Solar Keymark Network

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

Final Minutes

15. Solar Keymark Network Meeting
October 1st – 2nd, 2013; Berlin, Germany

Item 1: Opening of the meeting

Harald Drück, chairman of the Solar Keymark Network, opened the meeting and welcomed the participants. He thanked Sören Scholz and Achim Sadenwater from DIN CERTCO for hosting the meeting. Furthermore he thanked Jan Erik Nielsen as the Secretary of the Solar Keymark Network, for the excellent preparation of the meeting.

Sören Scholz also welcomed the participants on behalf of DIN CERTCO and mentioned the advantages of Solar Keymark certification with regard to the removal of trade barriers. Furthermore he pointed out the relevance of experience exchange and common procedures within all involved stakeholders as a key element for a fair competition.

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 in particular and certification of solar thermal products in general.

The working rules of the Solar Keymark Network (SKN) are described in the "Solar Keymark Network Internal Regulations" (Document SKN_N0102.R7)

The meeting took place from Tuesday, October 1st, 2013, 13:00 hrs till Wednesday October 2nd, 2013, 11:35 hrs at the premises of DIN in Berlin.

The first invitation including the first draft agenda (Document SKN_N0218R0) of the meeting was sent out by email from Jan Erik Nielsen dated July 19th, 2013.

Harald Drück mentioned the **concept related to resolutions and decisions** implemented at the last SKN meeting.
Resolutions directly influence the Solar Keymark specific scheme rules (document SKN_N0106) and the Solar Keymark network internal regulations (document SKN_N0102) and hence shall be implemented in the next version of them.
Decisions are other important agreements achieved on the meeting that have to be included in the latest version of the Solar Keymark decision list (document SKN_N0100).

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 large number and broad spectrum of participants present the voting preconditions according to clause 4.2 of the Solar Keymark Network internal regulations (Document SKN_N0102R6) are fulfilled.

Item 3: Approval of the agenda

Following the first draft agenda (Document SKN_N0218R0) send out on July 19th, 2013 in the last weeks updated versions of draft agenda as well as documents related to the items mentioned on the agenda were send out and were also available via the Solar Keymark Internet site. The latest version of the agenda was named “15th Solar Keymark Network meeting - draft agenda version R5” document SKN_N0218R5 dated 29/09/13 and send out on September 29th, 2013. Since in the meanwhile minor changes were performed on the agenda, document SKN_N0218R6 was presented by Jan Erik Nielsen. This version of the agenda was shortly discussed but no substantial modifications were made. Hence it was agreed that document SKN_N0218R6 will serve as the basis for the meeting.

Item 4: Comments and final approval of the minutes of the 13. SKN meeting

Harald Drück mentioned that the minutes of the 14th Solar Keymark Network meeting (File: SKN_N0216R0.pdf) were elaborated by him, checked by Jan Erik Nielsen and proof read by Maria João Carvalho. He thanked both of them for their work.
The minutes were sent out by email dated Mach 19th, 2013 by Jan Erik Nielsen.

Within the 30 days following the send out of the minutes no comments were received. Hence no changes are required and Harald Drück asked for final approval of this version of the minutes.

The final minutes of the 14th Solar Keymark Network meeting (Document SKN_N02165R1) were finally unanimously approved by the participants present.

Note: The final version of the minutes will be send out by Jan Erik Nielsen in the coming days.

Item 6: Date & place of next Solar Keymark Network (SKN) meetings

The **16th SKN meeting** (spring 2014 meeting) is scheduled for

March 11th, 13:00 hrs to March 12nd, 14:00 hrs, 2014 (end of day one at 19:00 hrs)

at Gran Canaria on the Canary Islands based on an invitation of Salvador Suárez.

Furthermore meetings of the **IEA SHC Task 43** and the **Global Solar Certification Network (GSC-NW)** dealing with the global certification of solar thermal products will take place directly after the SKN meeting on **March 12th and March 13th** at Gran Canaria on the Canary Islands.

The **17th SKN meeting** (autumn 2014 meeting) is scheduled for

October 7th, 13:00 hrs to October 8th, 14:00 hrs, 2014 (end of day one at 19:00 hrs)

at Brussels, Belgium at the premises of CEN, provided the costs related to this are moderate.

Note: The next CEN TC 312 meeting is scheduled for October 9th, 2014

The **18th SKN meeting** (spring 2015 meeting) is scheduled for

Mach 10th, 13:00 hrs to March 11th, 14:00 hrs, 2015 (end of day one at 19:00 hrs)

and will take place at Wels, Austria based on an invitation of Harald Dehner from ASiC.

Item 5 Information from CEN CCB

Inga Schlüter from DIN informed about the latest news concerning the activities of the CEN Certification Board (CCB), especially concerning the planned outsourcing of the Keymark by means of the presentation included as Annex B.

The presentation was discussed and as a result the following decision was made:

Decision D1.M15 – Global certification – Solar Keymark

As the Solar Keymark Network (SKN) sees an urgent need to transfer Solar Keymark certification into a global certification mark it requests CEN to change their general certification rules during the on-going revision in such a way that certification bodies all over the world have the possibility to grant Solar Keymark certificates similar to the certification bodies located in Europe in order to ensure a fair competition.
The SKN expects CEN CCB to take action immediately and reply to the SKN related to this aspect at latest until 15th February, 2014.

Note: This decision will be send on behalf of the SKN by Jan Erik Nielsen as the SKN secretary to the chairman of CCB
Furthermore the specific national representatives should send this decision to their national representatives in CCB

This decision was taken unanimous with 0 negative votes and 0 abstentions.

In order to elaborate a proposal for modifications to be made on the general Keymark scheme rules the following working group was established:

Jan Erik Nielsen (Chair), Sören Scholz, Pedro Dias, Jaime Fernandez Gonzalez-Granda

The elaborated proposal will be presented by Jan Erik Nielsen during the next CCB meeting to be held on October 8th, 2013 a Brussels.

Item 7: New Absorber coatings to be considered as equivalent

Francis Kliem presented the documentation files for interchangeability for Solarceo (Cu) absorber coating (SKN_N0219R0.zip).

The presentation was discussed and the following decision was made:

Decision D2.M15 – Validity of Solar Keymark certificates in case of Solarceo (CU)

The participants present decided that in context with Resolution R5.M12, coatings on copper absorbers with the following brand names are considered as equivalent:

Blutec etaplus CU, Sunselect, Tinox classic, Tinox energy CU and Solarceo (CU)

Note: Document SKN_N0137R8 (Equivalent absorber coatings) will be updated accordingly leading to document SKN_N0137R9.

This decision was taken unanimous with 0 negative votes and 0 abstentions.

Item 8: New Glazing to be considered as equivalent

No new glazings to be considered as equivalent were presented at the meeting.

Item 9: Brand names / OEM /OBL

Note: OEM Original Equipment Manufacturer OBL Original Brand Labelling

Already at the 11th Solar Keymark Network meeting the topic related to different brand names in Solar Keymark certificates was intensively discussed but not finally solved. Also during the following meetings no resolution was made due to the complexity and also due to missing information.

The working group (WG) dealing with the subject is consisting of the following persons:

Sören Scholz (Chair), Ralf Köbbemann-Rengers, Christian Stadler, Pedro Dias, Costas Travasaros, François-Xavier Ball, Vincenzo Delacqua, Jaime Fernandez Gonzalez-Granda.

The document SKN_N0193R1 elaborated by Sören Scholz in cooperation with the circle of the Certification Bodies and distributed shortly before the 14th Solar Keymark Network meeting, was presented at that meeting by Sören Scholz.
It was decided that on the basis of this already available document and the input of the discussion, Sören Scholz and his group should prepare a proposal for a resolution at the next Solar Keymark Network meeting. As a result of this activity the document SKN_N0193R2 was elaborated.

After the presentation of the document SKN_N0193R2 by Sören Scholz and a discussion leading to small modifications of the document resulting in document SKN_N0193R3, the following resolution was made.

Resolution R1.M15 – Brand Names / OBM / OBL

The Solar Keymark scheme rules shall be extended by an Annex G “Solar KEYMARK certificates and sub-licenses for other brands, product names, and sellers” as described in document SKN_N0193R3.

This decision was taken unanimous with 0 negative votes and 0 abstentions.

Item 10: SK scheme rules Annex C- clarification

Jaime Fernandez Gonzalez-Granda presented document SKN_N0224R0. After a long discussion the following resolution was made:

Resolution R2.M15 – Main Type and Subtype fee application.

The following text printed in red should be added the Solar Keymark scheme rules, Annex C, Chapter C.4

C.4 Fees for Solar Keymark Network 2013

Annual fees:

maintype fee: **0** € per product main type and calendar year
subtype fee: **290** € per product subtype and calendar year

The first family of certified collectors or first family of systems is considered a main type. After the first certificate is granted for a collector or a system, the rest of certificates granted for collectors or for systems are all considered subtypes.
In a case where a manufacturer already has a certified collector and wishes to certify a new family of collectors and this new family will have many different trademarks, there are two options:

1) All trademarks are listed into one certificate.
   It is considered as a subtype and the fee to be paid is the “subtype fee”
2) Each trademark has its own certificate.
   Each certificate will have a different number and each trademark is considered as a subtype. The fee for each certificate is the “subtype fee”

Document SKN_N106_AnnexC_R13 will be updated accordingly leading to document SKN_N106_AnnexC_R14

Note: This resolution is not relevant with regard to the height of the fees for 2014. With regard to this, resolution R6.M15 is relevant

This resolution was taken with 0 negative votes and 11 abstentions.

The discussion related to this topic clearly showed the need for an update of Annex G “Solar KEYMARK certificates and sub-licenses for other brands, product names, and sellers” (SKN_N0193R3) just agreed upon at the topic before.

In order to do this and to present an updated version of the document as a basis for a resolution at the 16th SKN meeting, a working group consisting of the following persons was established:

Pedo Dias (Chair), Sören Scholz, Jaime Fernandez Gonzalez-Granda, Ralf Köbbemann-Rengers, Allard Slomp, François-Xavier Ball, Hans Peter Weiss, João Santos, Jan Erik Nielsen

Item 11: Internal checks of certification bodies, inspectors and test labs

In order to improve the quality of the work performed by test laboratories, certification bodies and inspectors it is helpful to perform internal checks or audits of these organisations.

In order to elaborate procedures and material for internal checks of **test labs** (and sub contractors) a working group was already established at the 12th SKN meeting. The original task of the group was to elaborate strategies and material for internal checks or audits of test labs and present them at the next SKN meeting. Even if the topic was on the agenda of all past SKN meetings no really progress was made.

In the meanwhile the composition of the originally formed working group was slightly modified and now consists of the following persons:

Andreas Bohren (Chair), Stephan Fischer, Uli Fritzsche, Sören Scholz, Danjana Theis, Jef Profke, Vinod Shama, Stefan Mehnert, Henry Rosik, Stamatios Babalis, Julien Heintz, Alberto Garcia, Franz Helmlinger, Jaime Fernandez Gonzalez-Granda, Carsten Lampe, Harald Dehner, Achim Sadenwater, Mark Witt, Malte Kottwitz and from the 15th meeting on Jan Erik Nielsen

Based on a presentation of a summary with “incorrect points and problems related to Solar Keymark certification” from Andreas Bohren at the 14th SKN meeting it was decided that the working group should analyse several data sheets and prepare, as a result of this activity, a list of problems where work is required.

The activity was carried out and Andreas Bohren presented by means of document SKN_N0226R0 the results. Furthermore he mentioned that via the Internet an Excel-file with detailed information such as the registration number and the potential deficits related to the analysed certificates is available.
Link: https://www.dropbox.com/sh/2tc79jk5z7gfjd8/vv5Cmk_acf

Harald Drück thanked Andreas Bohren and his group of the huge amount of work performed.

During the discussion following the presentation, there was a consensus that the available results should be used to improve the quality of the Solar Keymark data sheets. Since the certifiers are formally responsible for the data sheets they should evaluate the list with regard to their certificates. In case of severe failures in the data sheets they should contact the test labs that issued the respective certificate and ask for clarification / justification and corrective measures. This procedure should be handled according to the QM-system of the individual certification bodies.

Furthermore it was agreed that Andreas Bohren and his group will elaborate an example for a completely correct and “nice” Solar Keymark data sheet for solar collectors and present this at the next SKN meeting. Stephan Fischer mentioned that in this context also the soon available EN ISO 9806 should be taken into account.

Item 12: Sanctions against absent representatives

At the 13th Solar Keymark Network meeting it was agreed to establish a working group for the elaboration of a modified version of the Solar Keymark network internal regulations that includes sanctions against absent representatives obliged to participate in the SKN meetings. Unfortunately the requested document was not available for the 14th SKN meeting so that no progress related to this item was made.

The working group dealing with this subject is consisting of the following persons

Sören Scholz (Chair), Jaime Fernandez Gonzalez-Granda, Allard Slomp, Harald Drück, Daniele Bernacchioni, François-Xavier Ball, Jeff Profke

As a result of the activities within the working group, Sören Scholz presented document SKN_N102R7 with a proposal for the modification of the Solar Keymark network internal regulations by including chapter 3.4 (Sanctions against obligatory members absent at the meetings). The proposed modifications were discussed and slightly modified. Finally the following resolution was made:

Resolution R3.M15 – Sanctions against obligatory members absent at the meetings

To ensure a fair balance/competition in spending time and money for Solar KEYMARK Network meetings and to ensure experience exchange and training for testing, inspection, and certification, the obligatory members (see clause2.1.1) shall participate at least every second SKN meeting.

For some reasons (e.g. distance) participation “on the distance” is allowed by using web/video/teleconference system (if available). Furthermore, obligatory members shall participate physically at least every third SKN meeting.

SKN Meetings	Meeting 1	Meeting 2	Meeting 3	Meeting 4
Ideal attendance	physically	physically	physically	physically
Minimum attendance	web	-	physically	-
Real attendance	no attendance	no attendance	no attendance	no attendance
Reaction	No reaction	Warning in writing to attend the next meeting physically	Suspension of recognition or empowerment (including deleting from SK website)	**Withdrawal of recognition or empowerment (including deleting from SK website)**
Responsible	-	SKN secretary informs CB or CCB	CB or CCB based on info from SKN secretary	CB or CCB based on info from SKN secretary

First deviation from rule: No further reaction from SKN is required.

Second deviation from rule: The SKN secretary will inform the respective CB (in case of testing laboratories or inspection bodies) or CCB (in case of certification bodies) to contact the SKN member in writing for the reasons of his absence and to point out that physically attendance at the next SKN meeting is obligatory. Furthermore, a suspension of recognition/empowerment is announced.

Third deviation from rule: After being informed by SKN, the respective CB or CCB will suspend the recognition or empowerment of the SKN member. As a result of this suspension, the SKN member will be deleted from the official Solar KEYMARK website and can`t provide any service within Solar KEYMARK certification, at least until the next SKN meeting. Furthermore, a withdrawal of recognition/empowerment is announced.

Fourth deviation rule: After being informed by SKN, the respective CB or CCB will withdraw the recognition/empowerment of the SKN member. He can`t provide any service within Solar KEYMARK certification anymore and will be deleted as SKN member.

Document SKN_N102R7 will be updated accordingly by including the above mentioned resolution as chapter 3.4 leading to document SKN_N107R8

This resolution was taken with 0 negative votes and 3 abstentions.

Item 13: Freeze resistance test of heat pipes

At the 14th SKN meeting resolution R2.M14 (Freeze resistant test on heat pipes) was made related to the inclusions of document SKN_N0106_AnnexF_R0 in the Solar Keymark scheme rules as a mandatory test procedure for collectors using heat pipes until this test is implemented into the relevant collector standard as a mandatory test.

Due to last findings there was the need to precise and modify the procedure as done in document SKN_N0106_AnnexF_R2.docx. This document was presented by Ulrich Fritzsche. After a short discussion it was agreed that the document in its current status should only be considered as a background document.
In order to avoid any confusion the document will get the “ordinary” number SKN_N0228R0 and the document SKN_N0106_AnnexF_R2.docx will be rejected.

Item 14: Retesting

Harald Drück mentioned that retesting of solar thermal products could, even if the product was not changed since the initial test, in principle is necessary if either the validity of the test report is limited or if new standards were implemented.

Concerning the limitation of the validity of the test report the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components” proposed to make a resolution to change the Solar Keymark Scheme in such a way that a complete re-testing of solar thermal products is required if the initial date of Solar Keymark certification or the last complete re-testing was more than 10 years ago.

The proposal was discussed and the following resolution was made.

Resolution R4.M15 – Complete re-testing for Solar Keymark certification

A complete re-testing of solar thermal products is required if the initial date of Solar Keymark certification or the last complete re-testing was more than 10 years ago.

This sentence shall be included in the next version of the Solar Keymark Scheme rules in section 6, directly before chapter 6.1

This resolution was taken with 1 negative vote and 4 abstentions.

Concerning the potential need for re-testing of solar thermal products when new standards apply there is also a need for clarification since EN ISO 9806 will soon be available (estimated date of availability (DAV) 31.10.13). At this date of availability the EN 12975-2:2006 will be replaced by the EN ISO 9806. The harmonized (according to CPR: Construction Product Regulation) EN 12975-1 however is not to be expected before March 2014. During this transition phase EN 12975-1:2006 is referencing to a nonexistent Standard (EN 12975-2:2006). In order to enable Solar Keymark testing during this transition phase the Solar Keymark network agrees on the following resolution decision:

Decision D3.M15 – Equivalency of EN 12975-2:2006 and EN ISO 9806:2013 with regard to Solar Keymark testing

The Solar Keymark network considers the existing EN 12975-2:2006 and the upcoming EN ISO 9806:2013 being equivalent with respect to Solar Keymark testing until the revised EN 12975-1 is available and the Solar Keymark scheme rules have been changed accordingly. For the period until the revised EN 12975-1 is published, the Solar Keymark Network requires to apply the test methods as defined in EN ISO 9806, to enable that all collector types mentioned in the scope of EN ISO 9806 can be tested as a basis for Solar Keymark certification.
In order to facilitate the usage of the new EN ISO 9806:2013 the following table shows the required tests, the current reference to EN 12975-2 and the corresponding reference to EN ISO 9806 and the new section heading.

Table 1: Required tests according EN 12975-1:2006 and references to test procedure

Required test	**Reference EN 12975-2:2006**	**New Reference EN ISO 9806**
Internal pressure for absorber	5.2 of EN 12975-2	6 Internal pressure tests for fluid channels
High temp. resistance	5.3 of EN 12975-2	9 High-temperature resistance test
Exposure	5.4 of EN 12975-2	11 Exposure and pre-exposure test
External thermal shock	5.5 of EN 12975-2	12 External thermal shock test
Internal thermal shock	5.6 of EN 12975-2	13 Internal thermal shock test
Rain penetration	5.7 of EN 12975-2	14 Rain penetration test
Freeze resistance	5.8 of EN 12975-2	15 Freeze resistance test
Mechanical load	5.9 of EN 12975-2	16 Mechanical load test with positive or negative pressure
Impact resistance	5.10 of EN 12975-2	17 Impact resistance test
Final inspection	5.11 of EN 12975-2	18 Final inspection
Thermal performance	6 of EN 12975-2	20 Performance testing of fluid heating collectors
Stagnation temperature	Annex C of EN 12975-2	10 Standard stagnation temperature of liquid heating collectors

This decision was taken unanimous with 0 negative votes and 0 abstentions.

Note: Due to the need that empowered certification bodies and recognized test laboratories have to formalize to their National Accreditation Bodies (NAB) the request of change of their accreditation scope to include the new standard EN ISO 9806, the application of the decision may only be formally implemented when each NAB decides about the correspondence between both standards. The empowered certification bodies and recognized test laboratories should try to solve the formalities with their NAB a.s.a.p. but at latest within a transition period of 6 months provided this exists.
However it is recommended to use the procedures described in EN ISO 9806 as soon as the final version of this document is officially available.

Item 15: Calculation of collector annual output

In his position as chairman of the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components (EK-TSuB)”, Harald Drück presented on behalf of the EK-TSuB the proposal for a resolution concerning the calculation of the collector annual output as mentioned in the agenda (SKN_N218R5).

After a short discussion the following resolution was made:

Decision D4.M15 – Calculation of the Collector Annual Output (CAO)

For solar thermal collectors operated with a liquid as heat transfer fluid the annual solar collector output calculated with ScEnOCalc shall be given only in combination with the location and mean fluid temperature according to the information specified in the corresponding Solar Keymark data sheet.

Furthermore a reference to the number (zzz) of the corresponding Solar Keymark certificate has to be given.

The way how the “Collector Annual Output” (CAO) yyy shall be given is as follows:

$CAO_{location}$ at xx °C: yyy kWh/a based on Solar Keymark certificate number zzzz

Note: Only the locations and the temperatures xx given in the latest version of the Solar Keymark data sheet of the Solar Keymark scheme rules shall be used.

In addition for PVT collectors it has to be stated if the Collector Annual Output is calculated with our without electricity production.

This decision was taken unanimous with 0 negative votes and 0 abstentions.

Item 16: Modification of the SK scheme rules for PV/T collectors

Jaime Fernandez Gonzalez-Granda presented document SKN_N0220R0 and requested a modification of resolution R1.M14 dealing with the Solar Keymark Scheme Rules for PVT collectors

The topic was discussed and it was agreed to modify resolution R1.M14 by the following resolution (changes related to resolution R1.M14 are marked in red)

Resolution R5.M15 – Modification 1 of Solar Keymark Scheme Rules for PVT collectors

In order to modify the Solar Keymark Scheme rules for the Solar Keymark Certification of PVT collectors the following text has to be included in the Solar Keymark Scheme Rules (document SKN_N0106R21):

13.7 Solar Keymark Certification of PVT collectors

Solar Keymark certification of PVT collectors is possible provided the PV module being part of the PVT collector is certified using either

a) an ISO system 5 certification scheme according to ISO IEC Guide 67 by a certification body accredited according to EN 45011 or ISO 17065, or

b) a certification body accepted in the FCS (Full Certification Scheme) of the IECEE/CB Agreement whose scope includes the PV category

and still complies after modification, if any, as part of the PVT collector with the relevant EN standards

Note: A list of documents and standards PVT collectors should comply with is available as Annex D of prEN 12975-1:2012.2

Note: One possible procedure for compliance evaluation and it’s securing is described in the document SKN_N0213R0 entitled “Solar Keymark Scheme Rules for PVT certification - Requirements and Recommendations”

Note: The scope of certification bodies may be checked at http://members.iecee.org/iecee/ieceemembers.nsf/ScopeOverview?ReadForm Within the scope it must be checked that the certification body works under the FCS (full certification scheme) for each relevant standard. FCS is an extension to the IECEE CB agreement that has follow up activities based on an ISO 5 System. (more information on http://www.iecee.org/cb_fcs/default.htm and on http://www.iecee.org/Operational_documents/iecee_documents/od-3000.pdf)

Special requirement for performance determination of PVT collectors
*(Note: Text **according to Decision D7.M10**)*
For Solar Keymark certification of PVT collectors, the measurements of the thermal performance shall be performed with electrical production under MPP conditions. In addition an optional thermal performance determination without electrical production (open circuit for PV-Module) is possible.

For the electrical load applied for the electrical production an appropriate solution for the MPP tracking shall be used.

This resolution was taken with 0 negative vote and 1 abstention.

Item 17: SKN Budget for 2014 and other financial issues

Jan Erik Nielsen and Pedro Dias presented document SKN0221R0 (Financial status 2013 - budget 2014), SKN_N0222R0 (Expected fee income 2014 and expense) and SKN_N0223R0 (Services to be provided by ESTIF to the Solar Keymark Network in 2014).

The documents were discussed and especially also a reduction of the fees was agreed on in order to take into account the extremely bad economic situation of the European solar thermal industry. As a basis for a decision related to an overall reduction of the Solar Keymark Network fees Pedro Dias prepared and Excel-Sheet with various scenarios.

Due to the overall reduction of the SKN fees and hence the expected income of the SKN document SKN_N0222R0 (Expected fee income 2014 and expense) was revised resulting in document SKN_N0222R1.

After the discussion the following resolution and decisions were made:

Resolution R6.M15 – SKN fees for 2014

For 2014 the Solar Keymark Network fees will be as follows:
maintype fee of 50 € (increase of 50 €, compared to 2013 fee)
subtype fee of 230 € (decrease of 60 €, compared to 2013 fee)

This resolution was taken with 0 negative votes and 1 abstention.

Decision D5.M15 – SKN Budget for 2014

The budget of the SKN for 2014 as specified in documents SKN0221R0 (Financial status 2013 - budget 2014), SKN_N0222R1 (Expected fee income 2014 and expense) and SKN_N0223R0 (Services to be provided by ESTIF to the Solar Keymark Network in 2014) is accepted by the Solar Keymark Network.

This decision was taken with 0 negative votes and 0 abstention.

Decision D6.M15 – CEN fees for 2015

Taking into account the extremely bad economic situation of the European solar thermal industry the Solar Keymark Network decreased the share of the fees of Solar Keymark resulting in a reduction of the available budget for 2014 of around 17.000 €.
Despite this the European solar thermal industry requested a further reduction of the fees for 2015. In order to share this burden the Solar Keymark Network requests that CCB reduces the fees for Keymark certification for main type licences from 300 € to 200 € and for subtype licences from 60 € to 40 €.

The SKN would appreciate it very much if CEN CCB accepts this proposal and request a confirmation to the SKN related to this aspect at latest until 15th February, 2014.

Note: This decision will be send on behalf of the SKN by Jan Erik Nielsen as the SKN secretary to the chairman of CCB
Furthermore the specific national representatives should send this decision to their national representatives in CCB

This decision was taken with 1 negative votes and 1 abstention.

Item 18: Proposals for topics for new SCF projects – 5th SCF Call

Jan Erik Nielsen and Harald Drück mentioned that the next call for the projects funded by the Solar Certification Fund (SCF) will be launched on November 25th, 2013 with deadline January 15th, 2014.

As a basis of the 5th SCF call (SCF: Solar Certification Fund) the following activities were proposed:

- Buy/organise good web/video/conference system for use for remote participants at the Keymark Network meetings
- Standard procedure for creating space heat load data for calculation acc. to EN 12977
- Mapping of CE requirements for collectors in all EU member states
- Harmonisation and reduction of Inspections related to Certification
- Investigations regarding the tilt dependency of the power curve for solar collectors
- Liaison officer IEC TC 117 (Solar thermal electric plants)
- TC 312 WG1 convenor
- Elaboration of a standardised procedure for the determination of ecoindicators like energetic amortisation times, primary energy savings over life time to be potentially include certification schemes
- Liaison officer TC164 (water supply)
- Liaison officer TC371 (implementation of implementation of EPBD standards)
- Liaison officer TC228 (heating installations)
- Extended lobby Ecodesign (EcoDesign / Energy Labelling)
- Drafting feasibility studies TC312 Cen Mandate 495 (EcoDesign / Energy Labelling)
- Added (commercial) values for Solar Keymark certificates (EcoDesign / Energy Labelling)
- Global certification follow-up
- Promotion of new EN ISO 9806
- Support for certification body and inspection body meetings
- Improvement of SK database
- Preparation of a guideline for EN 12977
- Corrosion and ageing on the solar loop considering more than the fluid
- Update of EN 12976 and EN 12977 do describe in one chapter requirements related to stagnation, system design, maintenance and installation
- Revision of QAiST guide on EN 12975 towards EN ISO 9806
- Preparation of full SK relevant Document concerning the new scope of EN ISO 9806
- Drafting a standard for thermal insulation materials and solar glass (for collectors)
- Update of ScEnOCalc
- Liaison to TC 128 (roofing)

- Testing of solar air collectors
- Adaption of Solar Keymark scheme rules with regard to aspects and requirements resulting for CE-Marking of solar collectors
- Round robin test on mid-temperature collectors
- any other good ideas

The ideas listed above will serve as a basis for the 5th SCF Call to be elaborated by the SCF. Proposers of the topics listed above are encouraged to precise their proposals by sending more detailed information. Preferably this input should be in such a way that it can directly be used as the call text.

Please send this information to Jan Erik Nielsen at latest until Oct. 11th, 2013

Provided the amount required for financing of high quality proposals exceeds the available budget a recommendation for projects to be funded will be made by the Solar Certification Fund Steering Group based on priorities. Final decision on projects to be funded will be done at the 16th Solar Keymark Network meeting in March.

Note: The next physical **meeting of the Solar Certification Fund Steering Group** will take place by end of January or beginning of February 2014 at Brussels

Item 19: Solar Certification Fund - 1st Call – status report

By means of the presentation attached as Annex C Pedro Dias gave first a general overview of the number of projects supported by the Solar Certification Fund (SCF) in the different calls as well as the corresponding budget allocated to the different calls.

He also informed about thoughts for improvements as well as about the current status of the projects funded by the 1st SCF Call, the 2ndSCF Call, the 3rdSCF Call and the 4th SCF Call by means of the presentation included as Annex C.
Finally he reported about the improvements already performed related to the management of the SCF projects as well as the availability of the results of the SCF projects. Additionally he pointed out some possibilities for further improvement and mentioned that further information related to all SCF funded projects is available through the “QAiST discussion board” in the Internet.

After and during the presentation some questions were asked by some participants and answered by Pedro Dias.

Harald Drück thanked Pedro Dias for the huge amount of work he and his colleagues at ESTIF are performing in a highly professional way.

Item 20: Solar Certification Fund – 2nd Call – status report

Already dealt under Item 19.

Item 21: Solar Certification Fund – 3rd Call – status report

Already dealt under Item 19.

Item 22: Solar Certification Fund – 4th Call – status report

Already dealt under Item 19.

Item 23: Development of an indoor test procedure for factory made systems according to EN 12976

Stephan Fischer presented by mean of the presentation included as Annex D the results of the development of an indoor test procedure for factory made systems according to EN 12976. This activity was financed by the SCF and is now finalised.

After the presentation a few questions were asked by the participants and answered by Stephan Fischer. In this context the most relevant aspect was the question how the reproducibility of the new developed test method would be in case of testing a thermosiphon system with vacuum tube collectors since the method was up to now only validated for systems with flat plate collectors. Stephan Fischer mentioned that such a validation is intended to be performed in the future.

Item 24: Update on CE marking of Collectors

Note: The basis for CE marking of solar collectors is now the Construction Product Regulation (CPR); In previous times this document was called Construction Product Directive (CPD)

Stephan Fischer presented the topic; the presentation is included as Annex E.
After the presentation a few questions were asked by the participants and answered by Stephan Fischer. In this context Korbinian Kramer proposed to include in the list of proposals for the 5th SCF call (see topic 17) a topic related to “Adaption of Solar Keymark scheme rules with regard to aspects and requirements resulting for CE-Marking of solar collectors”; this was done.

Item 25: Report from the Solar Keymark Certification Bodies / Solar Keymark Inspection Working Group

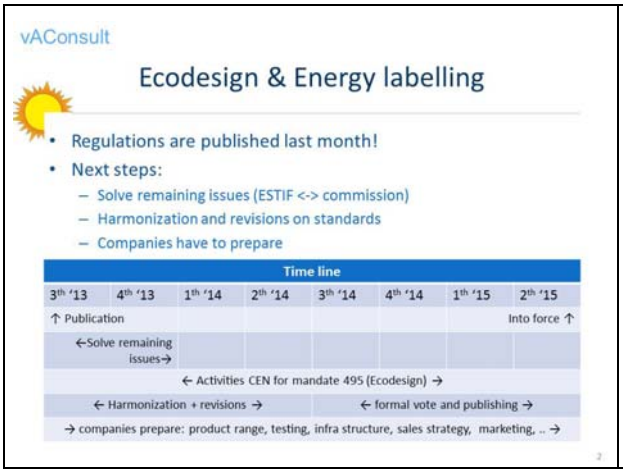
Sören Scholz informed about the latest news related to the certification body (CB) working group; the presentation is attached as Annex F. Since the last SKN meeting in March 2013, two meetings of the certification body group took place. Main topics were the preparation of a new Annex F of the SK scheme rules related to OBM/OBL certificates, the discussion of the SKN fees for different brands, the elaboration of a proposal to ensure the participation of obligatory members in the SKN meetings and aspects dealing with the misuse of the Keymark.

Furthermore Sören Scholz pointed out that the CB working group meetings are from his point of view very important for experience exchange as well as following and improving the scheme rules and finally the confidence in the Solar Keymark certification.

Jaime Fernandez Gonzalez-Granda presented the questionnaire for SK-inspectors (document SKN_N0225R0). He mentioned that up to now he did only receive one questionnaire filled out by a SK-inspector. He encouraged the participants present to send him back more of these questionnaires and to transfer this information also to their certifiers.

Item 26: Information on Energy Labelling

Jan Erik Nielsen mentioned that he received from Gerard van Amerongen, who could unfortunately not be present, a long and a short version of a presentation related to Ecodesign and Energy Labelling. There was an agreement among the participants to show the short version of the presentation and to distribute the long one separately by email. Hence Jan Erik Nielsen showed the following two slides:



After the presentation a discussion came up about the legal basis for the energy labelling and ecodesign. The documents being relevant in the context are listed in the following:

- Commission Delegated Regulation (EU) No 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device (1)
- Commission Delegated Regulation (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device (1)
- Commission Regulation (EU) No 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters (1)
- Commission Regulation (EU) No 814/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for water heaters and hot water storage tanks (1)

For further information see also:
http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:2013:239:SOM:EN:HTML

Item 27: Information on EPD / EN 15316-3-4

Jan Erik Nielsen informed on behalf of Gerard van Amerongen about the latest development related to the European Energy Performance of Buildings Directive (EPBD)”, the liaison task of Gerard van Amerongen to TC 371 and TC 228 and the actual status of the standard EN 15316-3-4 (Heating systems in buildings - Method for calculation of system energy requirements and system efficiencies - Heat generation systems, thermal solar systems)

The main news is that EN 15316-3-4 should be revised in such a way that based on an Excel-tool using hourly data, the performance of the specific energy supply systems of buildings can be determined. This is not considered as appropriate for solar thermal systems and hence it will be proposed to use the calculation tools being already available in the context of the solar thermal standards EN 12975, EN 12976 and EN 12977.

Item 28: Information on Legionella and TC 164

Jan Erik mentioned that a lot of work financed by the SCF was done by Gerard van Amerongen related to legionella aspects. This work is completed and the reports are available via the QAiST discussion board (for this see also item 19 and Annex C).

The next meeting of TC 164 WG 2 will be on Oct 14, 2013.

Furthermore CEN TC312 agreed to upgrade the already existing report related to “legionella aspects” to an official CEN technical report, in order to strengthen its relevance.

Item 29: Information from CEN TC 312

Jen Erik Nielsen informed that the last TC 312 meeting took place on Sept. 26, 2013 at Freiburg, Germany. There Panayis Konstantinidis from the company CALPAK and nominated by EBHE was elected as new chairman. In this context Mr. Panayis Konstantinidi mentioned that he as well as the TC 312 secretariat is financed for the next 3 years.
Sebastian Laipple from the company Hartmann Energietechnik was elected as WG 3 convenor. His activities as well as the DIN secretariat for WG 3 are financed by the German industry associations BHD and BSW.
Peter Kovacs resigned as WG 1 convenor. Hence there is the need for a successor.
The topic was discussed and Andreas Bohren mentioned that Switzerland is considering applying for WG 1 convenership.

Item 30: Global certification

Jan Erik Nielsen reported by means of the presentation included in Annex G about the extension of the IEA SHC Task 43 (Solar rating and certification procedures) for the period from 1st of July 2013 to 30th of June 2015.
This task provides an excellent basis to establish as a first step a global certification program for solar thermal collectors.

In addition to the presentation of Jan Erik Nielsen, Harald Drück reported about the signature of a Memorandum of Understanding (MoU) related to global certification between the Solar Keymark Network and the International Association of Plumbing & Mechanical Officials (IAPMO) on Sept. 29, 2013 at Berlin. The covering letter and the MoU is attached as annex H.

Item 31: Weather Data on the Keymark Website

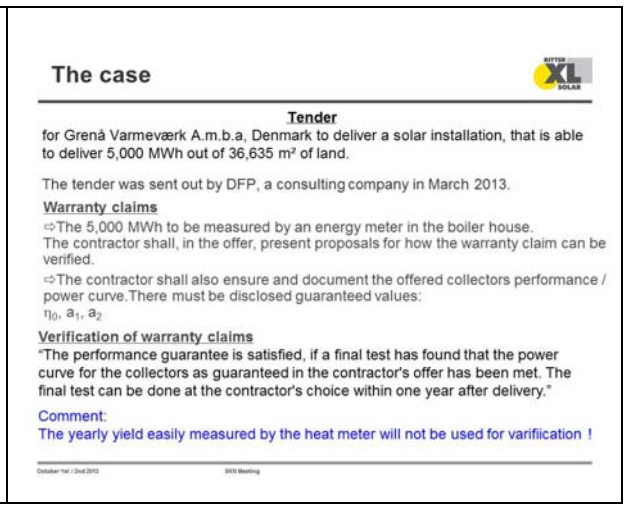
Jan Erik Nielsen informed about the availability of weather data on the Solar Keymark website. In this context he showed the following slides:

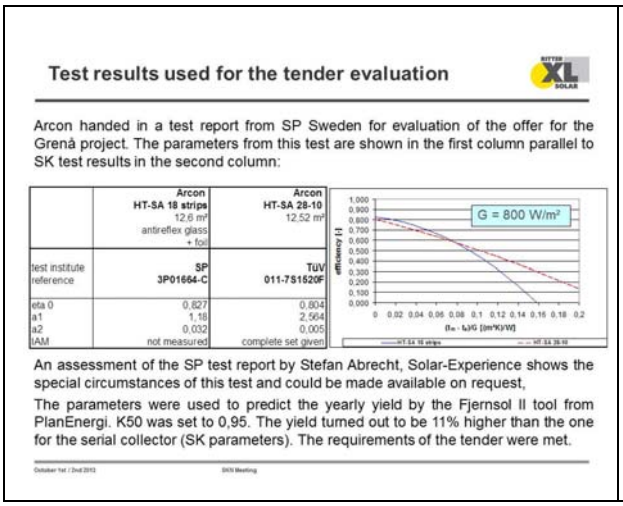
Jan Erik Nielsen pointed out that the space heating load files for the locations of Athens and Stockholm are still missing. Harald Drück mentioned that during his activity as TC 312 WG 3 convener, when EN 12977 was extended to solar combisystems, he collected these files since they are required for the annual performance prediction and are therefore an integral part of the reference conditions specified in EN 12977-2. Harald Drück will send the space heating load files to Jan Erik Nielsen *(done on Oct, 2, 2013)*.

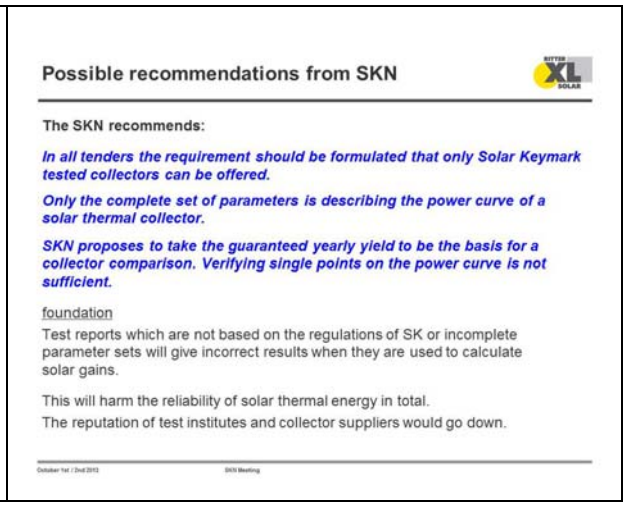
Item 32: Tenders should be based on Solar Keymark

Stephan Fischer presented on behalf of Detlev Seidler from the company Ritter XL Solar the slides below.

The topic was discussed and there was a consensus that it is in line with the interests of the Solar Keymark Network that in all tenders a requirement should be formulated that only Solar Keymark certified collectors can be offered. Obviously this is only relevant for types of solar collectors for which Solar Keymark certification is in principle possible.







Item 33: Experience with the misuse of the Solar Keymark

Based on a question of Harald Drück, Sören Scholz (DIN CERTCO) mentioned that misuse of certificates is a severe problem and can be expected to be even larger if we go towards global certification. Also according to François-Xavier Ball (CERTITA) misuse is an issue whereas for Susanne Hansson (SP) this is up to now not a crucial topic concerning certificates from SP.

Furthermore Sören Scholz showed an example of a “black list” related to the misuses of marks for wood pellets and mentioned the intention of DIN CERTCO to extend this list to other products such as e.g. solar thermal collectors and systems.

Also the aspect of making all SK certificates available via the Solar Keymark database was discussed. Finally it was, as already on the last meeting, agreed that proposals for resolutions related to both aspects (black list and inclusion of the SK certificates in the SK database) should be elaborated by the group of certifiers and presented at the next meeting for a final decision.

Item 34: Any other business

Item 34.1: Public access to SCF projects

Jan Erik Nielsen proposed to make the final reports of all SCF project available via the Internet. This was in principle appreciated by the participants, but the topic has also to be discussed within the Solar Certification Fund steering group.

Item 34.2: Transition period concerning EN ISO 9806

Based on a request from Maria João Carvalho and João Santos the note directly under Decision D3.M15 (Equivalency of EN 12975-2:2006 and EN ISO 9806:2013 with regard to Solar Keymark testing) was added after a short discussion.

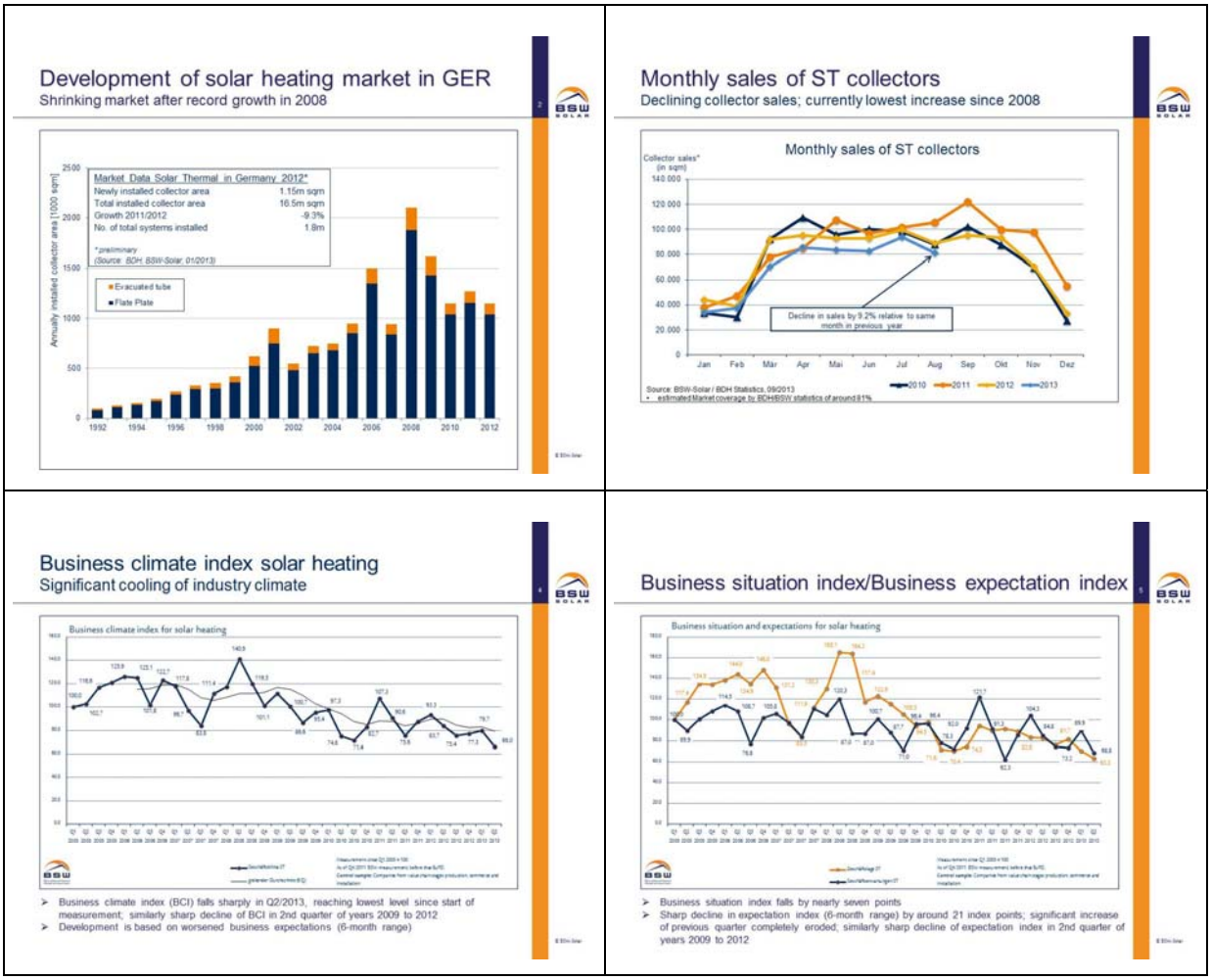
Item 35: Important national developments

Item 35.1: France

François-Xavier Ball reported about a development regarding solar thermal products that is currently under progress in the framework of the French thermal regulation. This regulation applies to new building projects and includes criteria regarding energy efficiency and energy consumption. It relies on calculation methods which up to now did not fully take into account solar thermal products. Indeed the results of solar thermal systems tested according to EN 12976 could not be used in these methods.
This situation is going to change since a new calculation tool is expected to be publicly available within 2 months which enables to use test results according to EN 12976 to calculate input data which can be used in the calculation method of the French thermal regulation.

Item 35.2: Germany

Harald Drück showed on behalf of BSW the following presentation related to the solar thermal market in Germany.



Copy of Item 5: Date and place of next meetings – since next meetings are usually stated at the end of the minutes

The **16th SKN meeting** (spring 2014 meeting) is scheduled for

March 11th, 13:00 hrs to March 12nd, 14:00 hrs, 2014 (end of day one at 19:00 hrs) at Gran Canaria on the Canary Islands based on an invitation of Salvador Suárez.

Furthermore meetings of the **IEA SHC Task 43** and the **Global Solar Certification Network (GSC-NW)** dealing with the global certification of solar thermal products will take place directly after the SKN meeting on **March 12th and March 13th** at Gran Canaria on the Canary Islands.

The **17th SKN meeting** (autumn 2014 meeting) is scheduled for

October 7th, 13:00 hrs to October 8th, 14:00 hrs, 2014 (end of day one at 19:00 hrs) at Brussels, Belgium at the premises of CEN, provided the costs related to this are moderate.

Note: The next CEN TC 312 meeting is scheduled for October 9th, 2014

The **18th SKN meeting** (spring 2015 meeting) is scheduled for

Mach 10th, 13:00 hrs to March 11th, 14:00 hrs, 2015 (end of day one at 19:00 hrs) and will take place at Wels, Austria based on an invitation of Harald Dehner from ASiC.

Item 36: End of meeting

Harald Drück thanked the participants for attending the meeting and for their constructive discussions. He also thanked Jan Erik Nielsen for the excellent preparation of the meeting and Pedro Dias for managing the Solar Certification Fund project and the financial issues of the Solar Keymark Network. Furthermore he thanked Sören Scholz and Achim Sadenwater from DIN for hosting the meeting. The participants applauded Harald Drück for his excellent conduction of the meeting. The meeting ended at 11:35 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 5th, 2013

Contact address Solar Keymark Chairman:
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Contact address Solar Keymark Secretariat:
Jan Erik Nielsen
SolarKey Int.
Aggerup 1
4330 Hvalsoe, DK
Email: jen@solarkey.dk

Annex A: List of participants

15th Meeting, Berlin, October 1st and 2nd, 2013

NAME	ORGANISATION
Achim Sadenwater	DIN CERTCO
Alberto García de Jalón	CENER
Allard Slomp	Kiwa
Andreas Bohren	SPF Solartechnik
Andreas Gisch	IZES gGmbH
Ashraf Kraidy	RCREEE
Bernhard Aigner	SunWin
Daniele Bernacchioni	ICIM S.p.A.
Fernando Isorna	INTA
Filippo Brivio	IMQ S.p.A.
François-Xavier Ball	CERTITA
Francis Kliem	ISFH
Franck Cheutin	CSTB
Franz Helminger	AIT Austria
Giombattista Traina	Instituto Giordano
Giuseppe Terzaghi	Albarubens SRL
Hanspeter Weiss	Ernst Schweizer AG/ Swissolar
Harald Dehner	ASIC
Harald Drück	ITW
Inga Schlüter	DIN
Jaime Fernandez Gonzalez-Granda	AENOR
Jan Erik Nielsen	Solar Key Int.
Jim Huggins	Solar Rating & Certification Corp
João Santos	CERTIF
Julien Heintz	CETIAT and BELENOS
Katharina Meyer	DIN CERTCO
Korbinian Kramer	Fraunhofer ISE
Liangguang Tian	Shandong Supervision and Inspection Institute for Product Quality
Marco Pirozzo	Eurofins-Modulo Uno
Malte Kottwitz	TÜV Rheinland (Shanghai) Co., Ltd.
Maria João Carvalho	LNEG
Ozan Türk	SPF
Pedro Dias	ESTIF
Qingtai Jiao	Jiangsu Sunrain Solar Energy Co. Ltd.

Ralf Köbbemann-Rengers	Bosch / BDH
Richard Horton	Rheem
Sören Scholz	DIN CERTCO GmbH
Stefan Mehnert	Fraunhofer ISE
Stephan Fischer	ITW
Susanne Hansson	SP Technical Research Institute of Sweden
Ulrich Fritzsche	TÜV Rheinland Energie und Umwelt GmbH
Vinod Kumar Sharma	ENEA
Xiaochao Tong	CABR certification center
Yuwu Li	Shandong Supervision and Inspection Institute for Product Quality
Zou Huaisong	Beijing Cibsolar ltd

Annex B
Information from CEN CCB

Content

1 History and background

2 Our proposal

3 Your input is more than welcome !

4 Next steps

CCB meeting February 2012

CCB doc N595 "Strategic review on the policy of CEN on certification and the Keymark"

Six scenarios:

1 European safety label
2 Reference for benchmarking
3 Continue with the current setting
4 Transfer Keymark to another organisation
5 Outsourcing the management of the Keymark
6 Increase involvement in certification

CCB resolution 2/2012

CCB at its meeting on 21 February 2012,

- having received the draft for a strategic review on the policy of CEN on certification and the Keymark, prepared by CCMC (doc N 595),
- having discussed the pros and cons of the various proposed scenarios,

has agreed to:

1. Reject Scenarios 1, 4 and 6;
2. Establish a TF "Strategic Review on the Keymark" which will conduct an in-depth study of the consequences of Scenario 3 and 5, and will present its conclusions to CCB at its next meeting for a recommendation to CEN/CA at its meeting in November 2012;
3. Request the CCB Chair to establish the TF and invite participation by CCB members and by other key stakeholders;
4. Encourages CCB members to contact the Chair if they wish to take part in the TF before 20 March 2012;
5. Consider Scenario 2 in more detail, if necessary, at a later date.

The CCB Task Force

Task Force members:

- David Bell, Chair (BSI)
- Christine Kertesz (AFNOR)
- Inga Schlüter (DIN)
- Pedro Loste (AENOR)
- Pim Bijl (NEN)
- Ian Greensmith / James Berry (BSI)
- Nils Kleinjan (EEPCA)
- CCB Secretariat

Meetings 2012: 29 June – 9 October – 27 November
Meetings 2013: 15 April – 17 May – 11 June – 25 June – 3 September

TF-meeting on 29 June 2012

Scenario 3: Continue with the current setting
Only feasible with substantial improvements

Scenario 5: Outsourcing the management of the Keymark
Three models:
A = one sub-contractor
B = several sub-contractors (e.g. per sector)
C = one coordinator/sub-contractor + several associations

TF-meeting on 9 October 2012

Pertinent question:
Why would outsourcing the management of the Keymark be better, compared to the current situation?

Conclusion:
No objection to outsourcing, but the role and remaining tasks of CCB should be clarified.

CENELEC

TF-meeting on 27 November 2012

Final meeting to prepare a report for CCB with the conclusions and recommendations of the TF:

CCB doc N 603 Annex 1:
Conclusions of the CCB Task Force "Strategic review of the Keymark"

CENELEC

CCB meeting February 2013

Resolution 2/2013: Conclusions of the CCB Task Force "Strategic review of the Keymark"

The CCB,

- Noting the report of the CCB Task Force of 22 January 2013 and the conclusions from their study in the course of 2012.
- Thanks the Task Force for their work to date.
- Re-confirms that the Keymark is a valuable asset for CEN and its Members and agrees on the need to ensure a meaningful and successful development of the Keymark in the long run while minimising the costs for CEN.

1. Agrees on outsourcing the operation and daily management of the Keymark but not the ownership (Scenario 5) based on the principles as set out by the Task Force, subject to the satisfactory completion of the Implementation Documents.

CENELEC

CCB meeting February 2013

2. Decides to:
   - Inform CEN/CA of the selection of Scenario 5, subject to the satisfactory completion of the Implementation Documents.
   - Ask the Task Force to begin the drafting of the Implementation Documents which include i.a.:
     - A detailed financial model;
     - An implementation document which includes a recommendation on the possible sector approach;
     - The revision of the CEN IR3 (= Terms of Reference of CCB), including the responsibilities for the defence of the Keymark in cases of misuse;
     - The revision of the CEN/CENELEC IR4 (Keymark);
     - The revision of the Assignment- and Transfer Agreements;
     - The contractual rules for the partner(s);
     - The open tender process to select the partner(s).
   - To approve at its next meeting these Implementation Documents and to recommend them to CEN/CA for its approval.

CENELEC

TF-meetings April/May/June 2013

Drafting the Implementation Documents

Discussion on input from Scheme groups and empowered Certification bodies

Open Webmeeting, 25 June 2013, for discussion

CENELEC

The proposal

1 Practically all tasks and responsibilities relating to the management of the Keymark are transferred to an external Partner of CEN.

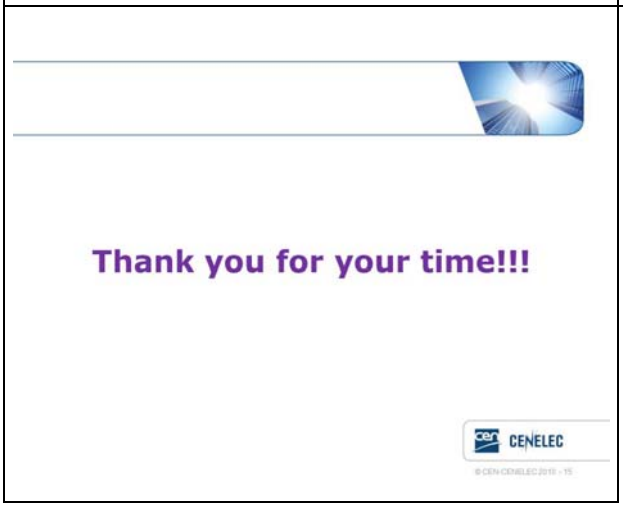
2 The external Partner of CEN shall be a legal entity and its core business should be in the domain of certification.

3 CEN Certification Board will have a monitoring role.

CENELEC


Consequences for the Keymark system
The external Partner of CEN will deal with:
✓ All applications for empowerment
✓ Sign agreement with empowered certification bodies for the right to use the Keymark
✓ Collecting the annual Keymark licence fees
✓ Revision of existing Keymark scheme rules
✓ Development of new Keymark schemes
✓ Actively develop and promote the Keymark
✓ Maintain the Keymark website and database
CENELEC


Next steps
At the CCB meeting on 8 October 2013, the final recommendation of the Task Force will be discussed and decided.
The recommendation of CCB will be submitted to the Administrative Board of CEN in November 2013 for approval.
If approved, implementation will begin early 2014.
CENELEC


Thank you for your time!!!
CENELEC

Annex C
Solar Certification Fund
status report and overview 1st, 2nd, 3rd and 4th Call

Solar Keymark Network meeting

15th meeting
1-2 October 2013
DIN - Germany

The Solar Keymark
CEN Keymark Scheme
THE Quality Label for Solar Thermal Products in Europe

Solar Certification Fund

- 50 projects supported so far
  - Closed: 23 - 1st call: 9
  - Reporting: 5 - 2nd call: 7
  - Deferred: 1 - 3rd call: 18
  - On-going: 20 - 4th call: 16
  - Cancelled: 1

The Solar Keymark
CEN Keymark Scheme
THE Quality Label for Solar Thermal Products in Europe
2

Solar Certification Fund

- 579 845 EUR (approx.) allocated to projects
  - 1st call: 145 950 EUR
  - 2nd call: 79 910 EUR
  - 3rd call: 170 565 EUR
  - 4th call: 183 420 EUR

The Solar Keymark
CEN Keymark Scheme
THE Quality Label for Solar Thermal Products in Europe
3

Solar Certification Fund

- Closed projects
  - Report and deliverables approved by the SCF Steering Group
  - Balance payment done or being prepared
    - invoice requested or payment on pipeline
- Deferred projects
  - Projects that are on-hold
    - Waiting for one of the conditions for the project to occur (external)
- Cancelled projects
  - One case insofar - request from contractor
  - Possible also by SG decision in extreme cases

The Solar Keymark
CEN Keymark Scheme
THE Quality Label for Solar Thermal Products in Europe
4

Solar Certification Fund

- On-going projects
  - Projects that are being executed
  - Periodic reports available (for the majority) at the Disc. Board
  - Deliverables (or drafts) may be also available at the Disc. Board
- Reporting projects
  - Projects that have concluded their work
  - Pending approval, because:
    - Reports (or deliverables) are to be provided (uploaded at DB)
    - Secretariat is preparing evaluation files
    - Evaluators are assessing report and deliverables
    - Evaluators requested aditional clarification or work

The Solar Keymark
CEN Keymark Scheme
THE Quality Label for Solar Thermal Products in Europe
5

Closed projects

Ref.	Project Name	Responsible	Start Date	End Date	Budget
1C01c	SK TC164:2010-vAConsult	Gerard van Amerongen	31/03/2011	01/04/2012	€7 000.00
	Liaison TC164 – TC312				
1C02a	Check 12976-Fraunhofer	Korbinian Kramer	16/06/2012	20/09/2012	€15 000.00
	Proposal for harmonized check list of factory inspection related to factory made systems				
1C07a	Legio2010-vAConsult	Gerard van Amerongen	27/06/2011	15/03/2012	€27 150.00
	Literature study on Legionella				
1C09a	SK 12977-PlanEnergi	Jan Erik Nielsen	01/04/2011	01/10/2012	€20 000.00
	Solar Keymark for "Custom built systems"				
1C10b	CE 2010-SWT	Stephan Fischer	08/07/2011	11/03/2013	€27 900.00
	CE-marking of collectors				
1C12b	SK Update-SP	Peter Kovacs	27/04/2011	18/02/2013	€20 000.00
	"Polymer sealings in solar collectors: Review of appropriate standards and writing a guide for manufacturers (PSC)"				
1C13c	AdminSFC2010-ESTIF	Pedro Dias	01/10/2010	01/04/2012	€8 950.00
	Administration of SCF				
1C14c	GloboCert-PlanEnergi	Jan Erik Nielsen	01/04/2011	28/08/2012	€5 000.00
	Global certification and ISO/EN harmonisation				
2C02a	Pcalc-SP	Peter Kovacs	13/01/2012	19/02/2013	€10 000.00
	Extension of Collector Energy output calculation tool				
2C02b	SK-LCMS-Demokritos	S. Babalis	13/01/2012	11/01/2013	€15 000.00
	Procedures for the certification of performance of large custom-made solar thermal systems, with particular emphasis on the modeling tools				
2C03a	TC312-WG1-SEAS	Jan Olof Dalenbäck	09/02/2012	18/02/2013	€6 000.00
	Part financing of CEN secretariat for solar collector working group (CENWG1)				
2C04	PoQAS-SPF	Andreas Bohren	00/01/1900	00/01/1900	€3 000.00
	Solar Keymark Policing for Quality Assurance				

The Solar Keymark
CEN Keymark Scheme
THE Quality Label for Solar Thermal Products in Europe
6

Closed projects

Ref.	Project Name	Responsible	Start Date	End Date	Budget
2C05	SOFLAT-SPF	Paul Gantenbein	13/01/2012	24/09/2012	€15 000.00
	Standard on solar fluids - Procedure for the assessment of the stability of glycol based SH TF and the Degradation of Fluid Containment Component Materials in SHCS – Laboratory Life Time Assessment Procedure				
3C03	T43Sup12-SolarKey	Jan Erik Nielsen	01/04/2012	12/12/2012	€10 000.00
	Support to IEA-SHC Task 43: Solar rating and certification				
3C05	Legio12-AVC	Gerard van Amerongen	22/05/2012	10/05/2013	€21 250.00
	Follow-up activities on Legionella issue				
3C06	EPBD12-AVC	Gerard van Amerongen	01/04/2012	22/04/2013	€9 925.00
	Follow-up process of revision of "EPBD-standards" and active participation in project team for revision/improvement of EN 15316-4-3				
3C07c	Lias164-12_AVC	Gerard van Amerongen	01/04/2012	22/04/2013	€5 000.00
	Liaison officer of TC 164 (Water supply)				
3C07d	Lias228-12_AVC	Gerard van Amerongen	01/04/2012	22/04/2013	€5 000.00
	Liaison officer of TC 228 (Heating systems in buildings)				
3C07e	Lias371-12_AVC	Gerard van Amerongen	01/04/2012	22/04/2013	€5 000.00
	Liaison officer of TC 371 (Project Committee - Energy Performance of Building project group)				
3C10a	SK-Auto_SP	Peter Kovacs	01/04/2012	14/06/2013	€10 000.00
	Automatic Solar Keymark collector data sheet generation with respect to inclusion of annual performance figures				
3C11a	HPQual_TUV	Ulrich Fritzsche	11/05/2012	27/05/2013	€19 650.00
	Quality assurance aspects related to heat pipes				
3C15a	Uncert-DEM	Emmanouil Mathioulakis	11/05/2012	22/01/2013	€11 700.00
	Estimation of uncertainty of determined collector and system performance				
3C19b	WWWdata_SRCC	Jim Huggins	08/06/2012	09/01/2013	€1 000.00
	Worlwide weather data set referenced to worldwide climate zones simplified Troll and Pfaffen - ISO DIS 9459-4				

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Deferred or Cancelled

Ref.	Project Name	Responsible	Budget
2C04	PoQAS-SPF	Andreas Bohren	€5 000.00
	Solar Keymark Policing for Quality Assurance		
	PROJECT CANCELLED !!! ***Request from the contractor. Allocated budget was EUR 5000.***		
3C14	CE-Bro-ESTIF	Pedro Dias	€8 250.00
	information about CE-marking of solar collectors - target group manufacturers		
	Project shall not start before there is approval (or at least final version sent for enquiry) of part 1 - EN12975. This is expected to happen only mid 2013. To be followed up by then.		

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On-going

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
1C04a	EN13203-3 solar-SWT	D. Bestenlehner	20/07/2011	31/07/2013	€14 950.00
	"Solar friendly" alternative to "EN 13203-3				
	Conclusion delayed: foreseen for July 2013. The (non-critical) delay arose from unforeseen problems with the simulation in general and the resulting necessary revision of the simulation model.				
2C07	CEN/TC312 Secretariat 2012	Vassiliki Drosou	01/12/2011	31/12/2013	€14 000.00
	Operating the CEN/TC312 Secretariat from 1st December 2011 till 31st December 2013				
	Contract extended - Dec 2013. *Extended to 2 years. Original sent 18/09/12*				
3C01	SK-Trade-ESTIF	Pedro Dias	02/05/2012	31/12/2013	€5 990.00
	Promotion of Solar Keymark				
	Project extended (Dec 2013). *Final deliverable missing - conference in non-SK market.*				
3C16	HarmReq _DINCERTCO	Sören Scholz	16/04/2012	30/09/2013	€7 000.00
	Measures to harmonise the qualification requirements for inspectors and test labs				
	Periodic report missing !!! *Will present first darft at SKN meeting 15 (Berlin - Sep 2013)*				

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On-going

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
4C02b	DHW-Store-Indicator	Stephan Fischer	02/04/2013	05/07/2013	€9 800.00
	Annual output indicator for solar water heater stores				
	Contract signed by ESTIF and sent for contractor's signature (2/4) *Contract returned signed by contractor (15/5)* *Payment request pending*				
4C05	SK-Annex E	Jaime Fernandez	01/06/2013	31/05/2014	€3 225.00
	Harmonized Solar Keymark factory production control procedure for EN 12975, -76 and -77 products. Improving Annex E to the scheme rules				
4C06	SK-12976	Danjana Theis	01/04/2013	31/12/2013	€15 310.00
	Quality assurance procedures to assure harmonised of boundary conditions for the long performance prediction for factory made systems and automatic implementation of the performance results in the Solar Keymark data sheets				
	Contract signed by both parties - advance payment request received (17/4) and paid				
4C07	DataSheet-12977	Jan Erik Nielsen	01/05/2013	31/10/2013	€7 000.00
	Elaboration of data sheet templates for custom built systems and components acc. to EN 12977 series				
	No interim report as project still to start (9/09/13)				
4C08	RR-12977	Christian Weißmüller	01/05/2013	31/10/2013	€29 500.00
	Organisation and management plus co-financing of a Round Robin Test of a solar water heater store according to EN 12977-3 and performance predictions of a complete solar water heating system according to EN 12977-2.....				
	Contract sent for contractor's signature (25/4) *Contract returned signed but undated - date added (3/5)* *Tests completed and report sheets to be sent to IFEP - 09/13*				

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On-going

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
4C18	SCF-Sec13	Pedro Dias	29/03/2013	31/03/2013	€9 985.00
	Administration of SCF: administrative secretariat / technical secretary				
	ESTIF: EUR 3 960 (Staff: 3600 + Other: 360) *SolarKey: EUR 6 025 (Staff: 5500 + Travel: 525)*				
4C19b	Industry_Interaction	Xavier Noyon	29/03/2013	31/03/2014	€10 000.00
	Ensure a better involvement of industry resources in standardisation work				
4C19e	Classmate	Peter Kovacs	01/05/2013	01/11/2013	€10 000.00
	Definition of classes and drafting info material to manufacturers related to EN ISO 9806				

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On-going

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
4C12a	LiasTC 164-13	Gerard van Amerongen	01/04/2013	31/03/2014	€5 000.00
	Liaison officers of TC 164				
	Contract sent for contractor's signature (2/4) *Contract received signed but undated date added (29/4)*				
4C12b	LiasTC 228 -13	Gerard van Amerongen	01/04/2013	31/03/2014	€5 000.00
	Liaison officers of TC 228 (Heating systems in buildings)				
	Contract sent for contractor's signature (3/4) *Contract received signed but undated - date added (29/4)*				
4C12c	LiasTC 371-13	Gerard van Amerongen	01/04/2013	31/03/2014	€5 000.00
	Liaison officers of TC 371 (Project Committee - Energy Performance of Building project group)				
	Contract sent for contractor's signature (25/4) *Contract returned signed by contractor but undated - date added (3/5)*				
4C16a	EcoDes-13	Gerard van Amerongen	01/04/2013	31/12/2013	€15 000.00
	Preparing to meet the requirements of Ecodesign Energy Labelling with respect to testing.				
	Contract sent for contractor's signature (25/4) *Contract returned by contractor signed but undated - date added (3/5)*				
4C17	CENmandate-13	Gerard van Amerongen	29/03/2013	30/09/2013	€8 900.00
	Preliminary work program reflecting the mandates M480 (EPD) and M495 (Ecodesign) for discussion within TC312.				
	Contract sent for contractor's signature (25/4) *Contract received from contractor signed but undated - date added (3/5)*				

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Reporting

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
3C02	SK-Database-SolarKey	Jan Erik Nielsen	01/04/2012		€9 900.00
	Reference weather data database for Solar Keymark testing and certification purposes. To be available for free via the Solar Keymark website				
	Update on final status of data - SKN meeting				
3C04	GlobCert12-AENOR	Jaime Fernandez	28/06/2012		€10 000.00
	Proposal for elaborating and implementing a Global Certification scheme for solar collectors				
	Evaluation report being prepared				
3C08	Elab12_tc	Uwe Trenkner	08/04/2013		€13 000.00
	Energy labelling with regard to promotion and awareness raising				
	Decide on need for testing stage of tool				
3C18	AdminSCF2012 _ESTIF	Pedro Dias	01/04/2012		€12 900.00
	Administration of SCF				
	Sent for Final Evaluation with SCF				

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Contracting

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
4C01	Task43Ext	Jan Erik Nielsen	02/04/2013		€20 000.00
	Operating Agent for extension of IEA-SHC Task 43 "Solar Rating and Certification"				
4C03	GlobCert II	Jaime Fernandez	29/03/2013		€24 700.00
	Follow-up project on global certification conc. elaborating and implementing a Global Certification scheme for solar collectors				
	Revised contract sent to subcontractor for signature. Payment request shall follow				
4C11	Uncert	Martin Persson	29/03/2013		€5 000.00
	Calculation of the uncertainty of the performance figures of solar collectors and factory made systems based on the results obtained by the QAIST round robin test				

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Solar Certification Fund

- Improvements done
  - Database for project monitoring
  - Project summary in annex to contract
  - Include in agreement direct upload of files by contractor
  - Deliverables easily acessible in SKN intranet
  - Report on project status in SKN intranet

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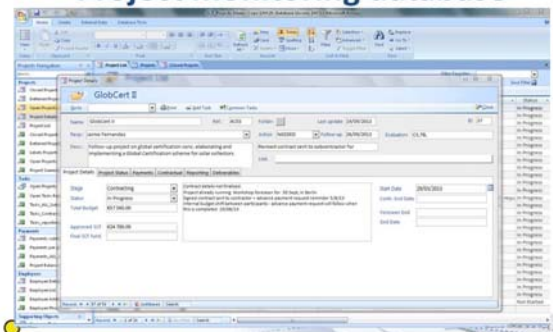
Project monitoring database



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Project deliverables list

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Project status report

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Discussion Board
http://qaist.unidev.eu/
Login: scf_projects (please use underscore between the words)
Password: scfprojects (in this case, no space between the words)
QAiST
Welcome to the QAiST project! (Quality Assurance in Solar Heating and Cooling Technology)
QAiST project (restricted access)
Welcome to the Solar Keymark Network!! The Quality Label for Solar Thermal Products in Europe
Solar Certification Fund
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Solar Certification Fund
• Improvements sought
– New application form, based on current project summary and project reporting
– Better dissemination of project results
• Clarification on documents to go public
• Promoting project results (SK, ESTIF, STW, etc.)
– Improved visibility of SCF support
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Annex D
Indoor test procedure for Factory made systems

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Research and Testing Centre for Thermal Solar Systems (TZS)
Universität Stuttgart

SCF2: SysIndoor - Development of an indoor test procedure for factory made systems according to EN 12976

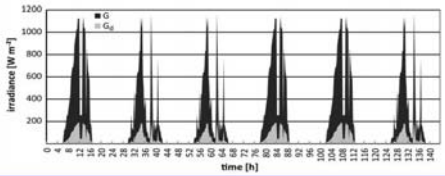
Sebastian Bonk, Stephan Fischer

Institute for Thermodynamics and Thermal Engineering (ITW)
Research and Testing Centre for Thermal Solar Systems (TZS)

University of Stuttgart
Pfaffenwaldring 6, 70550 Stuttgart, Germany
Email: fischer@itw.uni-stuttgart.de
Internet: www.itw.uni-stuttgart.de

Irradiance profiles

- 2 standard irradiance profiles for 1 day each
- DST sequences (Sol A/Sol B/Sto) are using defined combinations of these standard irradiance profiles
- profile combination for Sol A and Sol B sequence (performed together):



Evaluation Procedure

- The evaluation is done nearly unchanged using the InSitu Scientific Software (ISS)
- Additional evaluation step has been introduced
  - The measured irradiation has to be recalculated according to:

$$G_{ISS} = \frac{G_{b_{simulator}}}{IAM} + \frac{G_{d_{simulator}}}{K_{\Theta d}}$$

With:
$G_{b\,simulator}$ [W m⁻²]: beam irradiance during the measurement within the solar simulator
$G_{d\,simulator}$ [W m⁻²]: diffuse irradiance
IAM [-]: incident angle modifier for beam irradiance (for more detail see deliverable D4)
$K_{\Theta d}$ [-]: incident angle modifier of the diffuse irradiance

Requirements for the solar simulator

- Controllable irradiance in the collector plane between 50 W/m² and 1100 W/m² in at least 50 W/m².
- Irradiance must be set during a phase of 8 days of operation to the required irradiance levels with a reproducibility of ± 25 W/m².
- scanner to determine the irradiance distribution over the collector aperture area:
- the distributed mean irradiance values shall not differ more than ±15 % from the mean irradiance over the whole collector aperture area.
- Ambient air temperature shall be set to T_{amb}=17.5 °C ±5 K over whole measurement period.

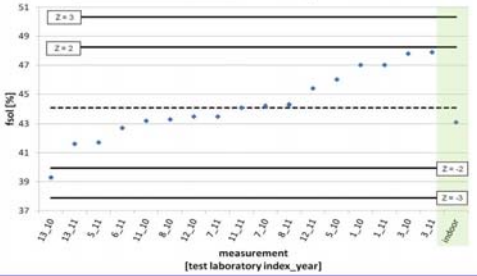
Additions to ISO 9459-5

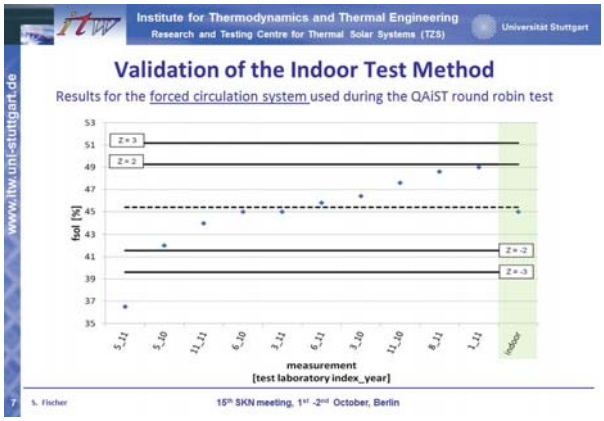
- Scope:
  - Systems using flat-plate collectors can be tested according to the ISO 9459-5 in a dynamic solar simulator
  - The incident angle modifier (IAM) of the collector must be known
- Apparatus:
  - Requirements for the used solar simulator have been defined
  - Suitable method for the determination of the mean irradiance while using a mechanical shading device have been developed

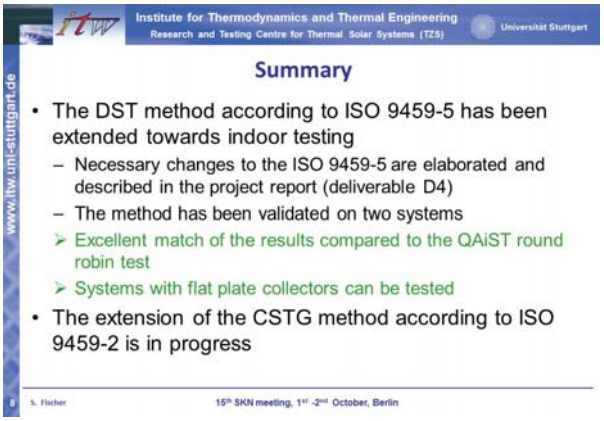
➢ Method has been validated on a flat plate collector

Validation of the Indoor Test Method

Results for the thermo siphon system used during the QAiST round robin test




Institute for Thermodynamics and Thermal Engineering
Research and Testing Centre for Thermal Solar Systems (TZS)
Universität Stuttgart
www.itw.uni-stuttgart.de
Validation of the Indoor Test Method
Results for the forced circulation system used during the QAiST round robin test
fsol [%]
Z = 3
Z = 2
Z = -2
Z = -3
5_11
5_10
11_11
6_10
3_11
6_11
3_10
11_10
8_11
1_11
Indoor
measurement
[test laboratory index_year]
S. Fischer
15th SKN meeting, 1st -2nd October, Berlin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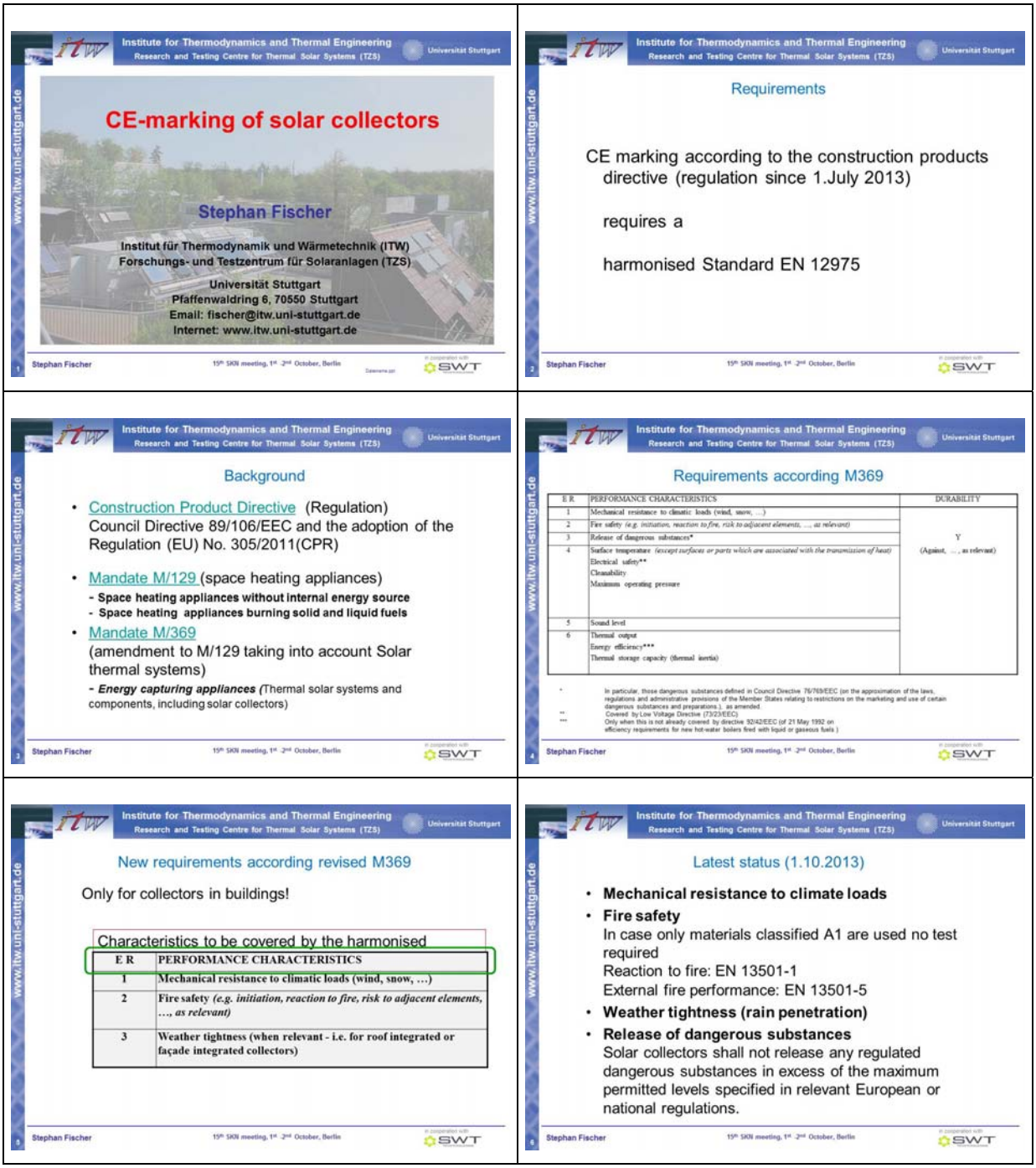
Summary
• The DST method according to ISO 9459-5 has been extended towards indoor testing
– Necessary changes to the ISO 9459-5 are elaborated and described in the project report (deliverable D4)
– The method has been validated on two systems
➢ Excellent match of the results compared to the QAiST round robin test
➢ Systems with flat plate collectors can be tested
• The extension of the CSTG method according to ISO 9459-2 is in progress
S. Fischer
15th SKN meeting, 1st -2nd October, Berlin

Annex E
Update on CE-Marking of solar collectors



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CE-marking of solar collectors

Stephan Fischer

Institut für Thermodynamik und Wärmetechnik (ITW)
Forschungs- und Testzentrum für Solaranlagen (TZS)

Universität Stuttgart
Pfaffenwaldring 6, 70550 Stuttgart
Email: fischer@itw.uni-stuttgart.de
Internet: www.itw.uni-stuttgart.de

Requirements

CE marking according to the construction products directive (regulation since 1.July 2013)

requires a

harmonised Standard EN 12975

Background

- Construction Product Directive (Regulation)
  Council Directive 89/106/EEC and the adoption of the Regulation (EU) No. 305/2011(CPR)
- Mandate M/129 (space heating appliances)
  - **Space heating appliances without internal energy source**
  - **Space heating appliances burning solid and liquid fuels**
- Mandate M/369
  (amendment to M/129 taking into account Solar thermal systems)
  - ***Energy capturing appliances*** (Thermal solar systems and components, including solar collectors)

Requirements according M369

E R	PERFORMANCE CHARACTERISTICS	DURABILITY
1	Mechanical resistance to climatic loads (wind, snow, …)	
2	Fire safety *(e.g. initiation, reaction to fire, risk to adjacent elements, …, as relevant)*	
3	Release of dangerous substances*	Y
4	Surface temperature *(except surfaces or parts which are associated with the transmission of heat)* Electrical safety** Cleanability Maximum operating pressure	(Against, …, as relevant)
5	Sound level	
6	Thermal output Energy efficiency*** Thermal storage capacity (thermal inertia)	

* In particular, those dangerous substances defined in Council Directive 76/769/EEC (on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations.), as amended.
Covered by Low Voltage Directive (73/23/EEC).
*** Only when this is not already covered by directive 92/42/EEC (of 21 May 1992 on efficiency requirements for new hot-water boilers fired with liquid or gaseous fuels)

New requirements according revised M369

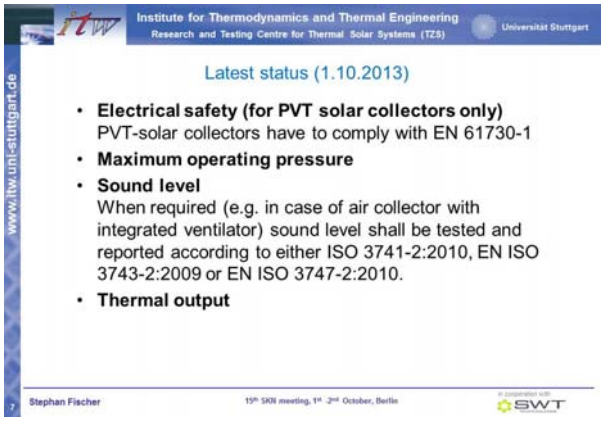
Only for collectors in buildings!

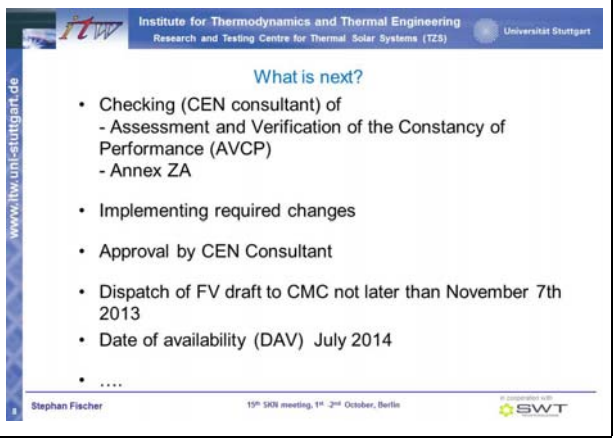
Characteristics to be covered by the harmonised

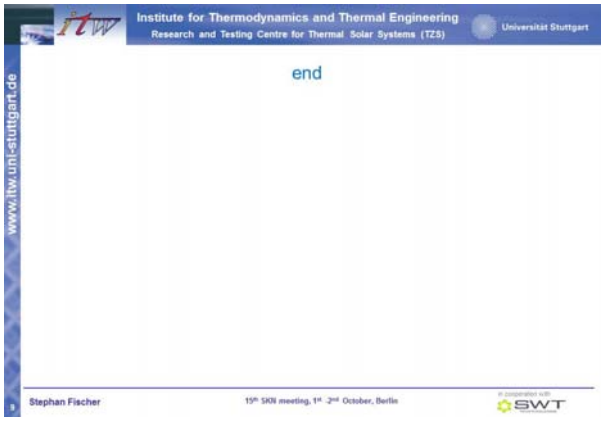
E R	PERFORMANCE CHARACTERISTICS
1	**Mechanical resistance to climatic loads (wind, snow, …)**
2	**Fire safety *(e.g. initiation, reaction to fire, risk to adjacent elements, …, as relevant)***
3	**Weather tightness (when relevant - i.e. for roof integrated or façade integrated collectors)**

Latest status (1.10.2013)

- **Mechanical resistance to climate loads**
- **Fire safety**
  In case only materials classified A1 are used no test required
  Reaction to fire: EN 13501-1
  External fire performance: EN 13501-5
- **Weather tightness (rain penetration)**
- **Release of dangerous substances**
  Solar collectors shall not release any regulated dangerous substances in excess of the maximum permitted levels specified in relevant European or national regulations.


Institute for Thermodynamics and Thermal Engineering
Research and Testing Centre for Thermal Solar Systems (TZS)
Universität Stuttgart
www.itw.uni-stuttgart.de
Latest status (1.10.2013)
• Electrical safety (for PVT solar collectors only)
PVT-solar collectors have to comply with EN 61730-1
• Maximum operating pressure
• Sound level
When required (e.g. in case of air collector with integrated ventilator) sound level shall be tested and reported according to either ISO 3741-2:2010, EN ISO 3743-2:2009 or EN ISO 3747-2:2010.
• Thermal output
Stephan Fischer
SWT


Institute for Thermodynamics and Thermal Engineering
Research and Testing Centre for Thermal Solar Systems (TZS)
Universität Stuttgart
www.itw.uni-stuttgart.de
What is next?
• Checking (CEN consultant) of
- Assessment and Verification of the Constancy of Performance (AVCP)
- Annex ZA
• Implementing required changes
• Approval by CEN Consultant
• Dispatch of FV draft to CMC not later than November 7th 2013
• Date of availability (DAV) July 2014
• ....
Stephan Fischer
SWT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Research and Testing Centre for Thermal Solar Systems (TZS)
Universität Stuttgart
www.itw.uni-stuttgart.de
end
Stephan Fischer
SWT

Annex F
Certification Body Group Report

Certification Body Group Report

15. Solar KEYMARK Network Meeting

Sören Scholz, 1 October 2013, Berlin

TÜVRheinland® DIN CERTCO Precisely Right.

We create confidence!

Summary of the CB Meetings (1)

- Dates:
  - 2013-07-09 preparation by AENOR
  - 2013-09-06 preparation by DIN CERTCO
- Participants:
  - Francois-Xavier Ball (CERTITA)
  - Daniele Bernacchioni (ICIM)
  - Jim Huggins, Tomas Koening, Eileen Prado, (SRCC)
  - Jaime Fernandez (AENOR)
  - Susanne Hannsson (SP)
  - Nikos Kanatsoulis (MIRTEK S.A.)
  - Jana Lewicka (TSU)
  - Henry Rosik (ITC)
  - Achim Sadenwater, Sören Scholz (DIN CERTCO)
  - Allard Slomp (KIWA)

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Summary of the CB Meetings (2)

- Preparation of new Annex F for OEM, OBL certificates
  - Definitions: OEM is the original manufacturer
  - Example (flow chart)
  - The same or different registration No.
  - Process of granting certificates Process of maintaining certificate
- Discussions of SKN fees for different brands
  - Fairness for small and big companies concerning testing, inspection, certification and licence fees
  - How to ensure easy invoice procedure for JEN
  - Transperency concerning Solar KEYMARK database
- Prepartion of new internal regulation for SKN
  - How to ensure a fair attendancy at SKN meetings
  - How to proceed if this is not possible

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Summary of the CB Meetings (3)

- Conclusions
  - These regular meetings are important for experience exchange and for development of certification procedures
  - Although we follow the same accreditation standard EN 45011 there are different ways of interpretation
  - A fair competition concerning workload for preparation and attending of the meetings is not yet fulfilled
  - Progress is possible also via web meetings
- Next Steps
  - proposal for minimum requirements for testing laboratories and inspection bodies
  - Regular sub-groups should be supported by SCF (permanent secretariat)

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Misuse of the Solar KEYMARK

Kind of Searching and Quantity:

- External Information (e.g. from customers, testing laboratories, consumers): 12
- Research for the mark on the Internet: 24
- Trade fair visits: 4
- eBay: 2
- Anonymous: 2

Measures and Quantity:

- Active search for deleted certificates: 10
- Customer acquisition: 3
- Letter to the company with the request to stop the misuse: 42
- Legal Actions by CEN: 1

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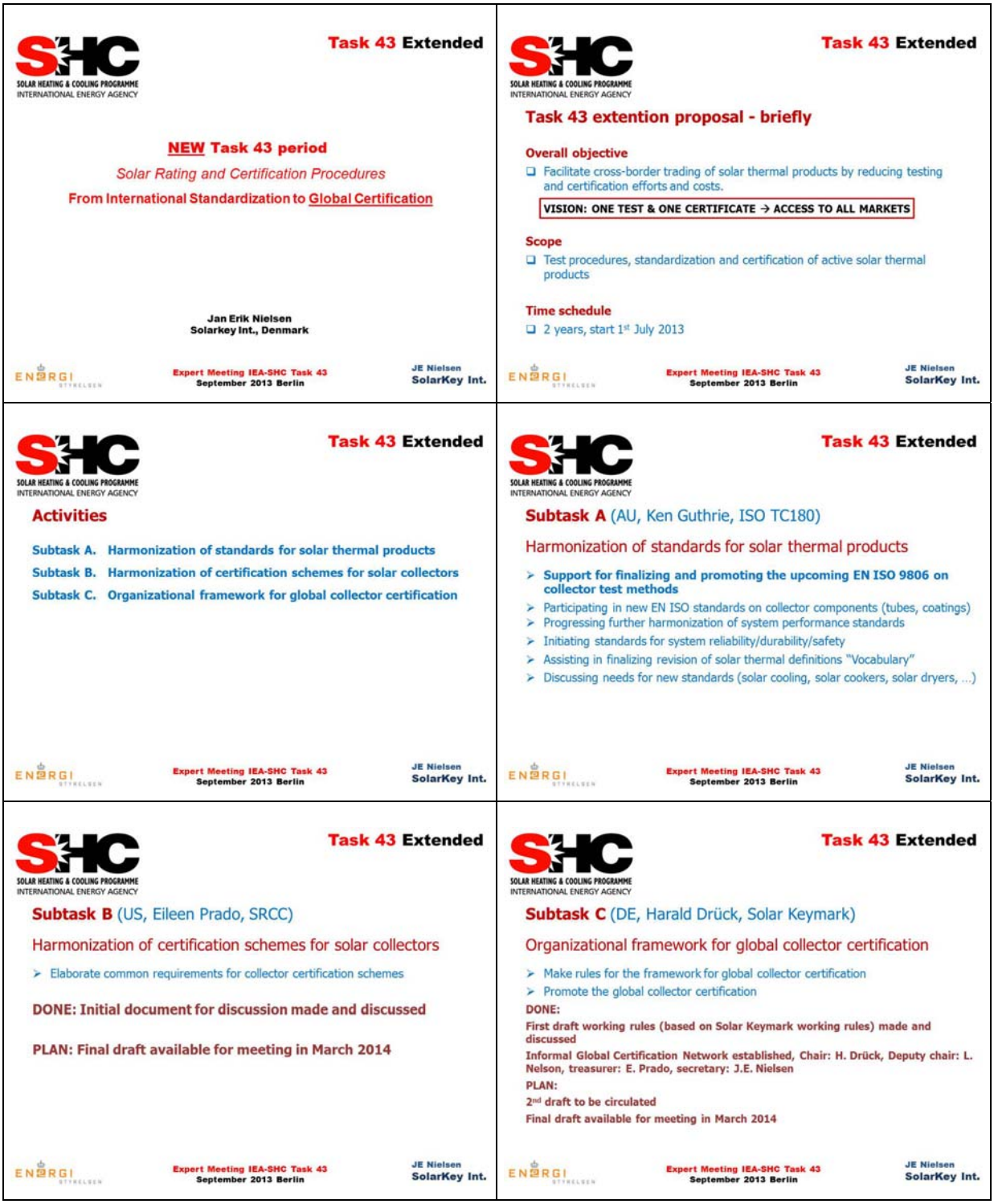
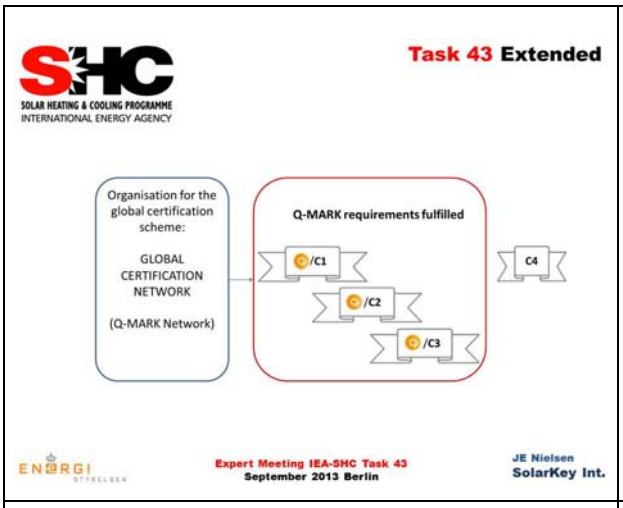
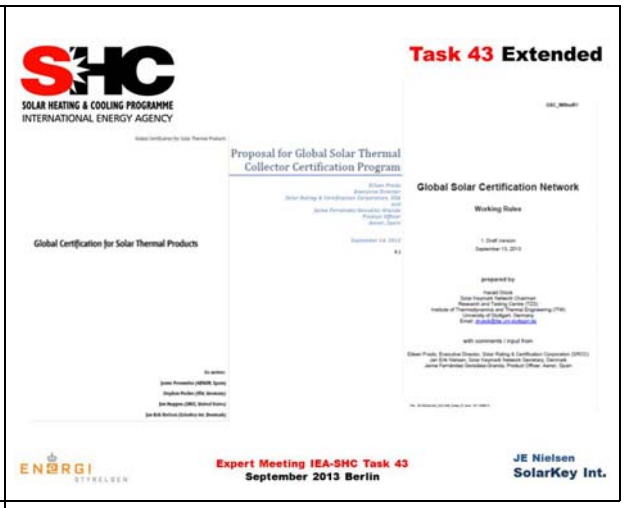
Annex G
Global Certification




Task 43 Extended
SOLAR HEATING & COOLING PROGRAMME
INTERNATIONAL ENERGY AGENCY
Organisation for the global certification scheme:
GLOBAL CERTIFICATION NETWORK
(Q-MARK Network)
Q-MARK requirements fulfilled
/C1
/C2
/C3
C4
ENERGI STYRELSEN
Expert Meeting IEA-SHC Task 43
September 2013 Berlin
JE Nielsen
SolarKey Int.


Task 43 Extended
SOLAR HEATING & COOLING PROGRAMME
INTERNATIONAL ENERGY AGENCY
Proposal for Global Solar Thermal Collector Certification Program
Global Certification for Solar Thermal Products
Global Solar Certification Network
Working Rules
ENERGI STYRELSEN
Expert Meeting IEA-SHC Task 43
September 2013 Berlin
JE Nielsen
SolarKey Int.


Task 43 Extended
SOLAR HEATING & COOLING PROGRAMME
INTERNATIONAL ENERGY AGENCY
Thank you for your attension
Jan Erik Nielsen
OA Task 43
jen@solarkey.dk
ENERGI STYRELSEN
Expert Meeting IEA-SHC Task 43
September 2013 Berlin
JE Nielsen
SolarKey Int.

Annex H
Covering letter and Memorandum of Understanding between IAPMO and SKN

INTERNATIONAL ASSOCIATION OF
PLUMBING AND MECHANICAL OFFICIALS

4755 East Philadelphia Street
Ontario, California – USA 91761-2816

Ph: 909.472.4201 Fax: 909.472.4221
http://www.iapmo.org

GP Russ Chaney, Chief Executive Officer
russ.chaney@iapmo.org

September 30, 2013

Dr. Harald Drück
Chairman
Solar Keymark Network

Via Hand Delivery

Dr. Drück:

On behalf of the International Association of Plumbing & Mechanical Officials (IAPMO) it is my pleasure to provide a signed MOU for Global Certification of Solar Thermal Products for your countersignature at the Global Certification meeting In Berlin.

The IAPMO Group provides codes, testing and certification of products in several countries in addition to the United States, including, among others, India, China, Australia, Indonesia, and the Philippines. We certainly are convinced that the establishment and maintenance of global certification for solar thermal products is important not only for deployment of solar thermal technology around the world, but also for the protection of consumers and the convenience of manufacturers.

The IAPMO Group would be pleased to work together with the Solar Keymark Network on a priority basis to help carry out the work set forth in the MOU. We are fortunate to enjoy the services of Les Nelson as our Director of Solar Heating & Cooling here at IAPMO. Les has labored for the benefit of the Solar Thermal industry for over forty years and I'm sure is well-known to you and your compatriots in Europe. Les will facilitate IAPMO's involvement in these activities on behalf of the IAPMO Group.

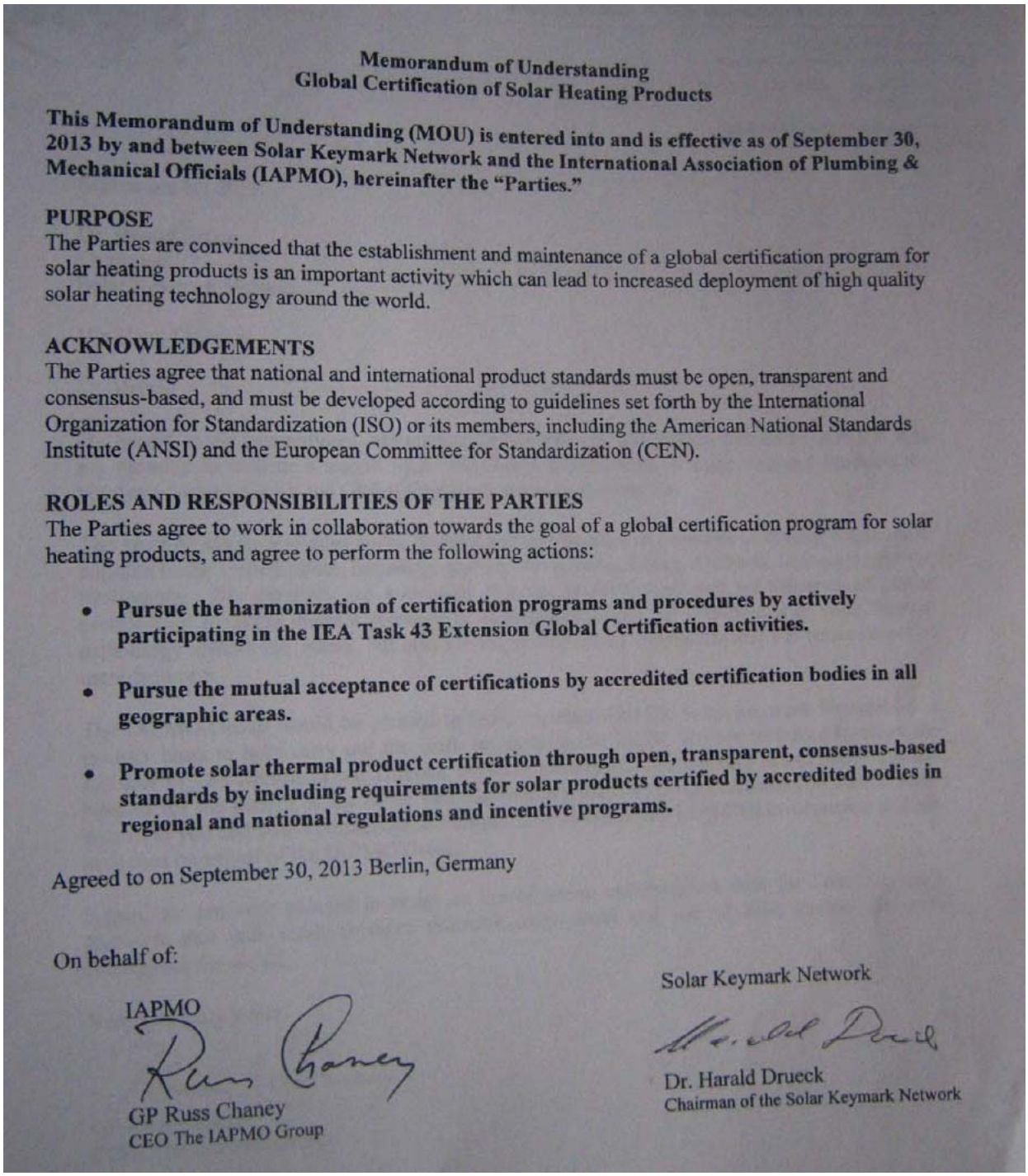
Again, we are very pleased to begin an era of active collaboration with the Solar Keymark Network that will result in more effective deployment and use of solar thermal products throughout the world.

Very sincerely yours,

Russ Chaney

GP Russ Chaney
CEO, The IAPMO Group

Memorandum of Understanding between IAPMO and SKN



Memorandum of Understanding
Global Certification of Solar Heating Products

This Memorandum of Understanding (MOU) is entered into and is effective as of September 30, 2013 by and between Solar Keymark Network and the International Association of Plumbing & Mechanical Officials (IAPMO), hereinafter the "Parties."

PURPOSE
The Parties are convinced that the establishment and maintenance of a global certification program for solar heating products is an important activity which can lead to increased deployment of high quality solar heating technology around the world.

ACKNOWLEDGEMENTS
The Parties agree that national and international product standards must be open, transparent and consensus-based, and must be developed according to guidelines set forth by the International Organization for Standardization (ISO) or its members, including the American National Standards Institute (ANSI) and the European Committee for Standardization (CEN).

ROLES AND RESPONSIBILITIES OF THE PARTIES
The Parties agree to work in collaboration towards the goal of a global certification program for solar heating products, and agree to perform the following actions:

- **Pursue the harmonization of certification programs and procedures by actively participating in the IEA Task 43 Extension Global Certification activities.**
- **Pursue the mutual acceptance of certifications by accredited certification bodies in all geographic areas.**
- **Promote solar thermal product certification through open, transparent, consensus-based standards by including requirements for solar products certified by accredited bodies in regional and national regulations and incentive programs.**

Agreed to on September 30, 2013 Berlin, Germany

On behalf of:

IAPMO
GP Russ Chaney
CEO The IAPMO Group

Solar Keymark Network
Dr. Harald Drueck
Chairman of the Solar Keymark Network