use (product fiche) etc.

What is the “installer label”?

The installers who offer for sales a combination, of a solar thermal system (“solar pre heat system”) with a conventional boiler from different suppliers will have the obligation to indicate in their commercial proposal (quote, final offer etc…) the energy efficiency and energy efficiency class of the proposed combination.

The information and labelling obligations, which are the object of these texts, apply to water heaters and hot water storage tanks sold in the EU. Such systems were defined originally as complete water heating systems, meaning the combination of a solar thermal system (“*solar pre heat system”*) with another heat generator (classically fossil fuel boilers). These complete products are available only from certain market players and are not the type of products that most solar specialists place on the market (typically, solar collectors and/or stand alone solar thermal systems).

ESTIF has demonstrated to the Commission that the vast majority of consumers who buy solar systems throughout Europe would not benefit from this valuable information if the scope of the obligations was not extended to offers by installers for *“combinations of solar preheat systems with water heaters placed separately on the market by suppliers”.*

Which test methods (measurement) will apply to solar thermal products?

There are three options for the determination of the solar output. All methods are based on exiting standards or pre standards, adapted for the eco design and energy labelling legislation

1. The “EN 13202-3” method
   For complete systems (solar thermal system and conventional heater) : each combination of components is tested separately.

2. The “EN 15316-4-3, B” method
   For solar systems, when the collector can be tested separately from the system. The collector (EN 12975), the heat store (EN 12977-3) and pump are tested separately.

3. The “ISO 9459-5” method
   Can be used for all solar systems and, in particular, for systems with an integrated auxiliary heater or with an integrated collector and heat store. The system, consisting of collector, heat store and pump, is tested as a whole.

Existing collector, heat store and system test results can be used, although it may be necessary to complement them with additional calculations. Third party testing is not necessary, the norm will be self-certification. The measurements and calculation methodologies will be described in a separate Commission Communication, which is also available from the ESTIF secretariat.

To which energy class will solar thermal systems belong?

The classification in energy class is not definitive yet. In the next phase of eco design and energy labelling, efficiency will be translated into energy classes. This phase has already started.

At this stage, and based on the preliminary studies, we assume the following:

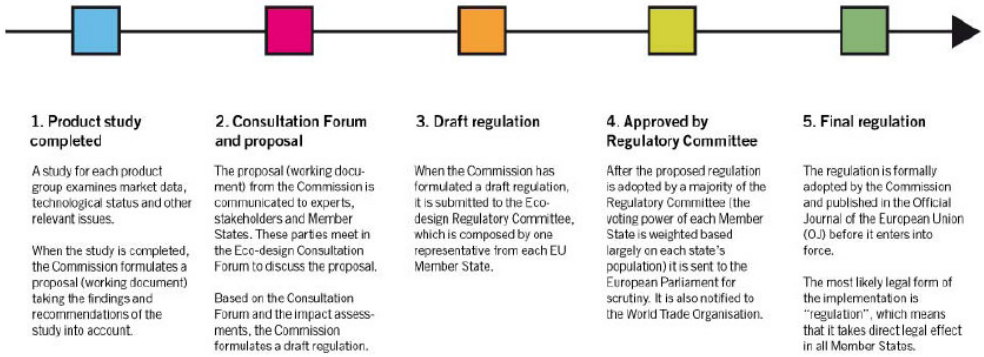
- The classes will range from G, through A, to A^{+++}.
- The G class represents the minimum acceptable efficiency according to the Eco design directive.
- The A class should be an upper limit for conventional boilers, defined as the efficiency of the currently best available condensing (gas) heater*.
- The three extra “+” classes are intended for systems including renewable (heat pumps or solar thermal).

Following this assumption, classes from G to B will be populated with electrical heaters / boilers, non-condensing boilers and combinations of those with thermal solar systems and possibly heat pumps. The state-of-the-art gas boilers will be mostly placed in class A. Heating systems, which incorporate renewable, are to be found in the classes ranging from A^{+} to A^{+++}. For thermal solar energy the collector area applied will be the major factor influencing the energy performance systems and to a lesser extent the quality (performance) in terms of energy output per square meters.

* It is possible that the best condensing gas boilers can reach the A^{+} category

European Solar Thermal Industry Federation

What is the process of adoption of the eco design and energy labelling measures, what are the remaining steps?



Source: http://www.eceee.org/Eco_design/products/water_heaters/

The adoption process concerning the two texts is not identical; however, the procedure should run in parallel. The scheme above describes the main procedural steps, which have to be completed. Publication of the current documents means that we are still in the purple phase (Consultation forum and proposal). The different industries, whose products are within the scope of the texts, as well as representatives from the member states, have until 3 September 2010 to comment on these "working documents.

The Commission will then review these comments and issue a draft text, which will be submitted to the other Commission directorates (i.e.: DG environment, Enterprise, Legal services) in what is called the Inter service consultation. After this process, the documents will enter the orange phase (draft regulation), which ends in their adoption by the Regulatory Committee of the member states representatives. The European parliament is then consulted and only after this consultation can the texts be formally adopted by the Commission and published in the official journal of the European Union.

When will these additional requirements be introduced?

The energy labelling and eco design requirements for water heaters and hot water storage tanks will enter into force one year after the definitive adoption of the texts (final regulation dark green phase).

It is not possible to anticipate the exact date on which the whole process will be completed but the Commission plans to publish the text in the first half of 2011. This would imply that requirements for the solar thermal industry would enter into force at the earliest in the first half of 2012.

Where to get further information?

The ESTIF Secretariat and the ESTIF task force are available to answer your questions. Please be aware that this process is ongoing and that we might not have a definite answer to all the questions that can arise. We remain in close contact with the Commission to further clarify and improve the proposed legislations.

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ESTIF, Brussels, July 2010