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 March 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 12th, 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

March 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 in 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:

Pedro 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 Heinze, 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/2tc79jk5z7gfj8/vv5Cmk_acf](https://www.dropbox.com/sh/2tc79jk5z7gfj8/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 clause 2.1.1) 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.

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### SKN Meetings

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


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

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

\[
\text{CAO}_{\text{location}} \text{ at xx °C: yyy kWh/a based on Solar Keymark certificate number zzzz}
\]

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 PVT 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 its 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.iece.org/iecee/iecemembers.nsf/ScopeOverview?ReadForm](http://members.iece.org/iecee/iecemembers.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.iece.org/cb_fcs/default.htm](http://www.iece.org/cb_fcs/default.htm) and on [http://www.iece.org/Operational_documents/iecee_documents/od-3000.pdf](http://www.iece.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:


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.*


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)


For further information see also:  
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

**March 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:**
Harald Drück
ITW, Stuttgart University
Pfaffenwaldring 6
70550 Stuttgart, Germany
Email: drueck@itw.uni-stuttgart.de

**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

<table>
<thead>
<tr>
<th>NAME</th>
<th>ORGANISATION</th>
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<tbody>
<tr>
<td>Achim Sadenwater</td>
<td>DIN CERTCO</td>
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<td>Alberto García de Jalón</td>
<td>CENER</td>
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<td>Allard Slomp</td>
<td>Kiwa</td>
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<td>Andreas Bohren</td>
<td>SPF Solartechnik</td>
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<td>Andreas Gisch</td>
<td>IZES gGmbH</td>
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<td>Ashraf Kraidy</td>
<td>RCREEEE</td>
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<td>Bernhard Aigner</td>
<td>SunWin</td>
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<td>Daniele Bernacchioni</td>
<td>ICIM S.p.A.</td>
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<tr>
<td>Fernando Isorna</td>
<td>INTA</td>
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<tr>
<td>Filippo Brivio</td>
<td>IMQ S.p.A.</td>
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<tr>
<td>François-Xavier Ball</td>
<td>CERTITA</td>
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<td>Francis Kliem</td>
<td>ISFH</td>
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<tr>
<td>Franck Cheutin</td>
<td>CSTB</td>
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<tr>
<td>Franz Helmingier</td>
<td>AIT Austria</td>
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<tr>
<td>Giombattista Traina</td>
<td>Instituto Giordano</td>
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<tr>
<td>Giuseppe Terzaghi</td>
<td>Albarubens SRL</td>
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<tr>
<td>Hanspeter Weiss</td>
<td>Ernst Schweizer AG/ Swissolar</td>
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<tr>
<td>Harald Dehner</td>
<td>ASIC</td>
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<tr>
<td>Harald Drück</td>
<td>ITW</td>
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<tr>
<td>Inga Schlüter</td>
<td>DIN</td>
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<tr>
<td>Jaime Fernandez Gonzalez-Granda</td>
<td>AENOR</td>
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<tr>
<td>Jan Erik Nielsen</td>
<td>Solar Key Int.</td>
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<tr>
<td>Jim Huggins</td>
<td>Solar Rating &amp; Certification Corp</td>
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<tr>
<td>João Santos</td>
<td>CERTIF</td>
</tr>
<tr>
<td>Julien Heintz</td>
<td>CETIAT and BELENOS</td>
</tr>
<tr>
<td>Katharina Meyer</td>
<td>DIN CERTCO</td>
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<tr>
<td>Korbinian Kramer</td>
<td>Fraunhofer ISE</td>
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<tr>
<td>Liangguang Tian</td>
<td>Shandong Supervision and Inspection Institute for Product Quality</td>
</tr>
<tr>
<td>Marco Pirozzo</td>
<td>Eurofins-Modulo Uno</td>
</tr>
<tr>
<td>Malte Kottwitz</td>
<td>TÜV Rheinland (Shanghai) Co., Ltd.</td>
</tr>
<tr>
<td>Maria João Carvalho</td>
<td>LNEG</td>
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<tr>
<td>Ozan Türk</td>
<td>SPF</td>
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<tr>
<td>Pedro Dias</td>
<td>ESTIF</td>
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<tr>
<td>Qingtai Jiao</td>
<td>Jiangsu Sunrain Solar Energy Co. Ltd.</td>
</tr>
<tr>
<td>Name</td>
<td>Institution</td>
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<tr>
<td>Ralf Köbbemann-Rengers</td>
<td>Bosch / BDH</td>
</tr>
<tr>
<td>Richard Horton</td>
<td>Rheem</td>
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<tr>
<td>Sören Scholz</td>
<td>DIN CERTCO GmbH</td>
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<td>Stefan Mehnert</td>
<td>Fraunhofer ISE</td>
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<td>Stephan Fischer</td>
<td>ITW</td>
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<tr>
<td>Susanne Hansson</td>
<td>SP Technical Research Institute of Sweden</td>
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<tr>
<td>Ulrich Fritzsche</td>
<td>TÜV Rheinland Energie und Umwelt GmbH</td>
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<tr>
<td>Vinod Kumar Sharma</td>
<td>ENEA</td>
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<tr>
<td>Xiaochao Tong</td>
<td>CABR certification center</td>
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<tr>
<td>Yuwu Li</td>
<td>Shandong Supervision and Inspection Institute for Product Quality</td>
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<tr>
<td>Zou Huaisong</td>
<td>Beijing Cibsolar ltd</td>
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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 COMP (doc N 590),
- 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. Encourage 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 Keretsz (AFNOR)
- Inga Schlüter (DIN)
- Pedro Loste (AENOR)
- Pim Bijl (NEN)
- Ian Greensmith / James Berry (BSI)
- Nils Kleinjan (EEPOA)
- 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.

**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”

**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.

**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 393 (= Terms of Reference of CCB), including the responsibilities for the defence of the Keymark in cases of misuse;
     - The revision of the CEN/CENELEC 84 (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.

**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

**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.
Consequences for the Keymark system

- 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

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.

Thank you for your time!!!
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

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

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

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

Solar Certification Fund
- 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 additional clarification or work

Solar Certification Fund
- Closed projects
  - Report and deliverables approved by the SCF Steering Group
  - Balance payment done or being prepared
    • Invoices 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

Closed projects
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<th>Responsible</th>
<th>Start Date</th>
<th>End Date</th>
<th>Budget</th>
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| 1234 | Project X    | John Doe    | 01/01/2023 | 31/12/2023 | $500,000
| 1235 | Project Y    | Jane Smith  | 11/02/2022 | 31/03/2022 | $250,000
### Closed projects

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<th>End Date</th>
<th>Budget</th>
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<td>P001</td>
<td>Solar keymark installation</td>
<td>John Smith</td>
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<td>31/12/2020</td>
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### Deferred or Cancelled

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<td>D01</td>
<td>Solar keymark review</td>
<td>Alex Johnson</td>
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<td>D02</td>
<td>Solar keymark implementation</td>
<td>Emily Davis</td>
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### On-going

#### The Solar Keymark CEN Standardisation Scheme

**On-going**

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<th>Project Name</th>
<th>Responsible</th>
<th>Start Date</th>
<th>End Date</th>
<th>Budget</th>
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<tbody>
<tr>
<td>O01</td>
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<td>John Smith</td>
<td>01/03/2021</td>
<td>31/02/2022</td>
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<tr>
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<td>01/04/2021</td>
<td>31/03/2022</td>
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### On-going

**On-going**

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### On-going

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<td>01/08/2021</td>
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### On-going

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<tr>
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### Reporting

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<td>01/04/2013</td>
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<td>Jan Erik Nilssen</td>
<td>01/04/2013</td>
<td></td>
<td>59 990.00</td>
</tr>
</tbody>
</table>

#### Solar Keymark Network
- Definitions and elaboration of the Solar Keymark network.
- Evaluating the potential and implementation of the Solar Keymark network.
- Reporting and reporting on the Solar Keymark network.

### Contracting

<table>
<thead>
<tr>
<th>Ref</th>
<th>Project Name</th>
<th>Responsible</th>
<th>Start Date</th>
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<th>Budget</th>
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<td>Jan Erik Nilssen</td>
<td>01/04/2013</td>
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</tr>
</tbody>
</table>

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

#### Project monitoring database

- [Database Interface](image)

#### Project deliverables list

- [List Interface](image)

#### Project status report

- [Report Interface](image)
Discussion Board

http://qast.unidex.eu/

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
Annex D

Indoor test procedure for Factory made systems

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 (ZES)
University of Stuttgart
Pfaffenweg 6, 70569 Stuttgart, Germany
Email: fischer@itw.uni-stuttgart.de
Website: www.itw.uni-stuttgart.de

Evaluation Procedure

- The evaluation is done nearly unchanged using the InSitu Scientific Software (ISS)
- Additional evaluation step has been introduced
  - The measured irradiance has to be recalculated according to:
    \[ G_{\text{SIS}} = \frac{G_{\text{SIS,measured}} + G_{\text{SIS,diffuse}}}{IAM} \]

  \( G_{\text{SIS,measured}} \) [W/m²]: beam irradiance during the measurement within the solar simulator
  \( G_{\text{SIS,diffuse}} \) [W/m²]: diffuse irradiance
  \( IAM \) [°]: incident angle modifier for beam irradiance (more details see deliverable D4)

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 \( T_{\text{avg}} = 17.5 \) °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 GAIST round robin test
Validation of the Indoor Test Method

Results for the modified simulation system used during the QaIST round robin test.

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.
Annex E
Update on CE-Marking of solar collectors

Background

• Construction Product Directive (Regulation)
• 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)

New requirements according revised M369

Only for collectors in buildings!

Characteristics to be covered by the harmonised

<table>
<thead>
<tr>
<th>PERFORMANCE CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mechanical resistance to climatic loads (wind, rain, etc.)</td>
</tr>
<tr>
<td>2. Fire safety (e.g. ignition, reaction to fire, risk to adjacent elements, etc. in relevant)</td>
</tr>
<tr>
<td>3. Weather tightness (when relevant - Ls for roof integrated or façade integrated collectors)</td>
</tr>
</tbody>
</table>

Requirements

CE marking according to the construction products directive (regulation since 1 July 2013)
requires a
harmonised Standard EN 12975

Requirements according M369

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.
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

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 PV draft to CMC not later than November 7th 2013
- Date of availability (DAV) July 2014

end
Annex F
Certification Body Group Report

Summary of the CB Meetings (1)

- Dates:
  - 2019-07-09 preparation by IKOM
  - 2019-09-09 preparation by DIN CERTCO

- Participants:
  - Francesco/Andreas Boll (CERTITIA)
  - Gianluca Mazzoni (IEC)
  - Jan Hugels, Tobias Koering, Eleonora Pardo, (SRRC)
  - Joanne Fernandes (AEOC)
  - Susanne Hansen (SP)
  - Yolanda Poletofy (MPL-T)
  - Jana Lewicka (TUE)
  - Timm Lueck (TÜV)
  - Achim Tadzen, Bozen Schmid (DIN CERTCO)
  - Abdal Shumy (KNV)

Summary of the CB Meetings (2)

- Preparation of new Annex F for OEM, OBL certificates
  - Definitions: OBL is the original manufacturer
  - Example (flow chart)
  - The name or different registration No.
  - Process of granting certificates Process of maintaining certificates

- 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 procedures for JEN
  - Transparency concerning Solar KEYMARK Database

- Preparation of new internal regulation for SKN
  - How to ensure a fair attendance at SKN meetings
  - How to proceed if this is not possible

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 workflow preparation and attending of the meetings is not yet fulfilled
  - Progress 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 accredited)

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 GENV: 1
Annex G
Global Certification

NEW Task 43 period
Solar Rating and Certification Procedures
From International Standardization to Global Certification

Task 43 Extended

Overall objective
- Facilitate cross-border trading of solar thermal products by reducing testing and certification efforts and costs.

VISION: ONE TEST & ONE CERTIFICATE → ACCESS TO ALL MARKETS

Scope
- Test procedures, standardization and certification of active solar thermal products

Time schedule
- 5 years, start 1st July 2013

Subtask A (AU, Ken Guthrie, ISO TC180)
Harmonization of standards for solar thermal products
- Support for finalizing and promoting the upcoming EN ISO 9606 on collector test methods
- Participating in new EN ISO standards on collector components (tubes, coatings)
- Progressing further harmonization of system performance standards
- Initiating standards for system reliability/durability/safety
- Assisting in finalizing revision of solar thermal definitions “Vocabulary”
- Discussing needs for new standards (solar cooling, solar cookers, solar dryers, ...)

Subtask B (US, Eileen Prado, SRCC)
Harmonization of certification schemes for solar collectors
- Elaborate common requirements for collector certification schemes

DONE: Initial document for discussion made and discussed

PLAN: Final draft available for meeting in March 2014

Subtask C (DE, Harald Drück, Solar Keymark)
Organizational framework for global collector certification
- Make rules for the framework for global collector certification
- Promote the global collector certification

DONE:
First draft working rules (based on Solar Keymark working rules) made and discussed
Informal Global Certification Network established, Chair: H. Drück, Deputy chair: L. Nielsen, treasurer: E. Prado, secretary: J.B. Nielsen

PLAN:
2nd draft to be circulated
Final draft available for meeting in March 2014
Task 43 Extended

Thank you for your attention

Jan Erik Nielsen
OA Task 43

jen@solarkey.dk
Annex H
Covering letter and Memorandum of Understanding between IAPMO and SKN

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,

GP Russ Chaney
CEO, The IAPMO Group
Memorandum of Understanding between IAPMO and SKN

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