

List of Decisions

Revision 7

Date: December 22nd, 2011

Preface:

This documents contains all the decisions made by the Solar Keymark Network up to the date mentioned above.

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MEETING 1

Decision D1.M1 – related to test results based on old / new (revised) standards

The experts present are confident that test results (thermal performance and durability) to be obtained on the basis of the new version of EN 12975 and EN 12976 will not differ from results that would have been obtained on the basis of the old version, as the methodology and the test equipment are the same.

This decision was taken unanimously (at the 1st Meeting, June 21st, 2006)

Decision D2.M1 – related to new accreditation certificates

It was decided that in case a test lab gets a new accreditation certificate, this certificate should be electronically send to jen@solarkey.org

This decision was taken unanimously (at the 1st Meeting, June 21st, 2006)

Decision D3.M1 – related to collector power curve / collector efficiency curve

In the revised version of the test standard for collectors (EN 12975) the collector performance is presented by means of a collector power curve.

In this context it was decided by the experts present to recommend that for collector performance tests that are carried out according to the revised version of the collector test standard EN 12975 the collector efficiency curve shall not be included in the test report (not even in an Annex).

This decision was taken unanimously (at the 1st Meeting, June 21st, 2006)

MEETING 2

Decision D1.M2 – related to simplification of the rules for testing collectors of same type but different sizes

The experts present decided that the current procedure should not be changed. This means that the smallest and the largest collector out of a series with the same type should be tested.

This decision was taken with one negative vote (at the 2nd Meeting, February 15th, 2007)

Decision D2.M2 – related to the question who is manufacturer and where is the location for picking of test samples

The experts present decided that it is not possible to give a precise answer on this question.

Furthermore it was decided that Josef Buchinger should send the case under question out to the Solar Keymark Network and ask for the individual opinions of the experts.

(Decided at the 2nd Meeting, February 15th, 2007)

MEETING 3

Decision D1.M3 – related to “Procedures for changing the certification body ”

The experts present agreed on the following:

- It shall be possible for a licensee to obtain a new license from another certification body without re-testing and re-inspection
- Old license shall be withdrawn when new one is issued
- Change of license should be done within 3 months after the request
- The test report(s) and the inspection report(s) have to be provided to the “new” certifier
- The test institute that issued the test reports has to be accepted by the “new” certifier

This decision was taken unanimously (at the 3rd Meeting, October 2nd, 2007).

→Scheme rules 11.

Decision D2.M3 – related to “ Flexible Solar Keymark certification ”

The experts present decided that in principle both approaches (“extrapolation/interpolation method” and “calculation method” – see above) should be included in a revised version of the Solar Keymark scheme rules.

This decision was taken unanimously (at the 3rd Meeting, October 2nd, 2007).

Decision D3.M3 – related to “made in”

The experts present decided that the information related to “made in” can refer to whatever is considered as appropriate by the one who is putting on the label.

Furthermore it was decided that the information to “made in” on the product identification plate should be made optional during the next revision of the standard.

This decision was taken unanimously (at the 3rd Meeting, October 2nd, 2007).

Decision D4.M3 – related to “ Performing of Solar Keymark tests by manufacturers ”

The experts present decided that this is not possible due to the existing Solar Keymark scheme rules.

Remark: It would only be possible if the test facility of the manufacturer is accredited. Furthermore the test sample has to be picked from the current production by an independent inspector.

This decision was taken unanimously (at the 3rd Meeting, October 2nd, 2007).

Decision D5.M3 – related to “ Solar Keymark certification of ICS Systems ”

Taking the aspects mentioned above into account the experts present decided that a Solar Keymark certification of ICS systems is possible.

This decision was taken unanimously (at the 3rd Meeting, October 2nd, 2007).

→Scheme rules 13.

Decision D6.M3 – related to “ Mechanical load tests of tubular collectors ”

The experts present decided that the “negative pressure test of the collector” according to 5.9.2 EN 12975-2:2006 does not have to be performed on tubular collectors due to the following reason:

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. This is not relevant for tubular collectors.

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.

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.

In order to exchange the experience related to performing the positive pressure tests it was agreed that the labs performing such tests should describe their procedure and mail it to the Solar Keymark Network until November 9th, 2007.

This decision was taken unanimously (at the 3rd Meeting, October 2nd, 2007).

→Scheme rules 13.

MEETING 4

Note: At the 4th Meeting, June 10th, 2008 no decisions were made.

MEETING 5

Decision D1.M5 – Validity of Solar Keymark certificates in case of absorbers selective coated by different manufacturers are used

The experts present decided to apply the following procedure in order to consider different coatings as equivalent:

Different coatings are considered as equivalent provided that

- the absorptance and emittance of the different coatings under question was measured by the same recognised lab and
- the durability and reliability tests according to EN 12975-2 (being relevant with regard to the absorber) of the same collector with an absorber with different coatings performed by an accredited test lab are successfully passed and
- the power curves determined by an accredited test lab for the same collector with an absorber with different coatings do not differ by more than 2% at a reduced temperature difference of 0 K and not more than 2% at a reduced temperature difference of 50 K and
- the equality is accepted by the Solar Keymark Network

Coatings on copper absorbers with the following brand names are already considered as equivalent:

Tinox classic, Blutec etaplus CU, Sunselect

This decision was taken unanimously (at the 5th Meeting, October 1st & 2nd, 2008).

→Scheme rules 4.6.1

Decision D2.M5 – Difference between nominal and effective store volume

The experts present decided that the difference between the nominal store volume stated on the system identification label shall not differ by more than 10 % from the effective store volume determined from the measured thermal capacity. The calculation of the percentage of the difference between the two volumes is based on the value of the effective volume.

The effective store volume shall be mentioned in the test report.

This decision was taken unanimously (at the 5th Meeting, October 1st & 2nd, 2008).

→Scheme rules 13.

Decision D3.M5 – Issuing of OEM certificates

The present experts decided that OEM certificates shall be issued by the certifier who issued the original certificate.

This decision was taken with three negative and 12 positive votes (at the 5th Meeting, October 1st & 2nd, 2008).

→Scheme rules 13.

MEETING 6

Decision D1.M6 – Voting on “Solar Keymark Network Internal Regulations; Version March 23rd, 2009”

The participants present decided to send out the modified version of the “Solar Keymark Network Internal Regulations” as discussed at the meeting for voting. For that purpose a “voting form” will be send out together with the document by the SKN secretariat.

In case the document is not approved as send out this has to be declared to the Solar Keymark Network (including Secretariat) within 30 days after sending out the document.

Comments submitted in the context of the voting shall be presented and discussed at the next SKN meeting.

This decision was taken unanimously (at the 6th Meeting, March 23rd & 24th, 2009).

Decision D2.M6 – Durability and reliability testing of custom build collectors

The participants present decided that durability and reliability tests shall be carried out on collectors representing the major features of the collector family. E.g. collector families with collectors having more than one glass covers that are separated by bars.

In case the largest size of the collector the test laboratory can test is smaller than the smallest size of the family representing the weakest point an other testing laboratory shall carry out the respective tests.

This decision was taken unanimously (at the 6th Meeting, March 23rd & 24th, 2009).

→Scheme rules 4.2

Decision D3.M6 – Handling of complains

The participants present decided that the procedure for handling of complains is as described in the general Keymark scheme rules (Internal Regulations, Part 4, Certification, 2006-8) in section 5.4 (complains) and 5.5. (appeal procedures).

If a special test is performed according to the procedures mentioned above and if the result is not fulfilling the requirements mentioned in chapter 6.1 of the Solar Keymark scheme rules the manufacturer has to carry the costs of the special test.

If the specially tested product fulfils the requirements and complies with the registered values, the costs have to be carried by the party which questioned the fulfilment of the requirements or registered values and ordered the test through the certification body.

Chapter 6.1 of the Solar Keymark scheme rules will be revised accordingly by Jan Erik Nielsen.

This decision was taken unanimously (at the 6th Meeting, March 23rd & 24th, 2009).

Decision D4.M6 – Definition of “series production” and “stock”

The participants present decided that a series production is existing when a least 10 collectors are produced with the same materials and the same manufacturing technologies in the same way and all major production processes are performed in presence of the inspector.

The participants present decided that at least 10 collectors of the same type more than the number of test samples picked must be available in the stock for picking the sample(s) to be tested.

This decision was taken unanimously (at the 6th Meeting, March 23rd & 24th, 2009).

→Scheme rules 14.

Decision D5.M6 – Validity of Solar Keymark certificates in case of absorbers selective coated by different manufacturers are used

The participants present decided that in context with decision D1.M5 **coatings on aluminium absorbers** with the following brand names are already considered as equivalent:

Alanod Mirotherm and Blutec eta plus_al

Note: This decision extends decision D1.M5 (Validity of Solar Keymark certificates in case of absorbers selective coated by different manufacturers are used was modified)

Additionally it was decided that in the future documentation for considering selective coatings and other materials as equivalent shall be provided in advance to the SKN.

This decision was taken unanimously (at the 6th Meeting, March 23rd & 24th, 2009).

→Scheme rules 4.6.1

MEETING 7

Decision D1.M7 – Solar Keymark Network Internal Regulations; Version September 3rd, 2009

The participants present agreed with the version of the “Solar Keymark Network Internal Regulations” as discussed at the meeting (Document N01002R3 (File SKN_N0102R3.doc)).

This decision was taken unanimously.

With regard to the procedure of the future meetings it was agreed that there is a need of the establishment of a formal voting and nomination procedure.

Jan Erik Nielsen will prepare tools (based on Excel) for that purpose.

Decision D2.M7 – CEN fees

The participants present decided to send the document N0104R0 related to “CEN fees from Solar Keymark” to CEN and asks for acceptance until the end of 2009.

In case the proposal described in the document is not accepted or an appropriate other proposal is presented by CEN the initiation of a new certification scheme will be considered.

This decision was taken with one abstention.

Decision D3.M7 – Fees for the SKN and Secretariat in 2009 & 2010

The participants present decided that the budget of the SKN (including chairman) for 2010 is in total 47.694 €.

Furthermore it was agreed that the budget for 2009 of 40.000 € for the SKN (including chairman) is increased by 4.800 €.

In 2010 the SKN fee is reduced to a value of 50 € per licence.

In case the income based on the SKN fees will not be as high as expected the resulting difference will be compensated in the year after.

This decision was taken unanimously.

Decision D4.M7 – Solar Keymark Database: Update procedure and brand

The participants present decided the following:

As soon as a licence is issued the certification body shall send by e-mail the related data sheet in a harmonised Excel format and PDF format to the Solar Keymark Network Secretary (Email: jen@solarkey.dk)

Brands mentioned on the Solar Keymark certificate will be included in the database as part of the licensee name: LICENSEE NAME (BRAND)

A brand is the name of the product as given by the licensee. In principle it might be possible to have different brands for the same product (e.g. for different markets).

It was agreed that the update procedure will be included in the specific scheme rules.

This decision was taken unanimously.

Decision D5.M7 – Solar Keymark Certification of PV/T collectors

The participants present decided that Solar Keymark Certification of PV/T collectors as a solar thermal product is possible provided the measurements of the thermal performance are performed with and without electricity production. For the electrical load applied for the electricity production a MPP Tracker shall be used.

In the Solar Keymark data sheet the thermal performance with and without electricity production shall be presented (see note below).

This decision was taken with one abstention.

Decision D6.M7 – Changing a collector in a Solar Keymark certified system

The participants present decided that a collector in a Solar Keymark certified system can be changed under the following conditions:

The original test report of the tested system configuration remains the reference for all kinds of modifications, even if a modification was accepted without retest. The procedure for an advice of amendment follows the four topics:

1. The manufacturer informs the Certification Body about the planned change of collector type.
2. The manufacturer delivers the test reports and Solar Keymark data sheets of both collectors and the system to the Certification Body.
3. Both the Certification Body and the test lab which has issued the system test report have to approve the system modification.
4. A negative decision can also be based on technical consideration out of the following few requirements.

Minimum requirements on the collector:

- The alternative collector is Solar Keymark certified.
- The original collector must be performance tested according to EN 12975
- The test reports of both collectors and the system are available to the Certification Body
- The change of the collector does not cause a change of the system configuration e.g. piping, inlet connections, controller, pump etc.

- Both collectors have to be “technical identical”

Definition of “technical identical” Collector” (Data based on test report)

- Tolerance of gross area $\pm 10 \%$
- IAM (50°) $\pm 3 \%$
- The pressure drop shall not differ by more than $\pm 10 \%$ for the nominal flow rate as stated by the manufacture
- Total performance of the collector at 1000 W/m^2 :
 - Integral from 0 to $100 \text{ }^\circ\text{C}$, tolerance of 0 to 10% (new collector being better than original)
 - $W_{\text{peak}} \pm 10 \%$, (Peak Power [$G = 1000 \text{ W/m}^2$] per collector unit)

No modifications allowed at:

- Hydraulic flow type
- Maximal operating pressure
- Permitted heat transfer fluid

Reporting

The original test report of the tested system remains the reference for all kinds of modifications – cascading modifications are excluded. The original test report remains unchanged and valid. The use of alternative collectors is briefly reported as an addendum to the original test report.

This decision was taken unanimously.

→Scheme rules 4.6.3

Decision D7.M7 – Procedure for considering glass as equivalent for flat plate collectors

The participants present decided that glazing can be considered as equivalent if the following requirements are fulfilled:

- The solar transmission (AM 1,5) does not differ by more than $\pm 1\%$ from the one of the glass used for the initial Solar Keymark collector test, provided that material (including tempered/non tempered), texture, surface treatment and thickness of the glass did not change. The change in transmission must be documented with a transmission measurement made by one of the Solar Keymark test labs or by labs accredited for transmission measurements.

and

- If the glass is toughened, no additional mechanical load test is required. For other materials, a collector must be sampled according to the rules of Solar Keymark. This collector has to pass the mechanical load test according to EN 12975-2 chapter 5.8 made by one of the Solar Keymark test labs.

and

- The impact resistance test according EN12975-2, chapter 5.9 has been passed successfully with at least the same result as in the initial test (only if the impact resistance test was performed during the initial test). The tests must be carried out by a Solar Keymark test lab.

This decision was taken with one negative vote.

→Scheme rules 4.6.2

Decision D8.M7 – Solar Keymark scheme rules, Version September 4th, 2009”

The participants present agreed in principle with the documents for the “ Solar Keymark scheme rules” (Document SKN_N0106.R1.doc) and the annexes C (Document SKN_N0106.R1annexC) and annexes D (Document SKN_N0106.R1annexD) as resulting from today’s discussion.

The detailed description of the extrapolation methods for the certification of system families will be finalised in the corresponding working groups before September 15th, 2009.

The final version of the scheme rules resulting from these activities will be submitted to CCB for approval and will be made available via internally via www.solarkeymark.org.

This decision was taken unanimously.

Decision D9.M7 – Validity of Solar Keymark certificates in case of Tinox energy CU coating

The participants present decided that in context with decision D1.M5 coatings on copper absorbers with the following brand names are considered as equivalent:

Tinox energy CU, Tinox classic, Blutec etaplus CU, Sunselect

Note: This decision extends decision D1.M5 and decision D5.M6 (Validity of Solar Keymark certificates in case of absorbers selective coated by different manufacturers)

This decision was taken unanimously.

→Scheme rules 4.6.1

Decision D10.M7 – Mandatory identification of the manufacture

The participants present decided that for collectors, as the name of the manufacturer, also the name of the supplier of the collector can be mentioned.

Furthermore, the discrepancy in the information required related to the manufacture’s name in EN 12975 and EN 12976 should be removed during the ongoing revision of EN 12975.

This decision was taken unanimously.

→Scheme rules 17.

Decision D11.M7 – Translation of Solar Keymark documents

The participants present decided that certification bodies or test institutes can translate documents such as e.g. factory inspection reports or data sheets in other languages provided that always the original English text remain in the document.

This means that the preparation of a document using any language and English is possible.

In case of doubts, contradictions etc. the English text is the relevant one.

This decision was taken unanimously.

→Scheme rules 17.

Note: (Practical comment by the Secretary) In present version of the Solar Keymark collector data sheet there is no room for two values for the thermal performance parameters. Until further notice the two sets of values for a PV/T collector are given in the following way:

- Values for PV/T collector **without** electricity production: To be given in the normal way in the data sheet.
 - Values for PV/T collector **with** electricity production: To be given with the following explanation in the comments field of the data sheet in the following way: *The thermal performance of the collector is reduced if electricity is produced simultaneously. A test was performed with simultaneous electricity production; results from this test show the following performance parameters: n0a: d.ddd; a1a: d.ddd w/(m²k); a2a: d.ddd w/(m²k²); tstg: ddd °c.*
-

MEETING 8

Decision D1.M8 – Nomination of industry representatives by national solar thermal trade associations

In countries where more than one national solar thermal trade association exists each trade association can nominate up to two national industrial representatives for participation in the Solar Keymark Network.

This decision was taken unanimously.

Decision D2.M8 – Revised version Solar Keymark Scheme Rules, Annex D

The participants present decided to accept the document N106R6AnnexDR3.

This decision was taken unanimously.

Decision D3.M8 – Extension of Solar Keymark Certification to New Subtypes of Solar Collectors

The definition of the biggest collector and the smallest collector is done at the initial test. If later a bigger size or smaller size is added to the collector family this is resulting in a new definition for the existing family. If there is a new biggest collector added this will require performance testing and reliability testing of this collector. If there is a new smallest collector added this will require performance testing on the smallest collector.

This decision was taken unanimously.

→Scheme rules 4.2 (foot note)

Decision D4.M8 – Certification of systems by using collector Solar Keymark certificates from a different certification body

The participants present decided that in general a certifier has to perform Solar Keymark system certification based on collector Solar Keymark certificates issued by other certification body.

In order to ensure that no system certificates are based on withdrawn collector certificates, Jan Erik Nielsen will elaborate an appropriate procedure.

This decision was taken with one negative vote.

→Scheme rules 12.

Note:

According to the existing rules the manufacturer is already today required to inform, in addition to the certifier of the collector, also the certifier of the system about any changes related to the collector. In order to be sure that the manufacturer informs the certifier of the system about a withdrawal of the certificate for the collector, it is recommended to state the obligation clearly in the contract between the certifier of the system and the manufacturer.

Decision D5.M8 – Hot water tapping times

It was decided that the following tapping times should be used for the performance prediction:

Table 1: Data of reference locations and adjusted tapping time.

Reference locations	Longitude ¹	Time zone	Adjustment of standard time	Tapping time (CET ²)
Stockholm	18.07°	1	-0.20	17.80
Würzburg	9.90°	1	0.34	18.34
Davos	9.82°	1	0.35	18.35
Athens	23.70°	2	0.42	18.42

(table extracted from N0124R0)

Note: Time given in Table 1 are decimal figures

Furthermore it was agreed that there is no need to re-calculate the results presented in already existing test reports.

The explicit tapping times should be included in a future version of EN 12976-2 and CEN/TS 12977-2.

This decision was taken unanimously.

→Scheme rules 13.

Decision D6.M8 – Validity of Solar Keymark certificates in case of Alanod MIROTHERM and TiNOX energy Al coating

The participants present decided that in context with decision D1.M5, coatings on aluminium absorbers with the following brand names are considered as equivalent:

Alanod MIROTHERM and TiNOX energy Al and Bluetec eta plus_al

Note: This decision extends decision D1.M5: decision D5.M6 (Validity of Solar Keymark certificates in case of absorbers selective coated by different manufacturers check) and decision D9.M7 (Validity of Solar Keymark certificates in case of Tinnox energy CU coating)

This decision was taken unanimously.

→Scheme rules 4.6.1

Decision D7.M8 – Display of Solar Keymark licence number on collector

The participants present decided that for new Solar Keymark certificates issued from 01. May 2010 onwards it is only allowed to display the Solar Keymark logo on the collector together with the Solar Keymark licence number.

For Solar Keymark certificates issued before 01. May 2010 it is required to display the Solar Keymark licence number together with the Solar Keymark logo (in case the logo is displayed) from 01. May 2011 onwards on the collectors.

This decision was taken with one negative vote.

→Scheme rules 15.

Decision D8.M8 – No Solar Keymark for uncovered collectors

Uncovered solar collectors shall not be excluded from Solar Keymark certification.

This decision was taken with one negative vote.

The request for excluding uncovered solar collectors from Solar Keymark certification is mainly based on the fact that in some countries Solar Keymarked products (including uncovered absorbers operated in combination with a heat pump) can benefit from subsidies.

There was a consensus that subsidy schemes should also take into account the electrical energy consumption of a solar thermal systems.

A working group was established in order to elaborate mechanisms for avoiding the misuse of Solar Keymark certification for non solar products.

Members of the **working** group are:

Costas Travasaros, Jean Marc Suter, Rob Meesters, Carsten Lampe, Christian Stadler, Fabienne Salaberry

Note: It was not possible to identify a leader of the working group

The working group shall prepare a proposal as a basis for a decision at the next meeting.

Decision D9.M8 – Procedure for physical inspection / surveillance

The participants present decided to proceed with the physical inspection and surveillance test as it is already present common practice. This means a physical inspection as described in the Solar Keymark scheme rules every second year.

The latest version of documents N0122R0 (Checks and controls for solar collectors) and N0123R0 (Checks and controls made of the solar heating system) shall be used for the inspection reports.

This decision was taken with one negative vote.

→Scheme rules 16.

Decision D10.M8 – Factory inspection report

The participants present decided that the document N0132R0 (factory inspection report) shall be used for reporting.

This decision was taken with one negative vote.

→Scheme rules 16.

Decision D11.M8 – Harmonised requirements for documentation provided by collector manufacturer for factory inspection

The participants present decided that the documentation required in Annex A of N0120R0 (extended by information related to method for connecting the absorber plate and the piping e.g. laser welding, soldering) has to be provided by the solar collector manufacturer in the context of a factory inspection.

This document will be included as Annex A3 in a revised version of the Solar Keymark scheme rules.

This decision was taken unanimously.

Note: The requirements resulting from Annex B of N0120R0 (Collector label) are already required by EN 12975-1:2006, section 7.2 (labelling)

Decision D12.M8 – Annual inspection requirements in case of ISO 9001 certification

In case the manufacturer is ISO 9001 certified by a certifier accredited by a national accreditation body being a member of IAF (International Accreditation Forum) (www.iaf.nu) a Solar Keymark factory inspection is only required every second year provided the ISO 9001 report is made available to the certifier.

Based on conclusions of previous audits, interim inspections can be requested by the certifier.

This decision was taken with two negative votes.

→Scheme rules 16.

Decision D13.M8 – Remote Random Sampling procedure.

The participants present decided that a remote sampling procedure as described in N0126R1 and N0127R0 can be performed for picking samples for Solar Keymark type testing.

This decision was taken unanimously.

→Scheme rules 4.1.1

MEETING 9

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

The Solar Keymark internal regulations and Solar Keymark scheme rules should be updated once every year taking into account the decisions made in the meantime.

Since the decisions are already agreed on by the Solar Keymark Network no voting on the Solar Keymark internal regulations and Solar Keymark scheme rules is required.

This decision was taken unanimously.

→Scheme rules 18.

Decision D2.M9 – Interchangeable sub-components of collectors

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

This decision was taken unanimously.

Decision D3.M9 – Labelling of systems

The participants present decided that the requirement stated in EN 12976-1:2006, clause 4.7 “Every system shall have the following information durably marked on a plate or label to be visible at installation” can be considered as fulfilled if

- the label is included in the documentation supplied with the system

and

- in the documentation it is stated that the label (or corresponding page of the documentation with the label) has to be placed at the systems or the site where the system is installed

and

- an appropriate way for providing a durable fixing and display of the label is provided

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

This decision was taken unanimously.

→Scheme rules 15.

Decision D4.M9 – Procedure for updating the data base

The certification bodies shall inform the Solar Keymark secretariat every two weeks about the Solar Keymark certificates issued and withdrawn for updating the Solar Keymark database every two weeks.

This decision is partly updating Decision D4.M7

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

This decision was taken unanimously.

→Scheme rules 18.

Decision D5.M9 – Revised version Solar Keymark Scheme Rules, Annex D

The participants present decided to accept the document N0106R6AnnexDR5.

This decision was taken unanimously.

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

The participants present decided that the budget of the SKN secretariat (including chairman) for 2010 is in total 56.721 €.

Note: With regard to the budget of the SKN secretariat (including chairman) for 2010 this decision replaces decision D3.M7.

The budget of the SKN secretariat (including chairman) for 2011 is in total 63.620 €.

Furthermore the activities of ESTIF described in document SKN_N0135R1 for an amount of 20.360 € are accepted.

This decision was taken unanimously.

Decision D7.M9 – Solar Certification Fund (SCF)

The participants present decided to accept the document SKN_N0145R1 as basis for operation of the Solar Certification Fund.

Representatives for the SCF Steering Group shall be nominated by the specific groups of manufacturers, test labs, certification bodies and ESTIF and CCB until Oct 20st, 2010. The nomination shall be performed by means of an Email to the Solar Keymark secretary Jan Erik Nielsen.

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

This decision was taken unanimously.

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

Manufacturers:

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

Test labs:

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

Certification bodies:

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

CCB:

- *Hoang Liauw*

ESTIF

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

Solar Keymark Network

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

MEETING 10

Decision D1.M10 – Update of Solar Keymark scheme rules

The Solar Keymark scheme rules as described in document SKN_N0106R7 are accepted with future editorial changes to be made by Jan Erik Nielsen.

It was agreed to submit the updated version to CEN Certification Board CCB for approval by correspondence.

This decision was taken unanimously.

A revised version of the decision list will be prepared by Jan Erik Nielsen in such a way that the “history” of the decisions is traceable. One option is to keep the heading of the decision and to mention below in which document the decision was when incorporated.

Decision D2.M10 – Funding of proposals from the 1st SCF call

The proposals recommend by the Solar Certification Fund Steering Group for funding as described in document SKN_N0155R1 are accepted and the corresponding activities will be funded.

This decision was taken unanimously.

Decision D3.M10 – Procedure for considering selective absorber coatings as equivalent

The experts present decided to apply the following procedure in order to consider different coatings as equivalent:

Different coatings are considered as equivalent provided that

1. They are applied on the same substrate (e.g. copper, aluminium)
and
2. The specific test procedure described below has been passed successfully
and
3. The equality is accepted by the Solar Keymark Network

Procedure

If a coating is to be considered equivalent to other coatings then the following tests shall be passed and requirements shall be fulfilled:

1. Two identical collectors (apart from the absorber coating) are compared to verify the equality of the two coatings. The absorbers of the two collectors must be made of the same

material and must have the same thickness. One of the collectors is coated with one of the reference coatings. The other collector is coated with the new coating.

2. The durability and reliability tests according to EN 12975-2 (being relevant with regard to the absorber, thus 5.3 High Temperature Resistance, 5.4 Exposure and 5.6 Internal Shock) for the collector with the new coating performed by an EN12975 accredited test lab are successfully passed.
3. The power curves determined by an accredited test lab for the two collectors with different coatings shall not differ by more than 2% at a temperature difference of 0 K and not more than 2% at a temperature difference of 50 K

The absorptance and emittance of the different coatings under question shall have - according to the specifications of the manufacturer - equivalent optical properties ($\alpha_1 = \alpha_2 \pm 1\%$ point at most, $\epsilon_1 = \epsilon_2 \pm 1\%$ point at most) and the same range of the production variability, e.g. $0.95 \pm 2\%$.

4. For selective absorber coatings on metal a IEA SHC Task X test shall be performed successfully
5. The interchangeability is accepted by the Solar Keymark Network

The equivalency of the absorber coating can be challenged anytime. In this case the absorber has to be sampled by an accredited third party or by the test lab. The costs for the whole procedure are fully carried by the challenger. Upon presentation of tests that suggest none-equivalency of an absorber coating, the SKN is obliged to request the re-evaluation of an absorber coating the latest until the forthcoming SKN meeting. The absorber has to be sampled by a third party.

This decision was taken with no negative votes and two abstentions

Note: This decision replaces decision D1.M5 – Validity of Solar Keymark certificates in case that selectively coated absorbers by different manufacturers are used as equivalent.

Decision D4.M10 – Absorber coatings to be considered as equivalent

The document SKN_N0137R2 shall be updated by Jan Erik Nielsen by implementing the Decision D3.M10 (Procedure for considering selective absorber coatings as equivalent) as mentioned above. After this change is performed the resulting document SKN_N0137R3 will reflect the current status of absorber coatings to be considered as equivalent.

This decision was taken with no negative votes and four abstentions

Note: This decision replaces decision D1.M5 – Validity of Solar Keymark certificates in case that selectively coated absorbers by different manufacturers are used as equivalent.

Decision D5.M10 – Validation of annual collector output calculation tool

Peter Kovacs and his group will prepare a document describing the validation of the annual collector output calculation tool. Based on this document by correspondence a decisions will be made if the annual collector output calculation tool is considered as validated.

This decision was taken unanimously

Decision D6.M10 – Annual collector energy output included in data sheets

Provided that the annual collector energy output calculation tool is successfully validated (see Decision D5.M10) values for the presentation of the annual energy output of collectors in the Solar Keymark data sheets shall be determined according to the method described in Annex B1 (Collector data sheet) of the Solar Keymark Scheme rules.

Values for annual energy output of collectors will be included on page 2 in the collector data sheet.

- One month after the annual collector energy output calculation tool is considered as validated values for annual energy output of collectors **should** be included in all new collector data sheets.
- Three month after the annual collector energy output calculation tool is considered as validated values for annual energy output of collectors **shall** be included in all new collector data sheets.
- Three month after the annual collector energy output calculation tool is considered as validated whenever a certificate is renewed, the values for annual energy output of collectors shall be included the related datasheet.
- One month after the annual collector energy output calculation tool is considered as validated licensees may ask for renewal of existing certificates for inclusion of the values for annual energy output of collectors in the datasheet. A fee may be requested for such renewal.
- The detailed description (document SKN_N0154R0) of the method used for calculating the annual collector energy output of the validated annual collector energy output calculation tool shall be public available at www.solarkeymark.org.
- The tool itself as an executable shall be available from www.solarkeymark.org
- The source code of the tool shall be available from a restricted area in the www.solarkeymark.org for empowered certification body and the test labs recognised for testing in connection with Solar Keymark certification. Password for access to this area will be given by the Solar Keymark Network Secretary.
- Calculation of the annual collector energy output for a Solar Keymark collector data sheet shall be done by an empowered certification body or a test lab recognised for testing in connection with Solar Keymark certification.

- In case the annual collector energy output calculation tool is not applicable to a specific collector the calculation of the annual collector energy output is not required

This decision was taken unanimously

Decision D7.M10 – Solar Keymark certification of PV/T collectors

The participants present decided that Solar Keymark certification of PV/T collectors as a solar thermal product is possible provided the measurements of the thermal performance are performed with electrical production under MPP conditions.

In addition an optional thermal performance determination without electrical production (open circuit for PV-Module) is possible.

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

This decision was taken with two negative votes and eight abstentions.

Note: This decision replaces decision D5.M7 – Solar Keymark certification of PV/T collectors

→Scheme rules 13.

Decision D8.M10 – pre-ageing of solar collector test samples

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:

Possibility 1:

Expose the product at least for 15 valid days (according to the validity criteria of EN 12975, 5.4).

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 4h. In between this two stagnation tests the collector has to reach approximately ambient temperature.

Exposure to outdoor conditions for at least 15 days, not requiring any boundary conditions to be fulfilled.

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 4h. In between this two stagnation tests the collector has to reach approximately ambient temperature.

This decision was taken with six negative votes and two abstentions

→Scheme rules 13

Decision D9.M10 – Revision of Annex D of the scheme rules

It was decided to revise Annex D of the SK scheme rules as proposed by Maria João Carvalho in document SKN_N0156R0

This decision was taken with no negative vote and two abstentions

Decision D10.M10 – Financing of translation and layout of QAISt brochures

The translation of the QAISt brochures will be supported with an amount of € 300,- per language and the new layout resulting from the translation will be financed completely by the SKN. The PDF-Files resulting from this activity will be available at www.solarkeymark.org

This decision was taken with no negative vote and one abstentions

Decision D11.M10 – Global certification – Solar Keymark

Provided there is not clear statement from CEN until the end of 2011 to open Keymark certification for solar thermal products for certification bodies from third countries until the middle of 2012 a separate certification scheme for solar thermal products will be elaborated.

This decision was taken with one negative vote and seven abstentions

The topic related to promotion of Solar Keymark in South America by Jaime Fernández was postponed due to his absence.

Decision D12.M10 – Participation at Solar Keymark network meetings

In case of absence of representatives obliged to participate in the Solar Keymark network meetings they will be informed by the Solar Keymark Secretary that their presence is required.

Furthermore a written statement of the respective body or representative will be requested providing information why he did not participate in the last SKN meeting.

In case of two absences in a row of bodies and representatives obliged to participate in the Solar Keymark network meetings a decision will be made related to require participation at the next meeting and sanctions if this is not the case.

This decision was taken with three negative votes and three abstentions

MEETING 11

Decision D1.M11 – Update of Solar Keymark scheme rules

The Solar Keymark scheme rules as described in document SKN_N0106R13 are accepted with future editorial changes to be made by Jan Erik Nielsen.

This decision was taken unanimously.

Decision D2.M11 – Procedure for considering absorber glazing as equivalent

Note: This procedure applies for thermally toughened safety flat glass only. For all other types of glass, no equivalences can be defined at present, due to a lack of experience

Collector glazing can be considered as equivalent if the following requirements are fulfilled:

1. If material, texture, surface treatment and thickness of the glass remain unchanged,
 - a. the solar transmittance (AM 1.5) shall be measured and documented for both types of glazing. The solar transmittance (AM 1.5) shall not differ by more than ± 1 percentage point from the one of the glass used for the initial Solar Keymark collector test. These measurements shall be not older than 2 years and shall be made by one of the Solar Keymark test labs or by labs accredited for transmittance measurements;and
 - b. if the impact resistance test according to EN12975-2, chapter 5.9 was performed during the initial test, the impact resistance test shall be passed successfully with equal or better result than in the initial test. The tests shall be carried out by a Solar Keymark test lab or at the manufacturing site by a test engineer from a Solar Keymark test lab.
2. If the glass is not identical like described in point 1 above the following additional test has to be done:
 - a. If the thickness of glass is changed, mechanical load and rain penetration has to be tested.
 - b. If the thickness of glass is changed by less than 1 mm no transmittance measurement needs to be done, if no other characteristic of the glazing was changed and if the glass is of the same type and from the same glass manufacturer (e.g. Securit Albarino T from Saint Gobain).
 - c. If texture or surface treatment is changed, the collector performance test incl. IAM has to be done.

Remark: The new test results from collector testing (not glass only testing) have to be documented in an updated test report from accredited test lab according to EN 12975.

This decision was taken with no negative votes and two abstentions

Decision D3.M11 – Validation of annual collector energy output calculation tool

The annual collector energy output calculation tool prepared by Peter Kovacs is considered as validated.

The annual collector energy output calculation tool shall be made available via the Solar Keymark website for download. A closed version will be public available. An open version will be available in the restricted area of the website.

This decision was taken unanimously

Decision D4.M11 – Language of Solar Keymark data sheets

It was decided that the master of future versions of Solar Keymark data sheets shall be in English only. Other languages can be added under the responsibility of the corresponding certification body

This decision was taken unanimously.

Decision D5.M11 – Units used for “Energy” in Solar Keymark data sheets

It was decided that in the future, energy quantities shall be given in kWh.

This decision was taken unanimously.

Decision D6.M11 – Solar Keymark Certification of tracking concentrating collectors

Solar Keymark certification of tracking concentrating collectors is possible, since they are explicitly mentioned in the scope of EN 12975-1 and EN 12975-2.

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 .

This decision was taken unanimously

Decision D7.M11 – First steps towards global certification

The vast majority of the participants present see the need for the establishment of a global certification scheme for solar thermal products.

Hence it was decided to include a topic related to the “elaboration of concept for global certification” in the next call of the Solar Certification Fund (SCF)

This decision was taken unanimously.

Decision D8.M11 – Solar Keymark Network 2012 budget

It was decided that the budget of the Solar Keymark Network (SKN) for 2012 is in total 79.160 € (as stated in document SKN_N0174R0).

In 2012 the SKN fees will kept constant as stated in annex C of the Solar Keymark scheme rules, document SKN_N106R5)

This decision was taken unanimously.

Decision D9.M11 – Solar Certification Fund funding principles related to the financing of TC and WG secretariats and liaison officers

No funding of TC and WG secretariats and liaison officers by the SCF will be provided on a regular basis. Funding of TC and WG secretariats and liaison officers by the SCF is decided on a case by case basis e.g. by including specific topics in the SCF calls.

This decision was taken unanimously.

Decision D10.M11 – Funding of the TC 312 secretariat in 2012

It was decided to launch on October 15, 2011 a exceptional call for funding of the TC 312 secretariat in the period between Dec. 1st, 2011 until Dec. 31st, 2012. Budget 15.000,- € Deadline for proposals October 31st, 2011. The SKN will give the authority to the Solar Certification Fund steering group to make a final decision related to this issue.

This decision was taken unanimously.

Decision D11.M11 – Funding of proposals from the 2nd SCF call

The proposals recommend by the Solar Certification Fund Steering Group for funding as described in document SKN_N0169R0 are accepted and the corresponding activities will be funded.

This decision was taken unanimously.

Decision D12.M11 – Certification of combined solar thermal and heat pump systems

It is a future goal of the Solar Keymark Network to extend its activities as well as the Solar Keymark certification towards combined solar thermal and heat pump systems.

This decision was taken with no negative votes and one abstention

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