Minutes
1. Solar Keymark Network Meeting

Item 1: Opening of the meeting

Uwe Brechlin and Harald Drück, chairman of the Solar Keymark Network, opened the meeting and welcomed the participants.
Uwe Brechlin introduced the Solar Keymark II project and mentioned that in the framework of this project the Solar Keymark Network is established.
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 and the certifiers) working according to the Solar Keymark scheme rules.

The meeting took place on Wednesday, June 21st, 2006
from 14.00 till 17:00 hrs at the Intersolar Trade Fair, Freiburg, Room K10.
The invitation and the agenda of the meeting was sent out by email dated June 8th, 2006. The version of the agenda named "1. Draft Agenda" (File: SK_NW_AG1A 07/06/2006) was accepted by the participants with a small change concerning the order of the items. The final agenda that was agreed on at the beginning of the meeting is included as Annex B.

Item 2: Introduction of participants

The participants were asked to introduce themselves. The list of participants is attached as Annex A.

Experience of certifiers with Solar Keymark certification

In the context of the introduction Mr. Drück asked the representatives from the certifiers to report about their experience with Solar Keymark certification.

Sören Scholz, DIN CERTCO (Germany):
Up to now 60 Solar Keymark (SK) certificates for collectors and systems were issued by DIN CERTCO. In addition to this approx. 25 more certificates are under preparation.
Mr. Scholz is very positive about SK. With regard to the future he would like to see a European round robin test of solar thermal collectors and the translation of the SK certification scheme in other European languages.
He sees the need to find a common agreement on how to handle product changes.
Furthermore a list of frequently asked questions would be helpful. He also expresses the need for a European checklist and mentioned that it is important that all certifiers act in the same way.

Joao Nascimento, CERTIF (Portugal) :
Up to now there are 5 Solar Keymark manufacturers in Portugal and 10 Solar Keymark (SK) certificates were issued by CERTIF.

Giorgos Panaras as representative for ELOT (Greece):
Up to now 3 SK certificates were issued by ELOT. There only exists one national test lab in Greece that is Demokritos.
He mentioned that ELOT is very positive to the Solar Keymark and that there is a national certification scheme in combination with Solar Keymark certification available.
Furthermore he mentioned that at the next meeting of the Solar Keymark Network a representative from ELOT will participate.

Dominique Caccavelli for CSTB (France):
He mentioned that CSTB has their own certification scheme named CSTbat. In 2005 the number of 85 certificates were issued for CSTbat.
CSTB is interested in Solar Keymark certification and wishes to issue also the Solar Keymark certificates in the future.

Peter Kovacs not officially representing SP-certification (Sweden):
He mentioned that SP is empowered to issue SK certificates, but up to now no SK certificates were issued by SP. At the moment SP is considering if they should apply for a new empowerment on the basis of the new version of the European standards (EN 12975 and EN 12976)

Vinood Shama from ENEA (Italy):
He mentioned that an institution named ICIM in Italy is thinking about to apply for an empowerment to issue Solar Keymark certificates.
Note: ENEA is no certification body.

Item 3: Presentation of the Solar Keymark II Project

A short presentation about the Solar Keymark II project is given by Jan Erik Nielsen.
The presentation is included as Annex C. For further information see: www.solarkeymark.org

Item 4: Solar Keymark and CE-Mark

At the last CEN TC 312 meeting at the Canary Islands it was decided to go for CE-Marking for solar collectors provided that several conditions are fulfilled (Resolution 3, CEN/TC312-Gran Canaria, Spain, 2006-04-03 & 04).
Jan Erik Nielsen gave a short presentation about the relation between Solar Keymark and CE marking (see Annex D).
He also presented an indicative time frame for establishing CE-marking and estimated that it will take approximately 7 years until CE-marking of solar thermal collectors on the basis of the Construction Product Directive (CPD) will be obliged.

Item 5: Test reference years

With regard to the performance prediction according to EN 12976 it is essential that all labs use the same weather data. In order to ensure this, it was agreed on the following procedure:

Calculation of check-sum figures:

In order to identify the data set and to ensure that the same data are used check-sum figures have to be calculated (proposal from Peter Kovacs).

The check-sum figures that have to be determined are:
- maximum value
- minimum value
- sum over the year.

For the calculation of these values the data should be imported in a spread sheet programme (e. g. EXCEL) and the values should be determined without using any interpolation algorithms (e. g. for calculation of an annual sum: SUM(B1:B8760)

For the following quantities the check-sum figures mentioned above have to be calculated:
- direct radiation (on 45° tilt angle) [W/m^2]
- diffuse radiation (including ground reflection) on 45° tilt angle) [W/m^2]
- ambient temperature [°C]
- wind speed (optional) [m/s]

Weather data:

It was agreed that with regard to the weather data for specific countries the persons listed below will act as a contact point. On request these persons shall supply weather data that are not protected with any copyright.

Sweden:	Ulrik Pettersson / Peter Kovacs (SP)
Germany:	Harald Drück (ITW)
Denmark:	Jan Erik Nielsen (SolarKey)
Spain:	Pilar Navarro Rivero (ITC)
Austria:	Josef Buchinger (arsenal)
Greece:	Emmanouil Mathioulakis, Giorgos Panaras (Demokritos)
Italy:	Vinood Shama (ENEA)
Poland:	Marian Gryciuk (ECBREC)
Portugal:	Maria Carvalho (INETI)
France:	Dominique Caccavelli (CSTB)

The data should be delivered as hourly values and including the following quantities:
- direct radiation on 45° tilt angle [W/m^2]
- diffuse radiation (including ground reflection) on 45° tilt angle [W/m^2]
- ambient temperature [°C]
- wind speed (optional) [m/s]

TO DO: It was decided that these persons are responsible to send the check-sum figures (procedure for calculation of check-sum figures see above) for *their* weather data to Harald Drück (Email: drueck@itw.uni-stuttgart.de) until the end of August 2006.

Furthermore it was agreed that during the revision of the Solar Keymark scheme rules it should be stated in the revised version of the scheme rules that the check-sum figures of the weather used for the performance prediction shall be included in the test report.

Item 6: Revision of standards EN 12975, EN 12976 and ENV 12977

The revised version of EN 12975 is already available and the revised version of EN 12976 will be available quite soon.
With regard to the revision Harald Drück asked the representatives for the test labs when they intent to perform tests according to the revised version of the standards. The following answers were given:

INETI already performs tests and issues test certificates according to the revised version.

ENEA will in the coming month perform tests and issue test certificates according to the revised version

ITC mentioned that within 2,5 months the corresponding national standards will be available. If this is the case, then tests will be performed and test certificates will be issued according to the revised version of the standards.

Demokritos: Tests according to the revised version will be carried out from September 06.

ISE: New acquisitions will be tested according to the revised version of the standards.

arsenal: New acquisitions will be tested according to the revised version of the standards.

Consequences resulting from the revision of the standards:

According to Jan Erik Nielsen CCB requires that the certifiers and the test labs have to renew their accreditation based on the revised version of the standards.

Resulting from this the test labs and certifiers are recommended to inform their accreditation body that the standards are revised and ask them about the consequences.

According to Sören Scholz the certifiers are obliged to inform their test labs about the revised version of the standards. The test labs have to get from the accreditation body within one year a confirmation that their accreditation is still valid. As a consequence of this, also Solar Keymark certificates issued on the basis of the old version of the standards are still valid.

Decision – 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

Decision – 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

Decision – 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.

Item 7: Solar Keymark factory inspection check list

The aim is to agree on a common check list.

TO DO: As a basis for this it was agreed that all certifiers send their factory inspection check list in English language to
Mr. Stephan Fischer (Email: fischer@itw.uni-stuttgar.de).
Deadline. August 31st, 2006.

In conjunction with the next Solar Keymark Network meeting a special session related to the elaboration of a common checklist will be foreseen.

Item 8: Any other business

Nothing reportable was discussed related to any other business

Item 9: Date and place of next meeting

It was decided that the next meeting will take place in conjunction with the next Solar Keymark II Project meeting. In addition to the “core” Solar Keymark Network Meeting there will be a separate session related to the elaboration of a common check list for factory inspection.

Date for next Solar Keymark Network Meeting:

Feb. 15th, 2007 from 14:00 hrs to 18:00 hrs at Paris

Date for special “check list session”:

Feb. 16th, 2007 from 9:00 hrs to 12:00 hrs at Paris

Item 10: End of meeting

Harald Drück thanked the participants for attending the meeting and for their constructive contributions. He closed the meeting at 17:20 hrs.

The minutes were prepared by Harald Drück (Chairman of the Solar Keymark Network)
Stuttgart, July 19th, 2006

Contact address:
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70550 Stuttgart, Germany
Email: **drueck@itw.uni-stuttgart.de**

Annex A: List of participants

SOLAR KEYMARK NETWORK

1ST MEETING, FREIBURG JUNE 21ST 2006

NAME	ORGANISATION	SIGNATURE
Giorgos Panaras	DEMOKRITOS / ELOT (Greece)	
Josef Buchinger	arsenal (Austria)	
Marian Gryciuk	ECBREC/CLN (Poland)	
Pilar Navarro Rivero	ITC (Spain)	
Peter Kovacs	SP (Sweden)	
Uwe Brechlin	ESTIF (Belgium)	
Jan Erik Nielsen	SolarKey (Denmark)	
Harald Drück	ITW (Germany)	
Dominique Caccavelli	CSTB (France)	
David Matthews	ESTIF (Belgium)	
Maria Carvalho	INETI (Portugal)	
Sören Scholz	DINCERTCO (Germany)	
Shama	ENEA (Italy)	

Tomas Hruska	Engineering Test Institute (Czech Republic)	
? JOÃO NASCIMENTO	CERTIF (Portugal)	jnascimento@certif.pt
Korbinian Kramer	Fraunhofer ISE	korbinian.kramer@ise.fraunhofer.de

Annex B: Final agenda

Solar Keymark Network

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

1. Solar Keymark Network Meeting

Wednesday, June 21st, 2006 14.00- 17:00 hrs
Intersolar Trade Fair, Freiburg, Room K10

Final Agenda

Item	Content
1	Opening of the meeting Harald Drück (ITW)
2	Introduction of participants *Short presentation of the Certifiers (including mentioning the accepted solar test labs and inspectors)*
3	Presentation of the Solar Keymark II Project Jan Erik Nielsen, SolarKey Int., ESTIF consultant
4	Solar Keymark and CE-mark
5	Test reference years for performance prediction acc. to EN 12976 *How to ensure that all labs use the same data?*
6	Revision of standards EN 12975, EN 12976 and ENV 12977 with regard to the Solar Keymark
7	Solar Keymark factory inspection check list *Agreement on a common check list*
8	Any other business
9	Date and place of next meeting
10	End of meeting

Information how to reach Intersolar can be found at: **www.intersolar.de**

Contact adress:
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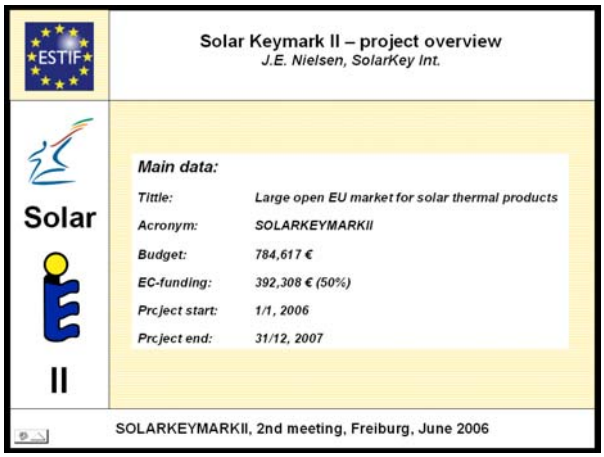
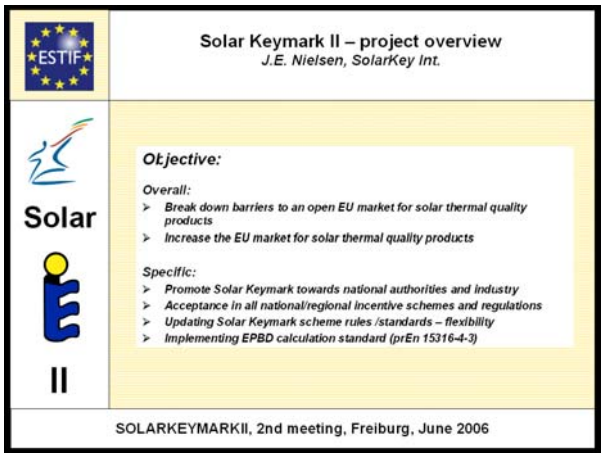
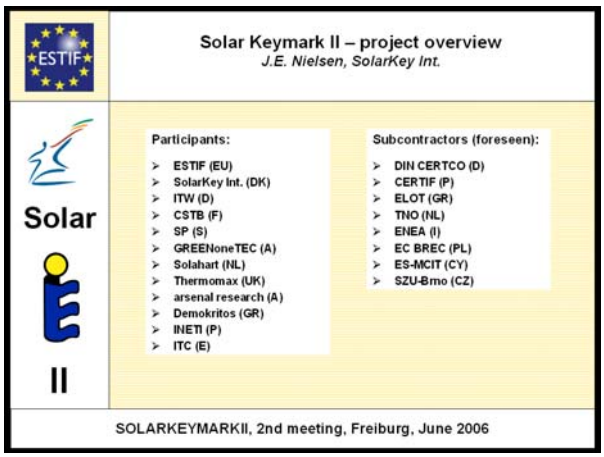
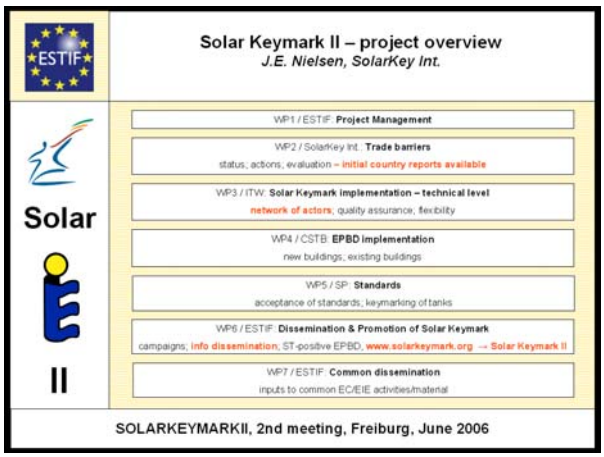
ITW, Stuttgart University
Pfaffenwaldring 6
70550 Stuttgart, Germany
Email: drueck@itw.uni-stuttgart.de

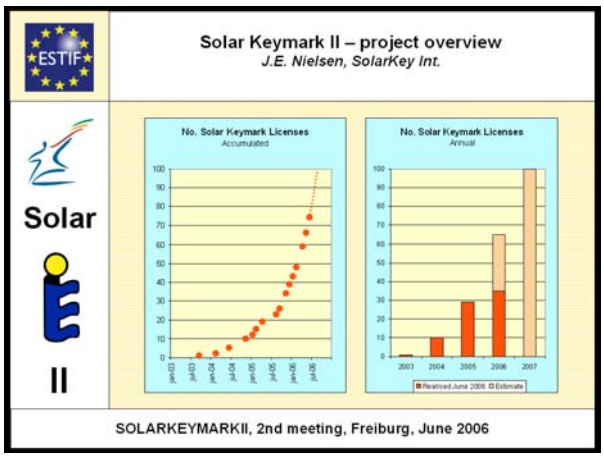
Annex C: Presentation of Solar Keymark II project











Annex D: Presentation related to CE-Marking