



Solar Keymark



Jan Erik Nielsen

Head of Dept., M.Sc.

> 25 years experience with solar thermal:

- Test procedures & Standards: ISO, EN
- Certification schemes: **Solar Keymark**
- LARGE solar systems
- ESTIF Technical Consultant
- Software / optimization of components and systems
- Project management



PlanEnergi

Danish independent consultancy firm

- renewable energy (incl. large scale solar thermal)
- environmental issues
- sustainable systems
- energy planning
- technology transfer.

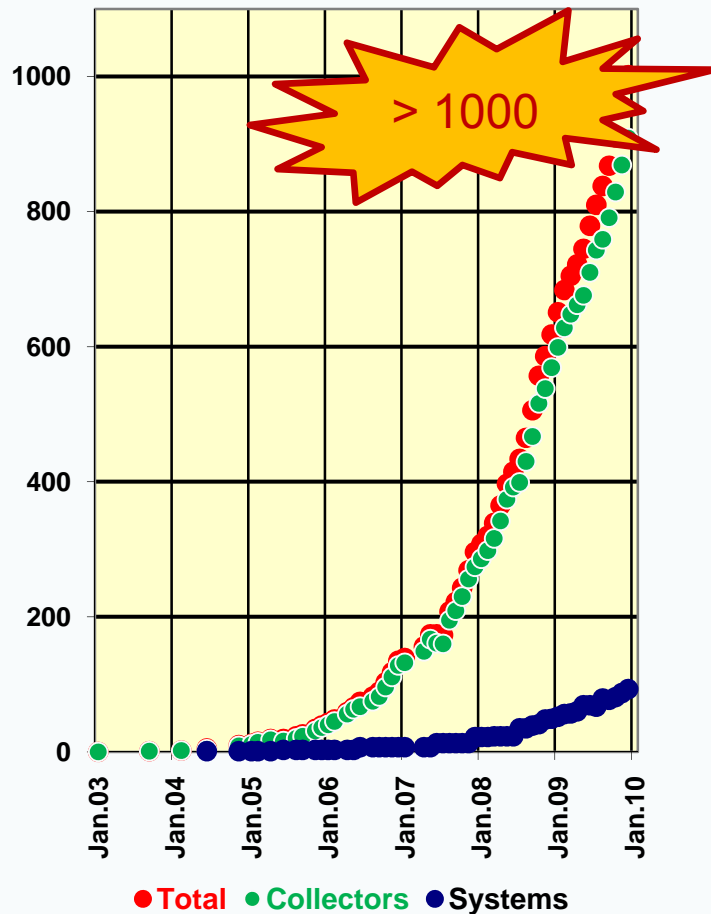
Established 1983. 15 people. Three offices in Denmark.



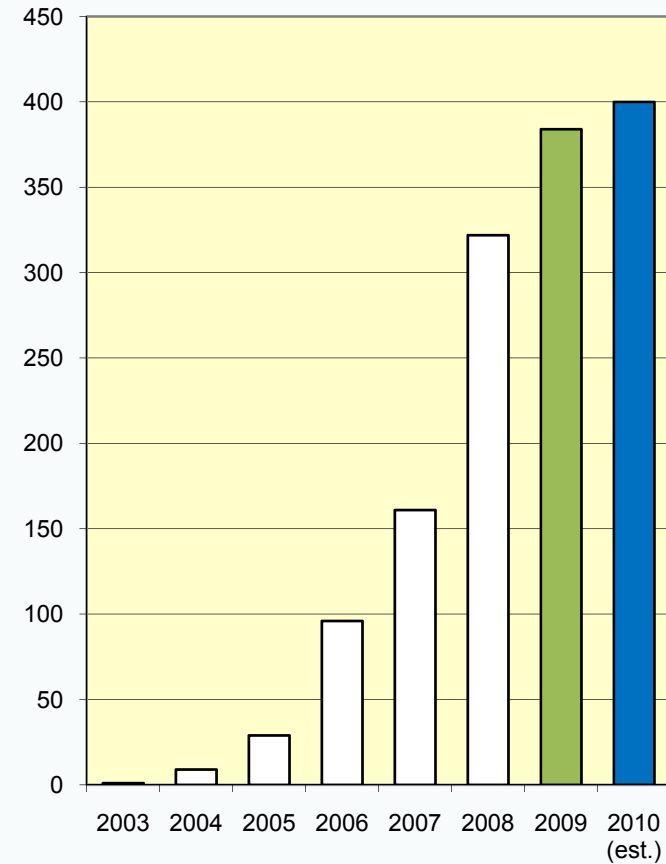
Solar Keymark



No. Solar Keymark Licenses



No. Solar Keymark Licenses New licences per year





Solar Keymark



Solar Keymark Foundation

Reduced fees to CEN

Increased fees to Solar
Keymark Network

Establish Solar
Keymark Foundation



Solar Keymark



Solar Keymark Foundation

- for funding Solar Keymark related activities/projects á la:

Promotion of Solar Keymark

- Brochures
- Events
- ...

Maintenance & development of Solar Keymark

- Increased flexibility (exchange of components)
- Increased security (round robin tests / spot checks)
- Increased harmonisation
- Including new products
- ...

Maintenance & development of Solar Keymark basis: EN standards

- Better standards
- Including new products
- ...

Global certification ?

- Make Solar Keymark useable/available outside Europe



Solar Keymark



Solar Keymark Foundation

Annual funding i €





Solar Keymark



Solar Keymark Foundation

Management

- To be decided at the next Solar Keymark meeting in March

Call for projects

- To be out quickly after next meeting

Applications for funding of projects

- Deadline maybe before summer

Final decision on funding of projects:

- Solar Keymark Network meeting October 2010



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Solar Keymark Flexibility

Collectors

Different sizes:

- ✓ Procedure

Exchange of absorber coatings:

- ✓ Procedure to evaluate coatings
- ✓ List of equivalent coatings
- ✓ List is expanding

Exchange of glass:

- ✓ Procedure to evaluate glass
- List ...

Exchange of insulation:

- Procedure ...

PV/T collectors:

- ✓ Procedure made



Solar Keymark



Solar Keymark Flexibility

Systems

Different sizes:

✓ Procedure established

Exchange of the collector in a certified system:

✓ Procedure established



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What is Solar Keymark and how to get it



SOLAR KEYMARK :

- ❑ REDUCES ADMIN & TESTING COST
- ❑ INCREASES SALES OPPORTUNITIES
- ❑ PROVIDES ACCESS TO EU MARKET
- ❑ ENCOURAGES GROWTH OF MARKET
- ❑ PROVIDES CERTIFIED PRODUCT QUALITY

FAST BECOMING THE "DE FACTO"
EUROPEAN SOLAR THERMAL MARK

WWW.SOLARKEYMARK.ORG

SOLAR KEYMARK



Solar Keymark



What is Solar Keymark and how to get it

Solar Keymark is the first internationally recognised quality mark for solar thermal products. It is based on three issues:

- ❑ Initial type testing to EN 12975 or
- ❑ An implemented manufacturing Q
- ❑ Annual review of QMS and bi-annu

Obtaining the Solar Keymark Requirements:

- ❑ Factory product selection for type testing by Test Laboratory inspector
- ❑ Collector/System type test at Test Laboratory to EN 12975/76
- ❑ Inspection of manufacturing Quality Management System

Maintaining the Solar Keymark Requirements:

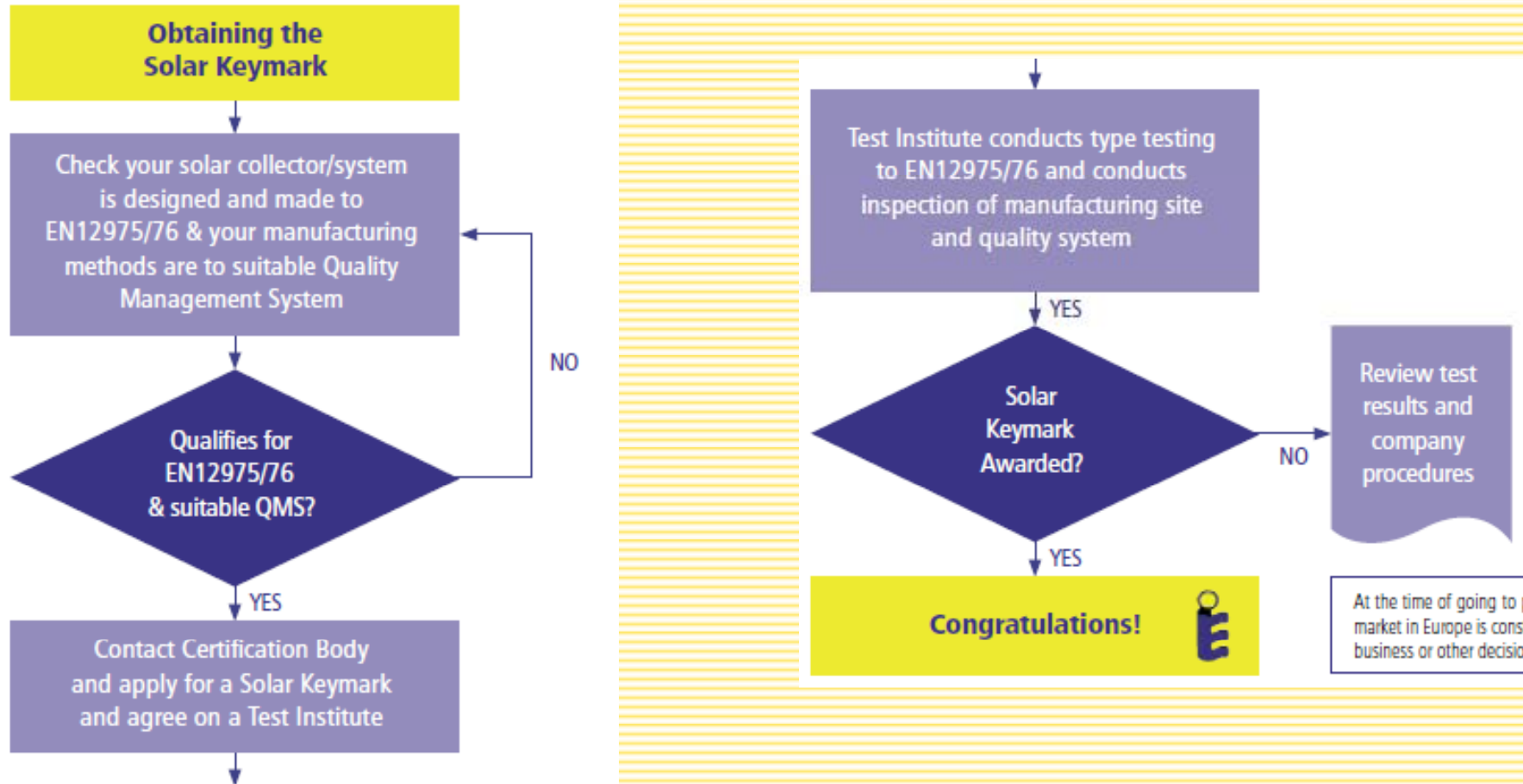
- ❑ Annual check of manufacturing Quality Management System documentation
- ❑ Every 2 years, physical inspection of Keymarked product selected from production or stock by Test Laboratory inspector



Solar Keymark



What is Solar Keymark and how to get it





Solar Keymark



What is Solar Keymark and how to get it

Indicative Cost of Solar Keymark

Certification costs for one collector/system:

- First year costs approx: € 2000-3000
- Annual costs following years approx: € 2000

This includes CEN fee & audits/inspections but excludes type testing n.b. reduced prices for collector sub types

Testing costs: € 5 000 – 10 000



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Solar Keymark Problems

The goal:

- ☺ **Show Keymark and be eligible in all EU member state's regulations and subsidy schemes**

Not 100 % reached; add-on requirements in:

- ❖ Germany, 525 kWh/m²
- ❖ Spain, ISO 9001
- ❖ UK, Eire, fire safety, tightness ... - extra testing !
- ❖ France, CSTBat (required by insurance companies) ... - extra testing !
- ❖ Hungary, check of (papers on) installation (load on fixings)
- ❖ Austria?
- ❖ Denmark, 5 year warranty



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CE-marking



Solar thermal collectors in buildings

Characteristics to be covered by the harmonised standard will be :

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

? – reply from EC pending



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Keymark & CE-mark

CE CE-mark covers harmonized part of new EN 12975:

- safety
- structural load
- tightness



Keymark covers the rest of the new EN 12975:

- durability/reliability
- performance

? – reply from EC still pending

Time schedule for CE-marking: 1-3 years ?



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Thank you for your attention !

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