

Solar Keymark Network

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



Final Minutes

16. Solar Keymark Network Meeting March 11th – 12th, 2014; Las Palmas de Gran Canaria, Spain

Item 1: Opening of the meeting

Gonzalo Piernavieja director R&D&Innovations welcomed the participants on behalf of ITC (Instituto Tecnológico de Canarias) and gave a short presentation about ITC.

Harald Drück, chairman of the Solar Keymark Network, opened the meeting and welcomed the participants as well as the numerous guests. He thanked Gonzalo Piernavieja for his presentation as well as Pilar Navarro Rivero and Salvador Suárez from ITC 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.

Pilar Navarro Rivero gave some practical information related to the breaks and the informal dinner planned for the evening.

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)

Harald Drück mentioned the **concept related to resolutions and decisions**:

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).

The meeting took place from Tuesday, March 11th, 2014, 10:00 hrs till Wednesday March 12th, 2014, 12:15 hrs at the premises of ITC in Las Palmas de Gran Canaria.

The first invitation including the first draft agenda (Document SKN_N0229R0) of the meeting was sent out by email from Jan Erik Nielsen dated January 17th, 2014.

Item 2: Introduction of participants

The participants attending the meeting physically introduced themselves and mentioned their nominating organisation or institution respectively.

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_N0102R) are fulfilled.

Since this meeting was the first meeting that was also additionally transmitted via internet Harald Drück asked the persons following the meeting via Internet to send an email to Pedro Dias and to confirm their virtual presence and to mention their name and institution.

The list of participants that attended the meeting physically and electronically is attached as Annex A.

Item 3: Approval of the agenda

Following the first draft agenda (Document SKN_N0229R0) send out on January 17th, 2014, 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 “16th Solar Keymark Network meeting – revised final draft agenda version R3” document SKN_N0229R3 dated 06/03/14 and send out on March 6th, 2014.

This version of the agenda was presented and discussed. Two proposals for additional topics were proposed and included under item 39 (any other business).

Based on a request of Christian Stadler, Harald Drück asked if there were objections postponing item 13 (tendering procedures based on Solar Keymark) to the second day of the meeting, since Christian Stadler would only be present at that time. Since there were no objections, it was agreed to do this – without changing the numbering of the items of the agenda.

It was agreed that the final agenda resulting from these changes would be the basis for the 16th Solar Keymark Network meeting. This final agenda is as document SKN_N0229R4 available via www.solarkeymark.org.

Item 4: Comments and final approval of the minutes of the 15. SKN meeting

Harald Drück mentioned that the minutes of the 15th Solar Keymark Network meeting (File: SKN_N0227R0.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 October 7th, 2014 by Jan Erik Nielsen.

Within the 30 days following the send out of the minutes the following comments were received:

From: Rosík Henry [mailto:hrosik@itczlin.cz]
Sent: 07 October 2013 17:13

To: Jan Erik Nielsen
Subject: RE: SKN Meeting minutes

Only one small technical remark, Jan Erik -
the reference in Item 12 does not work properly.

Rgds
---henry

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 **Fehler! Verweisquelle konnte nicht gefunden werden.**) 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.

Action: The reference will be corrected as follows:
.... the obligatory members (see clause 2.1.1) shall participate....

Gesendet: Mittwoch, 6. November 2013 14:54
An: Harald Drucek
Betreff: FW: SKN Meeting minutes

Hi Harald,

Please find below some comments on the SKN meetings.

Item 9

As mentioned at the meeting, the document presented was not elaborated by the WG but by the Chair in cooperation with the circle of the Certification Bodies. I suggest that the minutes are changed accordingly.

Action: Change Text from

“The document SKN_N0193R1 elaborated by the WG, as distributed shortly before the 14th Solar Keymark Network meeting, was presented at that meeting by Sören Scholz.

to

“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

Item 18

Typo - Jan Erik's name is not complete.

Action: Name completed

Item 25

Typo - 2nd line “March 2103”

Action: Word “Mach” changed to “March”

Item 27

The Directive is called Energy Performance of Buildings Directive (EPBD)

Action: “Performance of Buildings Directive (EPD)” changed to “Energy Performance of Buildings Directive (EPBD)”

Item 28 (HD: should be 29)

Typo - 2nd line “from the company)

Action: Word “form” changed to “from”

Item 28

Typo - last line ‘convenership’

Action: “convenor ship” changed to “convenership”

Kind Regards,

Pedro

Due to the changes mentioned above the document SKN_N0227R1 results as the revised version of the minutes. Harald Drück asked for approval of this version as the minutes.

The final minutes of the 15th Solar Keymark Network meeting (Document SKN_N0227R1) were unanimously finally 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 5: Date & place of next Solar Keymark Network (SKN) meetings

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

September 30th, 13:00 hrs to October 1st, 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 2nd, 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 in Rome based on an invitation of Vinod Kumar Sharma from ENEA.

The 19th SKN meeting (autumn 2015 meeting) is scheduled for

October 6th, 13:00 hrs to October 7th, 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 6: New Absorber coatings to be considered as equivalent

No new absorber coatings to be considered as equivalent were presented for this meeting.

Item 7: New Glazing to be considered as equivalent

No new glazings to be considered as equivalent were presented for this meeting.

Item 8: Inclusion of unglazed collectors in SK data sheets

The topic could not be discussed since Peter Kovacs was not present and since it was not exactly clear what was his intention to put this topic on the agenda.

Ulrich Fritzsche mentioned that the performance test results out of steady state method for unglazed solar collectors cannot be entered in the present version of the Solar Keymark data sheets and that this has to be solved in the near future.

Item 9: Renewable Heat Incentive (RHI) scheme in Great Britain

Harald Drück welcomed Jacob Andersen from DECC (Department of Energy & Climate Change) and Alex Stuart from Ofgem from the UK and mentioned that he was very happy that they attended the Solar Keymark Network meeting in order to intensify the cooperation between RHI and Solar Keymark.

Jacob Andersen explained the Renewable Heat Incentive (RHI) approach by means of the presentation included as Annex B1.

Alex Stuart explained the UK Domestic Renewable Heat Incentive by means of the presentation included as Annex B2.

Some questions were asked by the participants and answered by Jacob Andersen and Alex Stuart.

One of the main results was that products with MCS and SK certification are considered as equivalent, but this does not mean that all SK certified collectors are automatically eligible for RHI. Furthermore the installation / installers also require MCS certification.

Possibilities related to the exchange of data between MCS and Solar Keymark was discussed. There was a general consensus that it is preferable to establish one database for joint use instead of managing two separate databases.

Item 10: Status for incoming Solar Keymark fees 2014

The fees to be paid as for 01/01/14 are in total 269,340 €, Last year the amount was 267,670 €

At present the situation is as follows:

Due data	Certifier	Amount
still open		
30/01/2014	AENOR	14,190.00
30/01/2014	CERTIF	13,070.00
30/01/2014	DQS Hellas	5,370.00
30/01/2014	ICIM	11,430.00
30/01/2014	IMQ	50.00

30/01/2014	KIWA	940.00
30/01/2014	MIRTEC	380.00
30/01/2014	SP	5,820.00
already paid		
30/01/2014	CERTITA	1,250.00
30/01/2014	TSU	3,030.00
30/01/2014	DIN CERTCO	213,810.00
	Total:	269,340.00

Item 11: Recommendation for SCF project applications (5th call)

Jan Erik Nielsen and Harald Drück reported about the evaluation of the proposals handed in based on the 5th Call and the meeting related to their evaluation that took place February 4th, 2014 in Brussels. In this context Harald Drück also thanked all proposers, the evaluators and the members of the SCF steering group, ESTIF and the SKN secretary Jan Erik Nielsen for their work and efforts related to the 5th SCF call.

The results of this evaluation including a proposal of projects recommended as agreed on as a result of the SCF steering group meeting in Brussels for funding are listed in document SKN_N0230R1.

This document SKN_N0230R1 was presented by Jan Erik Nielsen and shortly discussed.

During the discussion the wish was expressed by some participants to receive more detailed information why their proposal was not recommended for funding even if the points resulting from the evaluation are in the range of the threshold for funding.

Harald Drück mentioned that this comment will be considered for the next SCF evaluation round and that more specific comments will be provided in case of not accepted proposals.

After a short discussion the following decision was made:

Decision M16.D1 – Funding of proposals from the 5th SCF call

The proposals recommend by the Solar Certification Fund Steering Group for funding as described in document SKN_N0230R1 are accepted and the corresponding activities will be funded.

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

Item 12: Election of industry representative for SCF steering group

Harald Drück mentioned that according to the Solar Certification Fund Working Rules (Document SCF_N001) the SCF steering group should have two representatives from ESTIF. In previous times this has been Teun Bokhoven as Chairman of the ESTIF Standardisation and Certification working group and Pedro Dias, representing the ESTIF secretariat. Since now Christian Stadler is Chairman of the ESTESC (European Solar Thermal Energy Standardisation & Certification Working Group) and since he was already in the SCF steering group as industry representative, one industry representative seat is now vacant.

Harald Drück asked for interested industry representatives and **Oscar Mogro** from BDR Thermea (Baxi Calefaccion) was proposed and elected without any negative votes and abstentions. Harald Drück welcomed Oscar Mogro as new SCF steering group member.

Item 13: Tendering processes for solar thermal collectors and projects

Harald Drück reported about a discussion that took place within the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components” (EK-TSuB – Prüflaboratorien) and that resulted in the proposal mentioned in the agenda as a basis for a decision by the Solar Keymark Network.

Furthermore he welcomed Stefan Abrecht for the company „Solar-Experience GmbH”. On behalf of Ritter Energie- und Umwelttechnik and Ritter-XL solar Stefan Abrecht explained the motivation as well as the ideas and stagey behind this initiative.

The topic was intensively discussed and finally the following decision was made:

Decision M16.D2 – Recommendations of the Solar Keymark Network related to tendering processes for solar thermal collectors and projects

The Solar Keymark Network recommends that the following aspects should be the technical basis for national and international tendering processes for solar-thermal projects:

1. Only solar-thermal collectors certified by Solar Keymark or by other adequate certification schemes such as SRCC or IAPMO can be used. Handing in the corresponding certificates and data sheets shall be requested.
2. As thermal performance criterion a calculated annual collector or system output shall be used.

Note 1: One appropriate tool for the calculation of the annual collector output for solar thermal collectors is the freely available Solar Keymark calculation tool “ScenoCalc” (<http://www.sp.se/en/index/services/solar/ScenoCalc/Sidor/default.aspx>)

Note 2: For large scale systems the IEA SHC Task 45 factsheet “annual performance guarantees for output of large collector fields” is available via:

Link: <http://task45.iea-shc.org/Data/Sites/3/documents/iea-shc-t45a3.2-fact-sheet-annual-performance-guarantees.pdf>

This decision was taken with 0 negative votes and 2 abstentions.

Item 14: Changes of Solar Keymark data sheets due to ISO 9806:2013

Harald Drück reported about the fact that the new ISO 9806:2013 replacing the EN 12975-2:2006 is using the gross area as reference area instead of the aperture area as it was the case for the EN 12975-2:2006.

Furthermore he reported about a discussion that took place within the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components” (EK-TSuB – Prüflaboratorien) that resulted in the proposal mentioned in the agenda as a basis for a resolution by the Solar Keymark Network.

The topic was discussed intensively. In this context Ralf Köbbeman-Rengers mentioned that the already existing ERP (Energy related products) documents require the use of the aperture area. Furthermore Pedro Dias mentioned a letter from Tommy Williamson from Kingspan

also questioning the sense of the use of the gross area as reference area especially with regard to the disadvantages resulting from this for vacuum tubular collectors.

As a result of an intensive discussion it was decided to postpone a decision related to a change of the data sheets in a way to provide the collector performance figures based on aperture and gross area until it is definitively clear what area is finally used in the ERP documents. Hence this topic will be discussed at the autumn SKN meeting again.

In order to strengthen the relevance of the use of the gross area the following decision was made:

Decision M16.D3 – Collector Gross area to be used in ERP documents

The Solar Keymark Network got aware of the fact that the collector gross area might not be used in the latest version of the ERP (ERP: Energy Related Products) documents. As in the latest version of ISO 9806:2013 only the collector gross area will be determined and used as reference area the Solar Keymark Network strongly requests to use the collector gross area in the context of the ERP documents.

Note: This Decision should be communicated to the European Commission by the Solar Keymark Network.

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

Item 15: Approval of ScEnOCalc updates by SKN

Harald Drück mentioned that during the last meeting of the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components” (EK-TSuB – Prüflaboratorien) a discussion took place about the fact that different results were obtained with different versions of ScEnOCalc. Since some of these results were quite doubtful it was questioned if the current regulation requiring to use always the latest version of ScEnOCalc available via the Solar Keymark website is appropriate.

As a result of this discussion the proposal mentioned in the agenda as a basis for a resolution by the Solar Keymark Network arose.

This proposal was discussed and finally the following resolution was made:

Resolution M16.R1 – Approval of ScEnOCalc updates by SKN

Each new version of ScEnOCalc shall be approved by the SKN before it becomes official. As a basis for this approval a document describing the major changes compared to previous approved versions as well as the validation performed with the latest version shall be provided.

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

Item 16: Approval and exclusion of test labs by SKN

Harald Drück reported about a discussion during the last meeting of the “Experience Exchange Circle of the German speaking Test Laboratories for Solar Thermal Systems and Components” (EK-TSuB – Prüflaboratorien) related to the poor quality of the work performed by some test labs and the difficulties to stop or improve their activities. Since such unqualified activities can ruin the whole reputation of the Solar Keymark it was considered as essential to establish a mechanism to try to prevent such labs from issuing tests reports for Solar Keymark certification within a relative short time.

As a result of this discussion the proposal mentioned in the agenda as a basis for a resolution by the Solar Keymark Network arose.

This proposal was discussed and modified and finally the following decision was made:

Decision M16.D4 – Recommendation to certifiers for reconsidering agreements with specific test labs and inspectors

In special cases, e.g. if the result of the work performed is of unacceptable poor quality, the Solar Keymark Network can recommend to the certifiers to reconsider their agreements with specific test labs and inspectors.

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

Furthermore it was decided to establish a working group for the elaboration of a proposal how to deal with complains. The working group consists of the following persons:

Sören Scholz (Chair): Stephan Fischer, Carsten Lampe, Vinod Kumar Sharma, Korbinian Kramer, Alberto García de Jalón, Giovanni Bellenda, Jaime Fernandez Gonzalez-Granda, Henry Rosik, Maria João Carvalho

The task of the working group is to elaborate a proposal for a procedure how to deal with complains as a basis for a decision / resolution at the next Solar Keymark network meeting.

Item 17: Improvements for organization and funding of SKN activities

Jaime Fernandez Gonzalez-Granda explained his thoughts related to a funding of SKN working groups on the basis of the text in the agenda.

In general this initiative was appreciated and Jaime Fernandez Gonzalez-Granda was requested to prepare for the next SKN meeting a simple procedure on how this can be done as a basis for a decision or resolution respectively.

Item 18: Transition from old EN 12975-1&2 to new EN 12975-1 and new EN ISO 9806:2013

Based on the input of Jaime Fernandez Gonzalez-Granda in the agenda the topic was intensively discussed. During this discussion it became clear that the subject is extremely complex and that it is not possible to elaborate now a proposal for a resolution specifying the details of the transition period.

Hence it was agreed to establish a working group to elaborate procedures for the transition from the old EN 12975-1&2 to new EN 12975-1 and new EN ISO 9806:2013 until April 1st, 2014. The working group is consisting of the following persons:

Jaime Fernandez Gonzalez-Granda (Chair), Sören Scholz, Stephan Fischer, Korbinian Kramber, Stefan Mehnert, Vinod Kumar Sharma, Ozan Türk., Daniele Bernacchioni, Alberto García de Jalón, Martin Perrson, Susanne Hansson, Pilar Navarro, João Santos, Maria João Carvalho, Ulrich Fritzsche, Franck Cheutin,

In the context of transition from EN 12975-2:2006 to EN ISO 9806:2013 João Santos gave the presentation attached as Annex C.

As a result of the presentation it was agreed that the decisions mentioned by João Santos in his presentation have to be definitively reconsidered. This activity will be performed within the above mentioned working group established for the elaboration of procedures for the transition from old EN 12975-1&2 to new EN 12975-1 and new EN ISO 9806:2013

Furthermore it was agreed that the decision list should be periodically reviewed by the SKN Chairman and Secretary prior to the SKN meetings.

Item 19: Proposal for a resolution related to new versions of Annex A and Annex E

Jaime Fernandez Gonzalez-Granda presented the new versions of the two Annexes mentioned above as well as the background related to their elaboration.

Note: According to clause 3.2 of the Solar Keymark Internal Regulations (Document SKN_N0102R8) all proposals for resolutions shall be send to SKN secretariat at least 3 weeks before the meeting. This was not the case for this topic.

Since the documents were not delivered in due time Harald Drück asked if there were any objections if a resolution related to this topic was made anyway. As there were no objections it was agreed to proceed with this topic towards a resolution.

After a short discussion and some questions and answers the following resolution was made.

Resolution M16.R2 – New Version of Annex E

The Solar Keymark scheme rules shall be modified by the new version of Annex E “Factory production control requirements” as described in document SKN_N0235R0 with the changes included by Jaime Fernandez Gonzalez-Granda resulting in document SKN_N0106_AnnexE_R1.

This resolution was taken unanimous with 0 negative votes and 2 abstentions.

Related to the documents for the new version of Annex A a relative lengthy discussion took place and as a result there was the impression that the subject is too complex to be decided now. One main reason for this was the fact that the documents were made available in too short time before the meeting. Hence it was agreed that Jaime Fernandez Gonzalez-Granda will prepare a final draft version of the documents and send this out to the Solar Keymark Network for commenting. Based on the comments he will elaborate a final version as a basis for a resolution to be made at the next Solar Keymark Network meeting.

Some Certification Bodies present ask if it is possible to use the proposed new version of annex A1 during a trial period until the next SKN meeting of October. It is agreed that this is possible and Jaime Fernandez Gonzalez-Granda will send out a revised version to the group. Using this inspection template shows evidence that all the requirements of Annex E are being evaluated since they are reflected on the check list. Using the actual version of Annex A1 it is hard to assure that the inspector is evaluating all aspects of Annex E.

Item 20: Discussion on update of Annex G “Solar Keymark certificates and sub licences for other brands, product names and sellers”

At the 15th SKN meeting the Solar Keymark scheme rules were extended by an Annex G “Solar KEYMARK certificates and sub-licenses for other brands, product names, and sellers” as described in document SKN_N0193R3.

As there was the wish to modify the document 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 and Eileen Prado as new member for the 16. meeting onwards.

Pedro Dias presented the subject including proposals for modification by means of the presentation attached as Annex D and asked for feedback in order to elaborate a final proposal for a resolution at the next SKN meeting.

The feedback determined by mean of informal indicative voting was in the direction of the elaborated proposal presented by Pedro Dias.

The working group shall, based on the presented content, elaborate a proposal for a decision at the next Solar Keymark Network meeting.

Item 21: Proposal for more specified requirements for changing the certification body

The subject was discussed but considered to be too complex to make a resolution now. Hence it was agreed to deal with this topic within the certification bodies working group (chaired by Sören Scholz) with Eileen Prado and Korbinian Kramer as additional participants.

The working group shall elaborate a proposal for a resolution to be made at the next SKN meeting.

Item 22: Proposal for „Selection and submission of samples in case of extension of product range by manufacturer“

Sören Scholz presented document SKN_N0232R0 entitled “Proposal for Selection and submission of samples in case of extension of product range by manufacturer” proposed to be included as paragraph 4.1.2 in the Solar Keymark scheme rules.

The document was discussed but no resolution was made because several open points were identified and also due to the fact that the proposed procedure is not in line with the general Solar Keymark scheme rules.

It was recommended to Sören Scholz that in case the subject is of high relevance for him, he should come up with a proposal for a decision / resolution at the next Solar Keymark network meeting.

Item 23: Definition of classes and info material to manufacturers related to EN ISO 9806:2013

Jan Erik Nielsen presented on behalf of Peter Kovacs the document SKN_N0233R0 entitled “Definition of classes and info material to manufacturers related to EN ISO 9806” prepared by Peter Kovacs, Stephan Fischer and Jan Erik Nielsen in the frame of the SCF financed project Classmate.

The initiative was appreciated and the document was discussed considering also the comments and remarks already stated in the agenda.

Finally it was agreed that the document should be revised taking into account the comments and a final version shall be prepared as a basis for a resolution to be made at the next SKN meeting.

Item 24: Solar Certification Fund Projects – General status report

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

He also reported about the improvements already performed related to the management of the SCF projects as well as ideas for further improvements.

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 25: Global certification

Jan Erik Nielsen gave a short presentation about the current status and the latest developments related to global certification. Furthermore he mentioned that the subject of “global certification” will be dealt in much more details in the meeting of the Global Solar Certification Network and the IEA Task 43 (Solar rating and certification) scheduled directly after the meeting of the Solar Keymark Network for March 12th and 13th, 2014.

Jan Erik Nielsen presented the topic and the general ideas and structure by means of the following presentation attached as Annex F.

Jaime Fernandez Gonzalez-Granda reported about the elaboration a Global Solar Network Scheme rules by means of the presentation attached as annex G.

Harald Drück mentioned that at present also the Global Solar Certification Network Working Rules are under development. A second draft version was prepared last week and will be discussed in the Global Solar Certification Network meeting in the afternoon.

Item 26: Changes in SKN meetings regarding Global Certification

Jaime Fernandez Gonzalez-Granda presented his ideas related to this topic based on his input to the agenda.

The specific points were shortly discussed and it was common consensus that wherever possible synergy effects between the Solar Keymark Network meetings and the Global Solar Certification Network meetings should be used. Furthermore it was agreed to try to limit the meeting time to two days.

Item 27: Example of a completely correct and “nice” Solar Keymark data sheet for solar collectors

Based on an activity already stated at the 12th SKN meeting to improve the quality of the work performed by test laboratories, certification bodies and inspectors a working group as establish.

In the meanwhile the composition of the originally formed working group was slightly modified and consisted at the last meeting 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 also Jan Erik Nielsen

At the 15th SKN meeting the working group was asked to elaborate and example of a completely correct, nice looking Solar Keymark data sheet for solar collectors.

Andreas Bohren mentioned that due to the changes required in the near future as a result of the adoption of EN ISO 9806:2013 the group did not prepare an example of a “nice” data sheet yet.

It was agreed that this should be done until the next meeting for flat plate collectors and vacuum tube collectors.

Additional there was as discussion about the development of a **fundamental new database** that can also be used for the generation of data sheets. In this context it was decided to establish a working group consisting of the following persons:

Jan Erik Nielsen (chair), Sören Scholz, Stephan Fischer, Korbinian Kramer, Henry Rossik, Pilar Navarro, Pedro Dias, Martin Perrson, Andreas Bohren, Ulrich Fritzsche, Stefan Mehnert

The task of the working group is to formulate requirements and a general strategy on how these requirements can be implemented to be presented at the next Solar Keymark network meeting.

Item 28: Presentation of a draft data sheet for products of the EN 12977 series

Jan Erik Nielsen presented the following draft data sheets:

System data sheet (EN12976 & EN 12977):

Document N0106_AnnexB2_R3.2-system-draft.xlsx

Annex B3: Store data sheet (EN 12977-3 & -4)

Document: SKN_N0106_AnnexB3_R0.2-store-draft.xlsx

Controller data sheet (EN 12977-5)

SKN_N0106_AnnexB4_R0.2-controller-draft.xlsx

After the presentation a short discussion followed. It was agreed that Jan Erik Nielsen will send out the data sheet for commenting again. Based on the input he will prepare a final version of the data sheets and make them available via www.solarkeymark.org.

Item 29: Remarks on thermal performance test performed as a basis for Solar Keymark Certificates

Stephan Fischer presented the following two examples showing incorrect test setups for the thermal performance testing of solar thermal collectors.



Example 1



Example 2

Overestimation of the thermal performance due to gains from reflected irradiance from ground and building



With regard to example 1 he pointed out that according to ISO 9806:2013, clause 21.6 collectors having non opaque backsides need to be installed in front of a surface having low

reflectance ($\rho < 0.2$) to ensure that the performance is not influenced by radiation gains from the back side of the collector. For the collector shown in example 1 he estimates an overestimation of approx. 5 – 10 % of the thermal performance due to gains from reflected irradiance from the back side.







The second example showed a concentrating collector receiving reflected radiation not only from the reflector but also from the adjacent ground and building. It was stressed that this also needs to be taken into account when evaluating the data or to be avoided not to influence the measurement

The two negative examples were shortly discussed but no further action was taken.





Item 30: Update on CE marking of Collectors related to CPR

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)

Andreas Bohren as new convenor of TC 312 WG1 reported about the latest status of the new EN 12975-1 by showing the following slides:

<p>31.12.2013 EN12975-1 rejected by Mr. J. Salazar</p> <p>CEN consultant Mr. Salazar made 36 comments (on his last working day,...), some easy, some severe and some hard to understand:</p> <ul style="list-style-type: none"> - PVT in the scope. (Widening the scope was not really according to the all regulations. - Rearranging of the standard is required. Some regulation of the requirements for harmonised standards were not followed. - Several comments on FPC (Factory production control) - Several comments on DoP (Declaration of Performance) <p>What's next ? Basically the draft has to be revised and corrected. We can not ask Mr. Salazar. Not only orthographic or layout corrections: The standard will change its appearance and its content. Before re-submitting to the Commission, the draft has to be accepted by CEN TC 312 again, not to ridicule the whole system. We have no idea who from CEN is going to check the new draft next time.</p> <p> <small>HSR INSTITUT FÜR TECHNISCHE ANWANDTUNGSFORSCHUNG UND FORTBILDUNGSGEMEINSCHAFT</small> 1 Dr. Andreas Bohren  <small>INSTITUT FÜR SOLARTECHNIK</small></p>	<p>Mail from CENELEC (end of January)</p> <p>Due to fact that the Framework Partnership Agreement between the Commission and CEN & CENELEC is not signed yet, there are currently no New Approach Consultants in place for 2014. Therefore the provisions of CEN-CENELEC Guide 15 cannot be met.</p> <p>This matter was duly considered with our Director General and both Vice-Presidents Technical as well as during the CLC/BT meeting held earlier this week. The outcome of that debate confirmed that the fact of having no Consultants for the moment being shall not prevent either the processing of draft standards or the offering of harmonized standards to the Commission. In particular, draft standards can be sent to vote without Consultant assessment.</p> <p>That is why CCMC is no longer addressing the Consultants requesting their assessment and this until the situation relating to the Framework Partnership Agreement is settled.</p> <p> <small>HSR INSTITUT FÜR TECHNISCHE ANWANDTUNGSFORSCHUNG UND FORTBILDUNGSGEMEINSCHAFT</small> 2 Dr. Andreas Bohren  <small>INSTITUT FÜR SOLARTECHNIK</small></p>
<p>Options</p> <p>Regarding FprEN12975-1 the options are:</p> <p>To delete the specific WI and to immediately proceed to activate Decision 19.2013 – so starting the work from the beginning (but taking into consideration the work /comments already done)</p> <p>To ask for an extension in the deadline – or a 9months tolerance for submitting the revised FV draft.</p> <p>Whatever we do, there is a good chance that EN12975-1:2014 will never exist, but EN12975-1:2015 seems possible.</p> <p> <small>HSR INSTITUT FÜR TECHNISCHE ANWANDTUNGSFORSCHUNG UND FORTBILDUNGSGEMEINSCHAFT</small> 3 Dr. Andreas Bohren  <small>INSTITUT FÜR SOLARTECHNIK</small></p>	<p>The fact that the final draft version of EN 12975-1 was not approved by the CEN consultant Mr. Salazar is creating an extremely unpleasant situation since this standard is urgently needed in the context of energy labelling and CE-marking.</p> <p>Several options on how to deal with the current situation were discussed.</p>

Stephan Fischer presented the latest news related to CE-marking of collectors by means of the following presentation

 <p>Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>CE-marking of collectors</p> <p>Stephan Fischer, Andreas Bohren (SPF)</p> <p>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</p> <p>Stephan Fischer 16th SKN meeting, 11th-12th March, Las Palmas</p>	 <p>Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>CE-marking of collectors</p> <ul style="list-style-type: none"> • Status CE-marking on basis of CPR (Andreas Bohren) • Use of existing Solar Keymark collector tests for CE-marking (CPR) • Time line for CE-marking of collectors (CPR) <p>Stephan Fischer 16th SKN meeting, 11th-12th March, Las Palmas</p>
 <p>Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>Use of existing Solar Keymark collector tests for CE-marking (CPR)</p> <p>In principle yes but...</p> <p>Test lab that has performed the tests must be notified body</p> <p>Situation in Germany: DIBt does not accept applications until the harmonised EN 12975-1 is available</p> <p>Stephan Fischer 16th SKN meeting, 11th-12th March, Las Palmas</p>	 <p>Institute for Thermodynamics and Thermal Engineering Research and Testing Centre for Thermal Solar Systems (TZS) Universität Stuttgart</p> <p>Time line for CE-marking (CPR)</p> <p>DoA of revised EN 12975-1</p> <p>Publication within OJEC (Official Journal of the European commission), 9 month</p> <p>Coexisting period, usually 12 month, during this period national requirements and requirements of harmonised Standard may exist in parallel, CE-marking possible</p> <p>Date of withdrawal of national Standards, CE-marking obligatory</p> <p>Details see GUIDANCE PAPER J</p> <p>Stephan Fischer 16th SKN meeting, 11th-12th March, Las Palmas</p>

One important aspect is that after the publication of the harmonised standard EN 12975-1 there will be a transition period of one year where collectors can be CE-marked. After the expiry of the transition period all collectors shall be CE-marked.

Item 31: Information on Energy Labelling

Jan Erik Nielsen mentioned that Gerard van Amerongen could not attend the meeting and submitted his excuses for this. The reason why Gerard van Amerongen is absent is the fact that he is attending a meeting of TC 228 in his role as liaison officer. Hence Jan Erik Nielsen showed the presentation attached as Annex H.

Following the proposal of Gerhard von Amerongen a Solar Keymark “reflection group”, named here, as usual, working group, consisting of the following persons was established:

Gerhard von Amerongen (Chair), Ralf Köbbeman-Rengers, Stephan Fischer, Korbinian Kramer, Lui González-Monroy, Oscar Mogro, Jaime Fernandez Gonzalez-Granda, Ulrich Fritzsche, Andreas Bohren, Luca Votta, Sören Scholz, Pedro Dias, Christian Stadler, Harald Drück

The task of the working group is to look how synergy effects between the Solar Keymark and Ecodesign / Energy Labelling can be created with the intention to strengthen the relevance and position of Solar Keymark.

Furthermore Pedro Dias presented the proposal Label Pack+ from ESTIF and asked for the formal support of the project by the Solar Keymark Network. Harald Drück appreciated the proposal and expressed this support.

Item 32: Current status of PVT testing

Ulrich Fritzsche reported about the current status of PVT testing, the outstanding work that still has to be performed as well as the open points that have to be solved by means of the presentation attached as Annex J.

Item 33: Report from the Solar Keymark Certification Bodies / Solar Keymark Inspection Working Group

Sören Scholz informed about the fact that no reportable activities were carried out since the last meeting.

Item 34: Information from CEN TC 312

Since Panayis Konstantinidis being the new TC 312 chairman was not present no general information related to TC 312 was presented.

TC312 WG1: The most important news were already communicated in the context of item 30.

TC312 WG3: The most important news were already communicated in the context of item 31.

TC312 WG2: Vinod Kumar Sharma presented the following slides below.

With regard to WG 2 Maria João Carvalho mentioned that she did not receive the documents send out by Vinod Kumar Sharma. He expressed his astonishment about this and ensured to include her in his email distribution list.

<p>16TH SOLAR KEYMARK NETWORK MEETING AND GLOBAL SOLAR CERTIFICATION NETWORK MEETING AND IEA-SHC TASK 43 EXPERT MEETING</p> <p>MARCH 11-13, 2014, GRAN CANARY (SPAIN)</p> <p>WG2</p> <p>REVISION OF THE STANDARD EN 12976 PART 1 & 2</p> <p>Dr. Vinod Kumar <u>SHARMA</u> Convenor CEN/TC 312 WG2</p>	<p>CREATION OF NEW WORK ITEMS</p> <p>New Work Items, as listed below, were created by CEN/TC312, on June 12, 2013</p> <ul style="list-style-type: none"> - New WI_prEN12976-1 "Thermal solar systems and components - Factory made systems Part -1: General requirements" - New WI_prEN12976-2 "Thermal solar systems and components - Factory made systems Part -2: Test methods". <p>Track to be followed: Enquiry + Formal Vote (ENQ+FV)</p> <p>Dispatch of ENQ draft to CMC : deadline is 2014.06.12</p>
<p>Old version of the standard EN 12976 both Part 1 and Part 2 and comments received were circulated. Moreover, request for choice of suitable track to be followed and any relevant useful input was sent to all WG2 members.</p> <p>Comments (prEN 12976-part1).doc</p> <p>Comments (prEN 12976-part2).doc</p> <p>Circulation of modified version of the text as described in revised drafts for EN 12976 – Part 1 and Part 2</p> <p>First enquiry sent to WG2 members on December 09, 2013</p> <p>Second enquiry sent to WG2 members on January 20, 2014</p>	<p>Submission of revisable WORD files, non-revisable PDF files and separate file with figures to Dott.ssa Vassiliki on February 17, 2014, in order to send them in CMC for ENQ.</p> <p>prEN 12976 - Part1.doc</p> <p>prEN 12976 - Part1.pdf</p> <p>prEN 12976 - Part 2.doc</p> <p>prEN 12976 - Part 2.pdf</p> <p>prEN 12976 - Part 2(Figures).doc</p>

Item 35: Information from CEN CCB

Harald Drück mentioned the request formulated by decision D1.M15 (Global certification – Solar Keymark) and asked about the reaction of CEN CCB related to this.

Jan Erik Nielsen told about an invitation he received from CEN CCB to attend a meeting related to global certification. During this meeting he got the impression that CEN CCB is in principle positive to change their rules in such a way that certification bodies all over the world have the possibility to grant Solar Keymark certificates. However, they requested a more specific proposal how to do this. Since the development of appropriate procedures is just under development within the Global Solar Certification Network the proposal was not submitted until now. This will be done when the appropriate documents from the Global Solar Certification Network are available.

Concerning the future outsourcing of KEYMARK administration there is a call for tender announced at: http://www.cen.eu/news/calls/Calls/Call_for_tender_CEN_Keymark.pdf.

Item 36: Presentation of selected SCF project results

Pedro Dias presented the selected SCF project results by means of the presentation attached as Annex J

Item 37: Project presentation "Strengthening Quality Infrastructure for Solar Energy in Maghreb"

Imed Landoulsi from the ANME (Agence Nationale pour la Maitrise de l'Energie), Tunisia presented the above mentioned project by the presentation attached as Annex K.

Harald Drück thanked Imed Landoulsi for his interesting presentation and appreciated the activity of PtB as an important instrument to provide the basis for Solar (Keymark) certification in the Maghreb region.

Item 38: Experience with the misuse of the Solar Keymark

No new cases to be reported.

Item 39: Any other business**Item 39.1: Testing of heat pipes mandatory from 1/2014 onwards**

Ulrich Fritzsche mentioned that the testing of heat pipes being part of vacuum tube collectors is mandatory since the January 1st, 2014. The test procedure to be used is described in Annex F of the Solar Keymark Scheme rules.

Furthermore he mentioned that the heat pipe issue is a nice example on how SCF funded projects can contribute to the improvement of the quality of solar thermal collectors since the investigations related to this issue were initially performed within an SCF funded project and are now part of the tests requirements for Solar Keymark and soon also SRCC certification.

Item 39.2: National certification schemes for stores

Based on an ad-hoc survey initiated within the Solar Keymark network the day before Pedro Dias mentioned that he only received input concerning the situation in Spain. This is shown below.



Since the aspect of certification of stores is quite important in order to promote the testing of hot water and combistores according to EN 12977-3 and -4 and the certification of stores according to the Solar Keymark scheme rules it was agreed to investigate this topic in more detail.

The participants were requested to send information about their national certification schemes to Pedro Dias at latest by the end of March 2014. He will compile the information and distribute it to the SKN.

Item 40: Important national developments

No important national developments to be presented were mentioned.

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

Item 5: Date & place of next Solar Keymark Network (SKN) meetings

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

September 30th, 13:00 hrs to October 1st, 14:00 hrs, 2014 (end of day one at 18:00 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 2nd, 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 in Rome based on an invitation of Vinod Kumar Sharma from ENEA.

The **19th SKN meeting** (autumn 2015 meeting) is scheduled for

October 6th, 13:00 hrs to October 7th, 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 41: 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 Pilar Navarro Rivero and Salvador Suárez from ITC for hosting the meeting.

The participants thanked Harald Drück for his excellent conduction of the meeting.

The meeting ended at 13:15 hrs.

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

Stuttgart, March 18th, 2014

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


16th Meeting, Las Palmas de Gran Canaria, March 11th – 12th, 2014

NAME	ORGANISATION
Participants physically present	
Alberto García de Jalón	CENER
Andreas Bohren	SPF Solartechnik
Daniele Bernacchioni	ICIM S.p.A.
Franck Cheutin	CSTB
Harald Dehner	ASIC
Harald Drück	ITW
Jaime Fernandez Gonzalez-Granda	AENOR
Jan Erik Nielsen	Solar Key Int.
João Santos	CERTIF
Katharina Meyer	DIN CERTCO
Korbinian Kramer	Fraunhofer ISE
Maria João Carvalho	LNEG
Ozan Türk	SPF
Pedro Dias	ESTIF
Ralf Köbbemann-Rengers	Bosch / BDH
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
Christian Stadler	General Solar Systems GmbH
Peter Markart	GreenOneTEC
Alfred Brunger	Exova
Zinian He	Beijing Solar Energy Research Center
Xiaowen Zhou	Beijing Tsinghua Solar Ltd.
Tao He	China Academy of Building
Min Wang	China Academy of Building
Henry Rosik	ITC
Emmanuel Leger	Centre d'essais BELENOS
Sophie Bocquillon	EUROVENT CERTITA

Carsten Lampe	ISFH
Stefan Abrecht	Solar-Experience GmbH
Giovanni Bellenda	Eurofins
Giacobbe Braccio	ENEA
Massimiliano Florio	ICIM S.p.A.
Luca Votta	Kiwa Italia SpA
Maria Rodrigues	ADENE
Jana Levicka	TSU Piestany
Oscar Mogro	BDR Thermea (Baxi Calefaccion)
Pilar Navarro	Technological Institute of canary
Luis González-Monroy	Termicol Energía Solar, S.L.
Martin Persson	SP
Imed Landoulsi	Agence Nationale pour la Maitrise
Jacob Andresen	DECC
Alex Stuart	Ofgem
Les Nelson	IAPMO
Eileen Prado	SRCC
Participants electronically present	
Jim Huggins	Solar Rating & Certification Corp. (USA)
George Roditis	Applied Energy Laboratory (AElab) (CY)
Stamatios Babalis	National Center for Scientific Research "DEMOKRITOS" (GR)
Ken Guthrie	Sustainable Energy Transformation (AU)

Annex B1

Renewable Heat Incentive (RHI)




Renewable Heat Incentive (RHI)

Solar Thermal opportunities

Presented at 16th Solar Keymark Network meeting, Gran Canaria

Jacob Andresen 11 March 2014




Renewable Heat Incentive

Options and opportunities for industry

Renewable Heat Incentive

- EU Renewable Energy Directive's 2020 target for renewables
- Prepare for mass rollout of renewable heat in 2020s and beyond
- A world first policy to incentivise the uptake of renewable heating systems like biomass boilers and solar thermal in all sectors
- **Non-domestic scheme** was launched in November 2011
- **Domestic scheme** will launch Spring 2014
- Strong growth expected in 14/15, with 15/16 having overall RHI budget of £430m

2 Renewable Heat Incentive




Renewable Heat Incentive

Options and opportunities for industry

Which scheme is right for me?

	Domestic	Non-domestic
Eligibility	Property must be single domestic dwelling - Social / private landlords and self builds	Commercial, industrial, public sector, not for profit and district heating for multiple homes
Payment period	Payments made over 7 years, based on heat produced over 20 years	Payments made over 20 years
Measuring usage	Deemed renewable heat output (metered if bivalent / second home)	Eligible heat use is metered on actual generation or use
Tariff setting	Compensates for additional costs of installing renewable heat technologies compared to conventional heating technologies	Compensates for additional cost over fossil fuel heating, provides incentive to overcome non-financial barriers and a return on additional capital invested

3 Renewable Heat Incentive

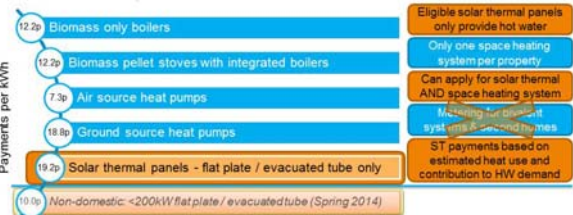


Renewable Heat Incentive


Options and opportunities for industry

Is the domestic RHI for me?

- Available for households on and off the gas grid – those without mains gas have the most potential to save on fuel bills and decrease carbon emissions



4 Renewable Heat Incentive




Renewable Heat Incentive


Options and opportunities for industry

Domestic RHI: For those intending to apply

- Only the owner of an eligible heating system can apply. Requirements are:



5 Renewable Heat Incentive



Renewable Heat Incentive (RHI)

Solar Thermal opportunities


Presented at 16th Solar Keymark Network meeting, Gran Canaria

Jacob Andresen 11 March 2014

<div data-bbox="225 253 300 304"> Department of Energy & Climate Change</div> <div data-bbox="328 253 663 304">Renewable Heat Incentive Options and opportunities for industry</div> <div data-bbox="225 331 360 365"><h3>Summary</h3></div> <ul style="list-style-type: none">• Domestic RHI is finally ready to go!<ul style="list-style-type: none">• Should generate a lot of interest from homeowners• DECC estimates around 16,000 solar thermal installations could be supported in the first year of the RHI and more the following year• Represents great opportunity for development of solar thermal industry in Great Britain <div data-bbox="188 647 788 685">7</div>	<div data-bbox="842 253 917 304"> Department of Energy & Climate Change</div> <div data-bbox="805 315 1404 685"><div data-bbox="1023 416 1182 450"><h2>Thank you!</h2></div><div data-bbox="981 461 1225 479"><p>jacob.andresen@decc.gsi.gov.uk</p></div></div> <div data-bbox="805 651 1404 685">8</div>
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Annex B2


UK Domestic Renewable Heat Incentive



UK Domestic Renewable Heat Incentive

11th March 2014
Solar Keymark Network meeting, Gran Canaria






Ofgem

- Ofgem is the Office for gas and electricity markets and is the independent energy regulator in the UK.
- Ofgem's other role is the administration of environmental programmes on behalf of UK government, subsidising and/or incentivising:
 - Energy Efficiency measures
 - Renewable electricity
 - And now renewable heat


2



The Renewable Heat Incentive (RHI)


- The Renewable Heat Incentive has two parts:
 - The non-domestic scheme launched in 2011
 - The domestic scheme to be launched Spring 2014
- Ofgem's role as administrator of the RHI is to:
 - Publish guide materials
 - Receive and assess applications
 - Make payments to successful applicants
 - Ensure ongoing compliance with scheme rules

3




Domestic Renewable Heat Incentive (DRHI)

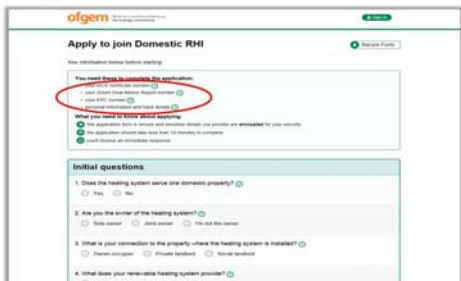
- For the domestic scheme there are 'rules' that the...
 - Person must meet
 - Property must meet
 - Installation must meet
 - And the product that has been installed must meet
- These are set out in government regulations.




4



The Application Form





Certificates the customer needs

Energy Performance Certificate (EPC)

Green Deal Advice Report (GDAR)

Microgeneration Certification Scheme (MCS) Installation Certificate

6

The clever bit...



Eligibility – Product (Heating System)

- One of the eligible technology types
- The product must be MCS certified (or equivalent, i.e. Solar Keymark)
- But not all MCS/Solar Keymark products eligible, e.g.
 - Heating must be via water (so no air-to-air heat pumps)
 - Only electrically driven heat pumps
 - Air Quality Certificate needed for new biomass installation
- Installed on or after **15 July 2009**

Solar Collectors

- Product characteristics that define eligibility of solar collectors

- Must be either a flat plate or evacuated tube collector.
- Must **not** generate electricity, no PV-T
- Must have been tested to a specific standard as named in the regulations...



Solar Collector Standards

The standards listed in the Regulations for solar thermal plants are:

- EN 12975-1:2006+A1:2010 and EN 12975-2:2006;
- EN 12975-1:2006+A1:2010 and EN ISO 9806:2013; or
- EN 12976-1:2006 and EN 12976-2:2006.

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MCS certified product list

EXISTING MCS CERTIFICATION BODY PRODUCT SPREADSHEET									
Product Name	Manufacturer	Model	Product Type	Technology Type	Product Description	Product Details	Product Details	Product Details	Product Details
...

Product data from MCS

Original MCS product fields	New MCS/Solar Keymark product fields
Technology Type	Testing Standard
Product Type	Integrated RW cylinder (Biomass and HP)
Product Name	Modulating? (Biomass and HP)
Description	Minimum output (Value kW) (Biomass and HP)
Model	Primary fuel (Biomass only)
Manufacturer	Secondary fuels (Biomass only)
Certification number	Compressor driven by electricity (HP only)
Listing Date	Provides Cooling? (HP only)
Website	Integrated fossil fuel burner within the product casing (HP only)
Withdrawn	Defrost mechanism (ASHP only)
Country Of Origin	Zero loss collector efficiency (STHW only)
Email	Collector linear heat loss coefficient (STHW only)
	Collector 2nd order heat loss coefficient (STHW only)
	Certification Body (For Clear Skies and Transition only)

12

Sources of data/evidence

- Test Certificates
- Test reports
- Test laboratories
- Certification Bodies
- Online resources – Solar Keymark/Certification Body databases

<http://solarkey.dk/solarkeymarkdata/qCollectorCertificates/ShowQCollectorCertificatesTable.aspx>
<http://eSearch.cen.eu/keymark/>
http://www.dincertco.tuv.com/search/companies_within_product?locale=en&title_id=30
www.produktdatenbank-get.at

13

Test Reports

14

Test Reports

5

Test Certificates

16

Databases

17

Creating the Product Eligibility List

18

Product Eligibility List

Eligible	Technology Type	Product Type	Name	Model	Manufacturer	Product ID	SRMP eligible	As Quoted	Fuel	Missing Content
✓	Biomass	Biomass boiler	Therma	Greenstar Plus 10kW	Boch	FD245-18	✓	✓	Pellets	<10%
✓	Solar Thermal	Evacuated Tube Collectors	Sundream	Apex Nexus 10/14 M	Kingdom	8804-256	✓	N/A	N/A	N/A
✓	Biomass	Biomass boiler	Purafire	Milbon 3000 3P	Wyle	8747390-C	✗	✓	Pellets	<10%
✓	Biomass	Biomass boiler	Hestia	Burnhamton 10/12 400	DSI	HDW747-425	✓	✓	Chips	<10%
✗	Air Source Heat Pump	Air extractor	Spacem	Raptor 8 M10 387	Lemnos	4848-85A	✗	N/A	N/A	N/A
✓	Air Source Heat Pump	Air to water heat pump	Almos	Solarville 12kW 2T	Miral	9474-03P	✓	N/A	N/A	N/A
✓	Ground Source Heat Pump	Ground to water heat pump	Enduro	Archer 4/6 3000	Immapol	262038844	✗	N/A	N/A	N/A

Biomass only 19

Data for Solar Keymark collectors

Out of 2,133 products – including historical products

- 1,580 are eligible
- 202 need some minor detail to become eligible
- 17 are not eligible
- 30 might not be eligible because of older test standards or might be PV-T
- 293 are missing the required information to define eligibility.

Solar Keymark products



20

We need your help to make this work...

- In the short term...

- We need the help of Solar Keymark and Solar Keymark certification bodies to help close the gaps
- Help keep the list accurate and up to date

- In the long term...

- Work together to expand the Solar Keymark database of certified solar thermal collector to make product data more accessible, consistent and useful for installers and customers.

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Thank you very much

- You can find more information on www.ofgem.gov.uk



Annex C

Transition from EN 12975-2:2006 to EN ISO 9806:2013

<p>CERTIF – Associação para a Certificação</p> <p style="text-align: center;">16th SOLAR KEYMARK NETWORK MEETING</p> <p style="text-align: center;">ITC – Instituto Tecnológico de Canarias Las Palmas de Gran Canaria</p> <p style="text-align: center;">March 11th and 12th 2014</p>	<p>CERTIF – Associação para a Certificação</p> <p style="text-align: center;"><u>Transition from EN 12975-2:2006 to EN ISO 9806:2013</u></p> <p>Suggestion for the re-evaluation of some of the decisions of the SKN List of Decisions (Document SKN_N0100) directly affected by this transition.</p>
<p>CERTIF – Associação para a Certificação</p> <p>Decision D6.M3</p> <p><u>Mechanical Load Tests of Tubular Collectors</u></p> <p>➤ “The experts present decided that the negative pressure test of the collector according to 5.9.2 of EN 12975-2:2006, does not have to be performed on tubular collectors due to the following reason:</p> <p style="padding-left: 20px;">The negative pressure test is intended to assess the extent to which the fixings between the collector cover and collector box are able to resist uplift forces caused by the wind.</p> <p style="padding-left: 20px;">This is not relevant for tubular collectors.”</p>	<p>CERTIF – Associação para a Certificação</p> <p>➤ “Concerning the mechanical load tests of tubular collectors with and without external reflectors, it was decided that action must be taken during the next revision of EN 12975.”</p> <p>➤ “It was decided that there shall be a remark on the Solar Keymark Certificate, in case the negative pressure test was not performed, as long as the pressure test is still mandatory according to the standard.”</p>
<p>CERTIF – Associação para a Certificação</p> <p>Decision D8.M10</p> <p><u>Pre-ageing of Solar Collector Test Samples</u></p> <p>➤ “The experts present decided that before performing a rain penetration test, the solar thermal product should be pre-aged to at least the following extent, by using either possibility 1 or possibility 2”.</p> <p>➤ “Possibility 1: Expose the product at least for 15 valid days (according to the validity criteria of EN 12975 – Clause 5.4.)”.</p>	<p>CERTIF – Associação para a Certificação</p> <p>➤ “Possibility 2: Two stagnation tests using a solar simulator providing at least 850 W/m² and 10 °C ambient temperature, with a duration of irradiance of at least 4 hours. In between this two stagnation tests, the collector has to reach approximately ambient temperature”.</p> <p>“Exposure to outdoor conditions for at least 15 days, not requiring any boundary conditions to be fulfilled”.</p>

CERTIF – Associação para a Certificação

Decision D6.M11

SK Certification of Concentrating and Tracking Collectors

- “SK certification is possible, since they are explicitly mentioned in the scope of EN 12975-1 and 2”.
- “The reliability testing of concentrating and tracking collectors shall be performed as described at present in the latest version of Annex P entitled “Reliability testing of concentrating and tracking collectors” of FprEN 12975-2”.

CERTIF – Associação para a Certificação

Recommendation:

- Decision D6.M3 - Withdraw;
- Decision D8.M10 – Review, clarifying that the pre-ageing should be performed when the collector has been subject to modification;
- Decision D6.M11 - Withdraw.

CERTIF – Associação para a Certificação

Maintenance of the SKN List of Decisions:

- Periodical review of the list?
- Need for a policy/procedure?
- Who should be responsible? (SKN Secretariat? Set up a Working Group?)
- Re-evaluation, review and withdrawal of decisions?

CERTIF – Associação para a Certificação


Thank you for your attention

João Santos (CERTIF)
with the collaboration of Maria João Carvalho (LNEG/LES)
Lisbon, Portugal, March 7th 2014



Annex D

Certificates for different brands



Solar Keymark

Certificates for different brands

The Solar Keymark
CEN Keymark Scheme

THE Quality Label for Solar Thermal Products in Europe

Group

Meeting 18/02

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

The Solar Keymark
CEN Keymark Scheme

THE Quality Label for Solar Thermal Products in Europe

Current text

- 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:
 - All trademarks are listed into one certificate.
It is considered as a subtype and the fee to be paid is the "subtype fee"
 - 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"

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Certification of different brands

- Discussion ground:
 - Simplify process
 - Smooth the creation of new brands
 - Clarify procedures
 - Reduce bureaucracy
 - Ensure quality assurance
 - Provide different certificate numbers
 - Facilitate surveillance of SK certificates
 - Reduce certification costs for manufacturers
 - Not jeopardising SKN funds

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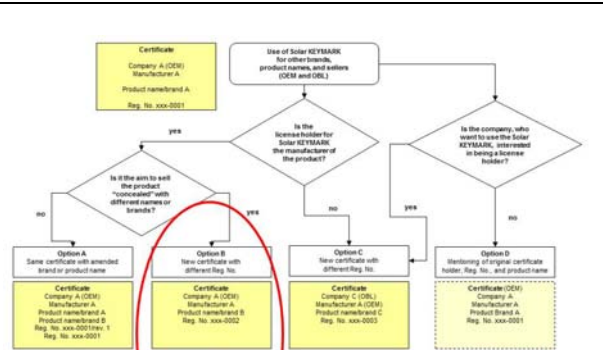
Currently



Main type
Subtype

The Solar Keymark
CEN Keymark Scheme

THE Quality Label for Solar Thermal Products in Europe



The Solar Keymark
CEN Keymark Scheme

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Proposal

Main type
Subtype A (family)
Subtype B (brand)

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Next steps


- Draft proposal
 - Presentation **for discussion** at SKN Spring
 - Editing Annex C and Annex G
- Final proposal
 - Review discussion inputs at SKN
 - Present timely proposal for changes
- Fees :
 - propose soft solution – small difference between subtypes in 2015
 - Revise in 2016 based on number of ST A and STB

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Annex E

Solar Certification Fund – General Status Report



Solar Keymark Network meeting

16th meeting
11-12 March 2014
ITC - Spain




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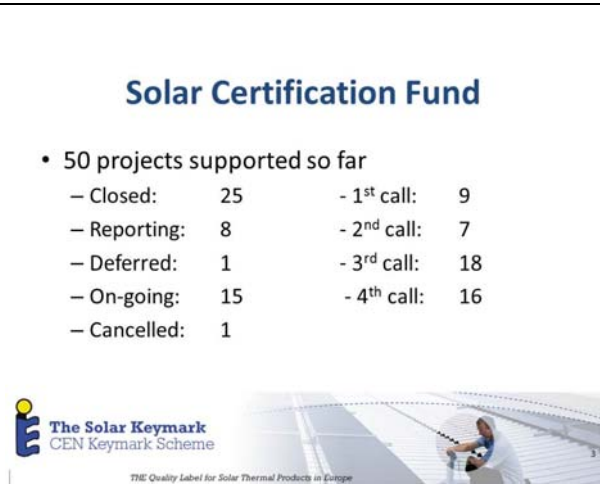
Solar Certification Fund

- 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




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Solar Certification Fund

- 50 projects supported so far
 - Closed: 25 - 1st call: 9
 - Reporting: 8 - 2nd call: 7
 - Deferred: 1 - 3rd call: 18
 - On-going: 15 - 4th call: 16
 - Cancelled: 1



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Solar Certification Fund

- Closed projects
 - Report and deliverables approved by the SCF Steering Group
 - Balance payment done or being prepared
 - invoice requested or payment in the 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




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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 additional clarification or work



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Closed projects

(since September 2013)

Reference	Project Name	Responsible	Start Date	End Date	Budget
3C04	GlobCert12-AENOR	Jaime Fernandez	28/06/2012	30/08/2013	€10 000.00
	Proposal for elaborating and implementing a Global Certification scheme for solar collectors				
3C07a	Liaison128_ISE	Korbinian Kramer	15/10/2012	28/11/2013	€5 000.00
	Liaison officer of TC 312 to TC 128 (Roof covering products)				
3C18	AdminSCF2012_ESTIF	Pedro Dias	01/04/2012	31/03/2013	€24 918.00
	Administration of SCF				



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Deferred

Ref.	Project Name	Responsible	Budget
IC14	CE-Bro-ESTB	Pedro Dias	€9 250.00

Information about CE-marking of solar collectors - target group manufacturers

Project concluded. Proposal to discuss tool at workshop on energy labelling.
March 14: workshop delayed, as final publication by ECs also delayed. Project closed but contractors will be invited to present it at the workshop, when finally done.

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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Reporting

Ref.	Project Name	Responsible	Start	Foreseen End	SCF fund. app.
------	--------------	-------------	-------	--------------	----------------

2C07 CEN/TC312 Secretariat 2012 Vasileiki Drosou 01/12/2011 31/12/2013 €34 000.00

Operating the CEN/TC312 Secretariat from 1st December 2011 till 31st December 2013

Contract extended - Dec 2013 - extended to 2 years. Original sent 18/05/12

Project concluded - under evaluation

3C01 SK-Trade-ESTB Pedro Dias 02/05/2012 31/12/2013 €5 990.00

Promotion of Solar Keymark

Project extended (Dec 2013).

One deliverable - conference in non-SK market - replaced by public presentation at intersolar 2013.

Project reporting

3C02 SK Database-SolarKey Jan Erik Nielsen 01/04/2012 31/10/2013 €9 900.00

Reference weather data database for Solar Keymark testing and certification purposes. To be available for free via the Solar Keymark website

Project had difficulties to get data from test labs.

Pre-approval done. Payment of 80% with the other 20% depending on missing locations: Athens and Stockholm

Presentation done at SKN 15 - Berlin - Item 12

Pending confirmation on the data for Athens and Stockholm



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Reporting

Ref.	Project Name	Responsible	Start	Foreseen End	SCF fund. app.
------	--------------	-------------	-------	--------------	----------------

3C08 Etab12_3c Uwe Trenkner 06/04/2013 21/09/2013 €9 900.00

Energy labelling with regard to promotion and awareness raising

Project concluded. Proposal to discuss tool at workshop on energy labelling.
March 14: workshop delayed, as final publication by ECs also delayed. Project closed but contractors will be invited to present it at the workshop, when finally done.

4C02b DWW-Store-Indicator Stephan Fischer 02/04/2013 05/01/2013 €13 000.00

Annual output indicator for solar water heater stores

Consultation period with SKN ended 18/10.

Project being evaluated.

4C11 Uncert Martin Persson 29/01/2013 05/01/2014 €9 800.00

Calculation of the uncertainty of the performance figures of solar collectors and factory made systems based on the results obtained by the DAIST round robin test

Currently being evaluated.

4C19c Classroom Peter Kovacs 01/06/2013 05/03/2014 €5 000.00

Definition of classes and drafting info materials manufacturers related to EN ISO 9806

Project results under evaluation.



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On-going

Ref.	Project Name	Description	Start	End (foreseen)	SCF fund. app.
------	--------------	-------------	-------	----------------	----------------

1C04a EN12975 solar SWT Dominik Berendsehn 20/07/2011 31/03/2014 €14 950.00

"Solar-friendly" alternative to EN 12975-3

Conclusion delayed: foreseen for December 2013. The (non-critical) delay arose from unforeseen problems with the simulation in general and the resulting necessary revision of the simulation model.

One advantage of the delay is that in 1

2C06 Testplan DWW Stephan Fischer 01/05/2012 30/06/2014 €19 910.00

Development of an indoor test procedure for factory made systems according to EN12975

Long negotiation regarding agreement

D.S. Only SWT method was developed. CSTO method not yet. End of May - depending on weather - complete project by end of June.

D.S. presented at SKN - September 13

3C16 Harmonize DIVERXIO Sören Schulz 16/04/2012 30/09/2014 €7 000.00

Measures to harmonize the qualification requirements for inspectors and test labs

Periodic report missing (1)

Will ensure first draft at SKN meeting 13 (Berlin - Sep 2013)

Project started with 18 month delay

4C01 Test4444 Ben Erik Nielsen 02/04/2013 09/07/2013 €20 000.00

Operating Agent for extension of SK-SPC Test 44 "Solar Rating and Certification"

Contract and project summary requested 14/6/2013

Contract received from contractor 20/06/2013

Contract signed by both parties - copy sent to contractor 26/08/2013

Foreseen end to be clarified.

4C03 GlobalCert 8 Jaime Fernandez 29/03/2013 06/01/2014 €24 700.00

Follow-up project on global certification (cert), elaborating and implementing a Global Certification scheme for solar collectors

Contract details not finalized

Project already running. Workshop foreseen for August 2013, in Berlin

Signed contract sent to contractor + advance payment request reminder 5/8/13

Internal budget shift between parties



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On-going

Ref.	Project Name	Description	Start	End (foreseen)	SCF fund. app.
------	--------------	-------------	-------	----------------	----------------

4C05 SK Annex E Jaime Fernandez 01/04/2013 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

Advance payment incorrect - accepted to avoid waiting time on it.

4C06 SK-12976 Daniela Thies 01/04/2013 31/12/2014 €35 310.00

Quality assurance procedures to ensure harmonized 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

Feb 2014: Partner informed about delay - corrective measures in place.

4C07 DataSheet 12977 Ben Erik Nielsen 01/05/2013 31/10/2013 €7 000.00

Elaboration of data sheet template for custom built systems and components acc. to EN 12977 series

No interim report for SKN 15 as project still to start (8/06/13)

Missing interim report SKN 16 but will have presentation at SKN 16. Foreseen end date to be revised.

4C08 EN-12977 Christian Wollschläger 01/05/2013 30/06/2014 €29 500.00

Organisation and management plus co-financing of a Round Robin Test of a solar water heater store according to EN 12977-9 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 (1/5)

Tests completed and report sheets to be sent to SKN - 08/13

Delays in gathering test reports: June 2014 final

4C12a LincTC 164-13 Gerard van Amerongen 01/04/2013 31/03/2014 €5 000.00

LincTC 164-13

Contract sent for contractor's signature (2/4)

Contract received signed but undated date added (29/4)

Project requires presentation at SKN 16



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On-going

Ref.	Project Name	Responsible	Start Date	End (est.)	Budget
------	--------------	-------------	------------	------------	--------

4C12b LincTC 128-13 Gerard van Amerongen 01/04/2013 31/03/2014 €5 000.00

LincTC 128-13

Contract sent for contractor's signature (1/4)

Contract received signed but undated - date added (29/4)

All on very high speed more standards are being revised. For SKN this is the 121313-4-3. The drafts will be ready

4C12c LincTC 171-13 Gerard van Amerongen 01/04/2013 31/03/2014 €5 000.00

LincTC 171-13

Contract sent for contractor's signature (25/4)

Contract returned signed by contractor but undated - date added (1/5)

Project requires presentation at SKN 16

4C14a EndUse-13 Gerard van Amerongen 01/04/2013 31/12/2014 €15 000.00

Preparing to meet the requirements of EndUse Energy Labelling with regard to testing

Contract sent for contractor's signature (25/4)

Contract returned by contractor signed but undated - date added (1/5)

Project deadlines revised - postponed one year to 31/12/2014

First deliverable for end March 2014

4C17 CENmandate-13 Gerard van Amerongen 29/03/2013 31/03/2014 €8 900.00

Preliminary work program reflecting the mandates (M40) and (M40S) (EndUse) for discussion within TC312

Contract sent for contractor's signature (25/4)

Contract received from contractor signed but undated - date added (1/5)

Project requires presentation at SKN 16

4C18 SKP-Sec13 Pedro Dias 29/03/2013 09/01/2014 €9 985.00

Administration of SKP administrative secretariat / technical secretary

ESTP: EUR 3 960 (Staff: 3600 + Other: 360)

Salaries: EUR 6 020 (Staff: 3000 + Travel: 120)

4C19b Industry-Interaction Kasper Nuyson 29/03/2013 31/03/2014 €10 000.00

Elaborate a better involvement of industry resources in standardisation work

Agreement with subcontractors on coming steps

ESTP project - planned done at the end only



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On-going

Ref	Project Name	Responsible	Start Date	End (est.)	Budget
4C12a	UiaTC 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	UiaTC 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 (25/4)					
4C12c	UiaTC 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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Solar Certification Fund

- New improvements
 - Reducing time for evaluation
 - Improve final report form
 - More straight forward for evaluation
 - Simplification and integration of forms
 - Application & project summary
 - Interim & final report
 - Indication of publishable deliverables



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Project deliverables list

- Currently only SKN
- To be made public
 - Previous projects
 - Ad-hoc authorisation
 - New projects
 - Included in reporting forms

Ref	Project Name	Responsible	Start Date	End (est.)	Budget
4C12a	UiaTC 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	UiaTC 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 (25/4)					
4C12c	UiaTC 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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Solar Keymark Network meeting

16th meeting
11-12 March 2014
ITC - Spain

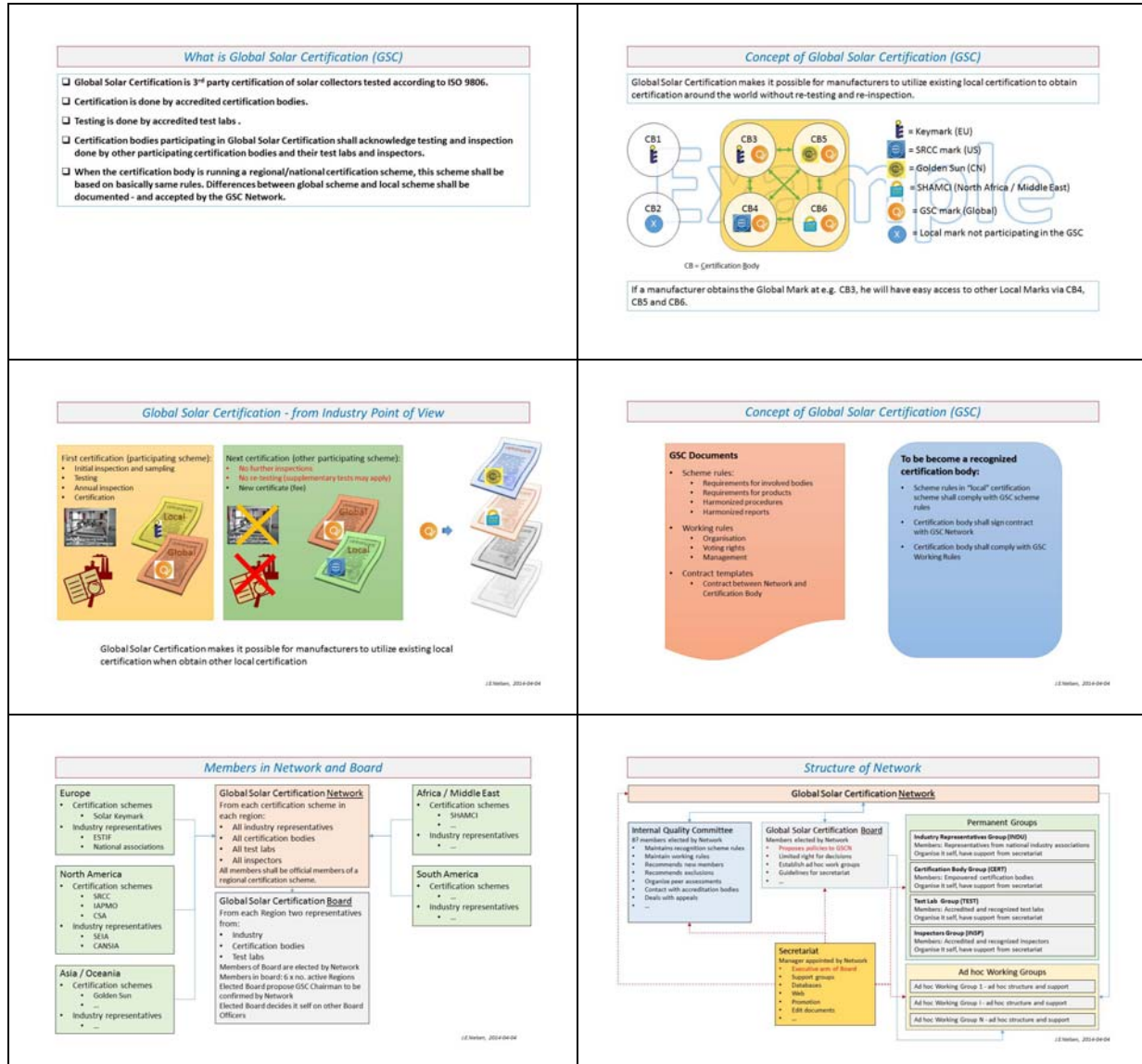


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Annex F

Global Solar Certification – General Approach



Annex G

Global Solar Certification – Scheme rules

IEA-SHC Task 43 Subtask B

Eileen Prado
Executive Director
SRCC

Jaime Fernández
Product Certification Officer
jafernandez@aenor.es

AENOR

1. Share the working method
2. Share the development of ideas
3. Share conclusions

AENOR

THE WORKING METHOD

- 5 web meetings from November to March
- Members of SCF Project
- Sharing the workload. Same agenda at every meeting:

Leader of subtask working group	Working group is responsible for preparing draft for
Jaime Fernandez	iv. Specification of inspection procedures (based on requirements in Annex E and procedures in Annex A of Keymark Specific Rules)
AENOR	
Sören Scholz	v. Rules for Mutual recognition among Certification Bodies (involves annexes that indicate differences of national certification schemes to Global Mark)
DINCERTCO	
Stephan Fisher	vi. Requirements for laboratories (This involves developing peer assessment/harmonization of accreditation activities)
SWT	
Les Nelson	vii. Requirements for inspection bodies (This involves developing peer assessment/harmonization of accreditation activities)
IAPMO	
Jim Huggins / Eileen Prado SRCC	viii. Main body of GM Specific Rules, (without annexes) ix. Product requirements and definitions (types, subtypes etc... there is no product standard to refer to so this must be included here) x. Rules for product classification (different classifications for tests results that may be required in different countries)
	xi. Specification of test procedures – reference to EN/ISO 9806
Susanne Hansson/ SP	xii. Common Basic Certificate for Global Mark only (template and data sheet)

- + What is happening at other working groups?

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THE DEVELOPMENT OF IDEAS

In the first meetings, a lot of time spent assuring we all had the same concepts in mind:

- Certification bodies will grant a Certificate and the manufacturer will be allowed the use of a Global Quality Mark
- There will be a common template for certificates and for technical annex
- Certification bodies will recognize the test reports and inspection reports done by others within the Global Certification Scheme for granting their own private Marks (This reduces double testing and inspection)
- To assure fair competition the requirements on certification bodies will use a *"hybrid system. We would need a specialized committee within the Global Network that would have the following tasks:*
 - Create a group for random spotchecks and address complaints using peer assessments
 - Help, organize and assure harmonization meetings within the accreditation bodies"

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THE DEVELOPMENT OF IDEAS

- A documented comparison of CBs' schemes with Global Scheme
- A need for a Board with an infrastructure for full time Secretariat and standing working groups
- An alliance or coalition between industry, laboratories and certification bodies

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CONCLUSIONS

Draft versions of two main documents presented and approved at GSC meeting of 2014-03-13:

- Global Solar Certification Scheme Rules
- Global Solar Certification Mutual Recognition Rules Among Certification Bodies and requirements for involved bodies

Time Plan and Milestones - subtask B	2013	2014	2015
B1. First draft set of requirements	D		
B2. Make 2 nd draft set of requirements		D	
B3. Make final draft set of requirements			D
B4. Make and approve final version of requirements			R
Milestones: D: Draft reports; R: Final reports; m: meeting			

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CALENDAR FOR NEXT 6 MONTHS

Continue work by members using methodology of web meetings every month to develop final documents for approval at GSC meeting (send 15 by July) :

Leader	GSC Scheme Rules
Jaime Fernández	Main Document
Soeren (Jaime and stephan)	Annex A Product Requirement (using Annex A3 of SK rules)
Susanne Hanson	Annex Template of certificate
Jim Huggins	Annex for comparison of CBs

Leader	GSC Mutual Recognition Rules among Certification Bodies and requirements for involved bodies
Soeren Scholz	Main document
Stephan Fischer	Annex C Requirements and procedure for peer assessment for testing laboratories
Les Nelson	Annex B Requirements and procedure for peer assessment for inspection bodies
Soeren Scholz	Annex D Peer Assessment Report

CALENDAR FOR NEXT 6 MONTHS





Web meetings are set for the following dates:

Dates of web meetings
28 April 16:00
27 MAY 16:00
23 JUNE 16:00

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Annex H

Ecodesign & Energy Labelling

 <p>Consciousness for renewable energy in the built environment</p> <p>Ecodesign / energy labelling - update -</p> <p>Gerard van Amerongen vAConsult (The Netherlands) Las Palmas 2014 03 11</p>	 <p>SCF 4C16a-Ecodes-12 - Ecodesign implementation -</p> <ul style="list-style-type: none"> Activities: <ul style="list-style-type: none"> Drafting of the document and technical report First trial with a workshop (Frankfurt) Results: <ul style="list-style-type: none"> No final results Issues: <ul style="list-style-type: none"> Unexpected extra public enquiry on transitional documents <ul style="list-style-type: none"> Results expected in march an needed to complete the document and start with the workshop
 <p>SCF 4C16a-Ecodes-12 - Ecodesign implementation -</p> <ul style="list-style-type: none"> Activities <ul style="list-style-type: none"> Drafting Ecodesign documents (manual) First trial with workshop (Frankfurt) Results: <ul style="list-style-type: none"> Draft manual (with templates and all instructions needed) Remarks: <ul style="list-style-type: none"> Unexpected extra public enquiry on transitional documents <ul style="list-style-type: none"> Daily in the project. The last info is needed. New version expected end of march 	 <p>Ecodesign / energy labelling - update -</p> <ul style="list-style-type: none"> September 2013: publication of the regulations <ul style="list-style-type: none"> Into force September 2015 December 2013: Extra consultation on latest version of transitional documents (that is: the methods) <ul style="list-style-type: none"> ESTIF commented. Main issue: <ul style="list-style-type: none"> Water heaters and combi heaters <ul style="list-style-type: none"> What to use as the efficiency of the backup heater Proposal submitted Next phase: harmonization of standards to replace the transitional document. <ul style="list-style-type: none"> 12975, 12976, 12977-3, 12977-4 and 15316-4-3
 <p>Ecodesign and energy labelling - Solar Keymark -</p> <ul style="list-style-type: none"> General remark: <ul style="list-style-type: none"> No third party testing required! No certified products required! Test institutes: <ul style="list-style-type: none"> Testing according to harmonized standards Clients: <ul style="list-style-type: none"> Industry (for the labels) Member states (verification market surveillance purposes) 	 <p>Ecodesign and energy labelling - Solar Keymark -</p> <ul style="list-style-type: none"> General remarks on Solar Keymark <ul style="list-style-type: none"> SK and trade barriers: <ul style="list-style-type: none"> Still valid. Ecodesign is limited to energy performance Accurate and reliable results are needed for success <ul style="list-style-type: none"> Certified product data is added value! An important challenge is to make the documentation available <ul style="list-style-type: none"> Accurate and reliable data See example "combination heater" 

Ecodesign and energy labelling - Solar Keymark -



- Suggestions for future Solar Keymark involvement:
 - Distribution of reliable and accurate data
 - Support to data distribution schemes and as such force those systems to use accurate and reliable data
 - Publication of technical data in format fitted to the technical documentation formats
 - Create a Solar Keymark label on certified energy labels
 - Safe guarding the data, calculations and the reliability
 - Communicate the added value of SK (other quality aspects)
 - Implement a cooperation model with other certifications to promote the use of good data and procedures
- Start a “reflection group” on how Ecodesign can make SK stronger
 - I am available for contributions

7

Last sheet



I am very sorry not being present at your meeting

Next time I will be there!

Any questions can be addressed to

vaconsult@vaconsult.net

Gerard van Amerongen

*I wish you a
productive
meeting*



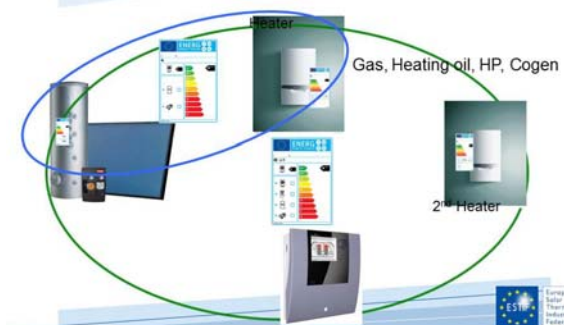
8

Proposal from ESTIF

- Labelpack A+ (Project proposal for H2020)
 - Facilitate the exchange of product fiches and a calculation tool for all actors in the supply chain in the form of an online application
 - Provide guidelines, as well as standardized answers to clarify the responsibility of each actor in the supply chain. (focus on installers and SMEs)
 - provide tailor-made information for end consumers, which will either be directly accessible by them, or used by dealers to explain the significance and added value of the “package label”

9

Package label Water, space combi heating



Water heater - Package label -



Proposal from ESTIF

- Patners:
 - Solar thermal and heating industry associations
 - Energy agencies and/or public authorities in charge of the implementation and/or market surveillance of energy labelling
 - Installers' organisation in charge of training and/or certifications and preferable specialised in RES
 - Organisations and/or NGO in charge of promotion of EE to consumers
 - IT specialist


12

Proposal from ESTIF

- Cooperation with SKN
 - link with the Solar Keymark and the SK database
 - improving the added value of the SK licences as well as the added value of the online application
 - SK in activities of promotion education towards consumers, installers and industry players
- What is requested:
 - Formal support/endorsement of the project by SKN
 - SK cooperation with the project
 - Expertise
 - Database

Annex I

Current status of PVT



Qualification and Certification of PVT Collectors – Current status

Dipl.-Ing. Ulrich Fritzsche
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Am Grauen Stein, 51105 Köln
Tel.: +49 221/806 4105, Fax + 49 221/806 1350
E-Mail: ulrich.fritzsche@de.tuv.com
Internet: www.tuv.com/solarenergie

1 12/03/2014 Ulrich Fritzsche - PVT - SKN_Meeting 02

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Precisely Right.

Current status – Solar Keymark experiences

- **First PVT-collector** were tested and certified according to new SKN-scheme rules
- integral design solution tested (direct laminated PVT)
- Complete IEC 61215 and 61730 test by external PV lab
- „uncovered“ PVT without critical stagnation temperature
- Certificate issued by DINCERTCO
- Open Points (for „uncovered“ PVT's)
 - Integration uncovered steady state results in Data sheet
 - Harmonized way for performance result visualization
 - Which figures beside the thermal performance shall be given?

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New wording for „uncovered“ or „unglazed“ needed

- Neither „Uncovered“ nor „unglazed“ is really applicable for typical PVT
- Better something like „Collector without front side insulation“ (One beer for the best suggestion!)
- As the absorber (cell) is not in direct long wave exchange with the cold sky, results may be based on global and not net irradiation like e.g. for „real“ uncovered pool heater
- Testing as covered collectors will result in electrical over estimation
- Strong wind dependency shall be taken into account!

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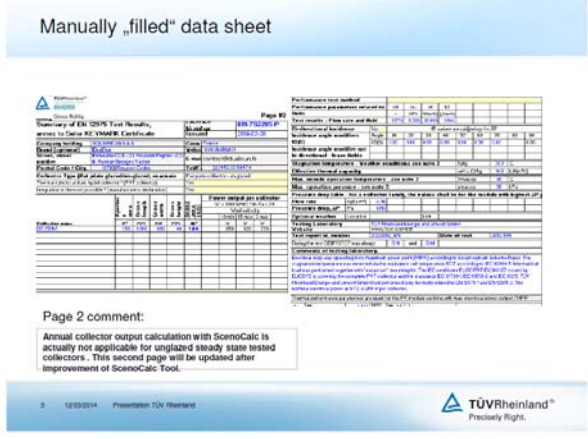
Solar Keymark Data Sheet – open questions

- Integration of electrical output on page 1 and/or page 2?
- Electrical output based on own measurements or manufacturer information (label)?
- If measured, how to deal with the different electrical performance classes of one PV-laminate?
- Should we only integrate the resulting cell temperature?
- If we give electrical performance figures, they will always be lower than STC values! (lead to discussions)
- If we compare to Nominal Operating Cell Temperature NOCT, result in conflict with irradiation level (1000/800 W/m²)

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Manually „filled“ data sheet

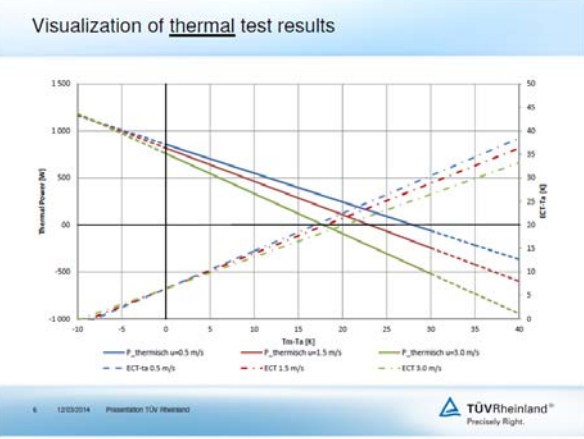


Page 2 comment:
Annual collector output calculation with SencCalc is actually not applicable for unglazed steady state tested collectors. This second page will be updated after improvement of SencCalc Tool.

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Visualization of thermal test results



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Determination of Equivalent Cell Temperature ECT as the link between electrical and thermal loop

- The equivalent cell temperature ECT (IEC 60904-5) can be easily detected simultaneous with the thermal performance characterization.

$$ECT = 25^{\circ}\text{C} + \frac{1}{\beta} \left[\frac{U_{OC2}}{U_{OC,STC}} - 1 - \alpha \ln \left(\frac{G_2}{1000} \right) \right] \quad (4)$$

- ECT is the only relevant value for determination of electrical output in addition to the values out of STC measurements
- The measurement of the open-circuit voltage V_{oc} and the STC values are sufficient to determine the actual cell temperature
- To fix the "weak point" in the existing PVT models, the relation between cell and fluid temperature as well as wind speed must be considered. Under consideration of ETC, the wide range of PVT's with high to low thermal conductivity could be covered
- Clear responsibilities for electrical and thermal experts are given. The electrical measurement for the ST experts is limited to V_{oc}

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Reporting of PV related results:

* Cell temperature curve (for $G = 1000 \text{ W/m}^2$)



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Joined Project PVT-Norm

- Evaluation of appropriate test procedures within a national (DIN) project PVT-Norm ((01FS12036) funded by the Federal Ministry of Economics and Technology
- Intention was to elaborate a "committee draft" to discuss within the international standardization committees
- Currently, only uncovered PVT-Collectors could be used for evaluation (more than 90 % market share)
- Ending of the funded project will be Mid of 2014

Project partner:



Funded by:

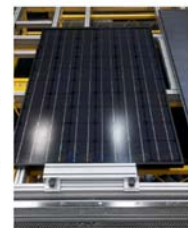


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Visualization of thermal performance and equivalent cell temperature

- Clear visualization of cell temperature dependency on
 - Fluid temperature
 - Wind speed
- Independent from absolute temperature ranges
- Clear system boundaries for ST und PV
- Only minor additional electrical characterization
- No need for new test procedures
- Indoor and outdoor applicable
- Highest reproducibility with indoor testing

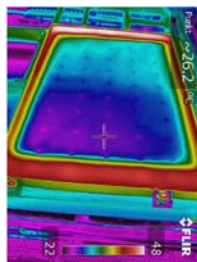


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Remaining work for over all performance visualisation

- Wind speed dependency consideration?
- Cell Temperature distribution and influence on electrical performance and ECT
- ECT applicable for collectors with inhomogeneous temperature distribution?
- Validation of a general equation for ECT behavior
- Integration of ECT behavior into simulation tools



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Reliability and safety of PVT-Collectors

- Safety aspects more critical due to the combination of water and electricity
- Thermal stagnation (worst case temperature, $T > 100^{\circ}\text{C}$ is possible)
- A standardised way for determination of critical (stagnation) temperatures shall be defined
- The Equivalent Cell temperature may also be a proper value for a "standardised stagnation temperature"
- Beside additional criteria for higher temperatures, a clear re-testing guideline for low temperature application shall be adapted

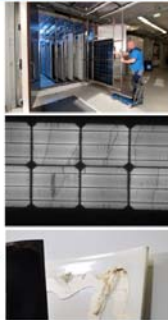


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Reliability and safety of PVT-Collectors

- Challenge for thermal components: accelerated aging test from PV qualification (climatic tests)
- Thermal Shock for PV Cells by Cold water (seems to be uncritical for uncovered PVT)
- Electroluminescence measurements for quality control
- **PV-laminates used for PVT application are mostly certified as PV-module but will be modified to a new PVT product with the risk of losing its certification**
- Most PV-modules are not specially designed for PVT application



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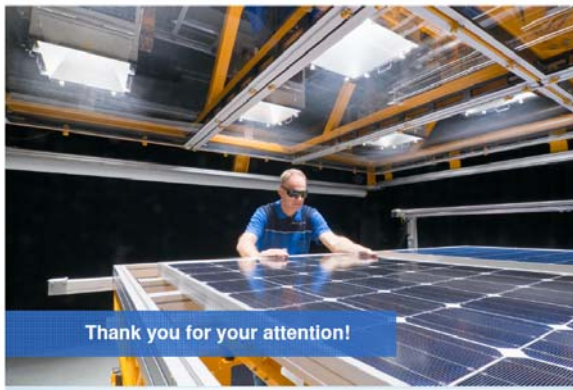
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Outlook on PVT module qualification



- German (DIN) project for PVT test procedure evaluation did start in 2013
- Validation of test procedure until mid of 2014 (realistic for uncovered PVT)
- Steady state and QD will be considered
- Presentation of test procedure as draft for standardization work
- Technical specification in 2015 possible
- Integral PVT tests also now possible
 - according to PV and ST standards
 - Additional combined tests

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Thank you for your attention!

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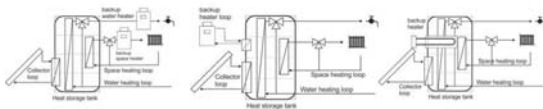
Annex J

Presentation of selected SCF project results

 <p style="text-align: center;">Reports on SCF projects</p> <p style="text-align: center;">Gerard van Amerongen vAConsult (The Netherlands) Las Palmas 2014 03 11</p> <p style="text-align: right;">1</p>	 <h4 style="text-align: center;">a short apology</h4> <ul style="list-style-type: none"> At the same as the SKNG meeting, a meeting of TC228 is being held. <ul style="list-style-type: none"> This is the most important meeting of the previous period The drafts of all the revised standards on EPBD will be finalized (including our EN15316-4-3) for public enquiry I am representing you in this matter and I am responsible for the EN15316-4-3. That is reason I have to skip your meeting. <p style="text-align: right;"><i>I wish you a productive meeting</i></p>  <p style="text-align: right;">2</p>
 <h4 style="text-align: center;">Contents</h4> <ul style="list-style-type: none"> Running project by vAConsult: <ul style="list-style-type: none"> SCF 4C12 LiasTC164-12 SCF 4C12-LiasTC371-12 (+ Jan Erik) SCF 4C12-LiasTC228-12 (+ Jan Erik) SCF 4C17-CENmandate-12 SCF 4C16a-Ecodes-12 (+ ESTIF) <p style="text-align: right;">3</p>	 <h4 style="text-align: center;">SCF 4C12 LiasTC164-12 - Drinking water -</h4> <ul style="list-style-type: none"> Activities: <ul style="list-style-type: none"> 26/09/2013: report TC312 (Freiburg) 16/10/2013: report TC164, WG2 (Bonn) 28/11/2013: report ESTESC (ESTIF, Berlin) 11/03/2013: report SKNG (:as Palmas) Results: <ul style="list-style-type: none"> Legionella report and CoP has been accepted for further development to a CEN-TR by: <ul style="list-style-type: none"> TC164, WG2 and TC312 (new common work group) Preparations at TC164 WG2 on revision EN 806-1 and -2 <ul style="list-style-type: none"> (Solar standards reference to these standards)  <p style="text-align: right;">4</p>
 <h4 style="text-align: center;">4C12-LiasTC371-12 - Energy Performance of Building project group -</h4> <ul style="list-style-type: none"> Activities: <ul style="list-style-type: none"> Work on umbrella for revision of standards <ul style="list-style-type: none"> CEN Mandate 480 (EPBD) Relevant for solar thermal: TC228 standards Meetings commonly together with TC228 WG2 See 4C12-LiasTC228-12 Results: <ul style="list-style-type: none"> Added to the solar thermal relevance of "umbrella" <p style="text-align: right;">5</p>	 <h4 style="text-align: center;">SCF 4C12-LiasTC228-12 - Heating systems in buildings -</h4> <ul style="list-style-type: none"> Activities: <ul style="list-style-type: none"> Development of standards (CEN mandate 480, EPBD) <ul style="list-style-type: none"> Solar relevant: EN15316-4-3 Participation in Coordination group and Work group 4 <ul style="list-style-type: none"> Four meeting within the contract period Building on acceptance in solar thermal community Results: <ul style="list-style-type: none"> Final proposal EN15316-4-3 for public enquiry <ul style="list-style-type: none"> Revised method B (Ecodesign) and new hourly method Solar PV is now integrated Future: harmonization (mandate 495, Ecodesign) <p style="text-align: right;">6</p>

New Hourly method

- EN 15316-4-3, method 3:
 - Added: hourly method collector & collector loop
- New standard on performance storage systems.
 - Modelling three options solar thermal:



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SCF 4C17-CENmandate-12 - CEN mandate 495 Ecodesign -



- Activities:
 - Attending two workshops Ecodesign coordination group
 - Drafting a workplan for the TC312 work groups
 - Reporting to TC312, ESTIF (ESTESC) and SKNG
- Results:
 - Workplan for work groups
 - Experts involvement in revision of standards (SCF proposal 2013).

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SCF 4C16a-Ecodes-12 - Ecodesign implementation -



- Activities:
 - Drafting of the document and technical report
 - First trial with a workshop (Frankfurt)
- Results:
 - No final results
- Issues:
 - Unexpected extra public enquiry on transitional documents
 - Results expected in march an needed to complete the document and start with the workshop

9

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SCF 4C16a-Ecodes-12 - Ecodesign implementation -



- Activities
 - Drafting Ecodesign documents (manual)
 - First trial with workshop (Frankfurt)
- Results:
 - Draft manual (with templates and all instructions needed)
- Remarks:
 - Unexpected extra public enquiry on transitional documents
 - Daily in the project. The last info is needed.
 - New version expected end of march

10

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Last sheet



I am very sorry not being present at your meeting
Next time I will be there!
Any questions can be addressed to
vaconsult@vaconsult.net
Gerard van Amerongen

*I wish you a
productive
meeting*



11

Annex K

Project presentation

Strengthening Quality Infrastructure for Solar Energy in Maghreb"

   <p style="text-align: center;">Strengthening quality infrastructure for solar energy in the Maghreb region</p> <p style="text-align: center;">Presented by Imed Landoulsi, ANME Tunisia</p>	  <p style="text-align: right;">Overview</p> <ul style="list-style-type: none"> • August 2012 – July 2016 • Budget 2 Mio EUR • 25 partners • Central topic : Solar water heaters • Objective: Consolidation of the quality infrastructure productive capacity for thermal solar energy (equipment and training) and the implementation of a network across the region.
  <p style="text-align: right;">Four axes to develop</p> <ul style="list-style-type: none"> • laboratories and standardization: improvement of conformity assessment & skills development within the national institutes for standardization and in the testing laboratories • Metrology: improvement of metrological traceability • Education: support to universities and research institutions • Networking: awareness and education campaigns on the quality infrastructure theme & development of regional networks 	  <p style="text-align: right;">Status of the project (1)</p> <p>Axe 1 "laboratories & standardization"</p> <p>Carried out activities:</p> <p>Delivery of equipment, training in Agilent Vee, study trip, training in ISO 17025</p> <p>Roundtable on solar thermal standards, participation in TC180</p> <p>Training remain to achieve after the delivery of the equipment (in progress)</p> <p>Outstanding:</p> <p>Monitoring of labels development: Return of essential information about the development in international labeling / regional / national in connection with solar thermal, in order to clarify the guidelines to be followed for the work on standards.</p>
  <p style="text-align: right;">Status of the project (2)</p> <ul style="list-style-type: none"> • Axe 2 "metrology" <p>Each country in the Maghreb will get support to be able to offer calibration services for the following instruments:</p> <p>Tunisia: wind speed (anemometers)</p> <p>Algeria: solar radiation (pyranometers)</p> <p>Morocco: flow rate (flow meters)</p>	  <p style="text-align: right;">Status of the project(3)</p> <ul style="list-style-type: none"> • Axe 3 "universities" <p>Development of a Blended Learning course on quality infrastructure for solar energy for university lecturers</p> <p>Starting date: December 2014 (E-learning of six months with two seminars and one training module)</p>

<div data-bbox="204 237 293 293"> Physikalisch-Technische Bundesanstalt Bundesmetrologie und Normen</div> <div data-bbox="352 255 619 291">Status of the project(4)</div> <div data-bbox="699 246 766 286"> Bund Bundesministerium für Wirtschaft und Klimaschutz</div> <ul style="list-style-type: none">• Axe 4 “networking” <p>The foundations of inter-country cooperation have laid mainly in terms of formalization of contacts and communication of information (edition of a newsletter, etc).</p> <p>Actions, borne by partners (information meetings in countries, awareness-raising campaigns) are still to be discussed according to the needs at the national level.</p> <p>Establishment of a collaborative platform, especially for archiving and sharing of documentation.</p> <div data-bbox="223 649 236 665">7</div>	<div data-bbox="818 237 908 293"> Physikalisch-Technische Bundesanstalt Bundesmetrologie und Normen</div> <div data-bbox="1313 246 1380 286"> Bund Bundesministerium für Wirtschaft und Klimaschutz</div> <div data-bbox="1013 237 1404 616"></div> <div data-bbox="1013 454 1193 499"><h1>Thank you!</h1></div> <div data-bbox="831 616 1254 672"><p>Contact: lea.zeppenfeld@ptb.de All publications available on: http://www.ptb.de/q5</p></div>
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