QAiST

Quality Assurance in Solar Heating and Cooling Technology

Quality Assurance in Solar Heating and Cooling Technology (QAiST)

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Intelligent Energy Europe

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Project summary

- The practical approach to quality assurance in solar thermal heating and cooling technology with regards to components and systems is standardisation and testing.
- Good, operational and generally accepted European Standards are an essential part of the market conditions and the basis for a large and open European market. Standards and pre-Standards are established, but work is still needed in order to keep track with recent technological developments in the direct use of solar thermal energy (i.e. new materials, concentrating devices, etc.) and in combination with other technologies (cooling, heat pumps, etc.).
- New Member States also bring new opportunities to market development. It is essential that the quality requirements, as well as the public incentives and regulations for solar thermal technologies that rely on them, integrate the current best practices.
- To open the world market for European producers, coordination with activities in the international standardisation is required. It is the right time now that sufficient experience with the certification process has been gained and the EN 12975 [1] and the CEN/TS 12977 [3] series of product standards are being revised.

Work programme

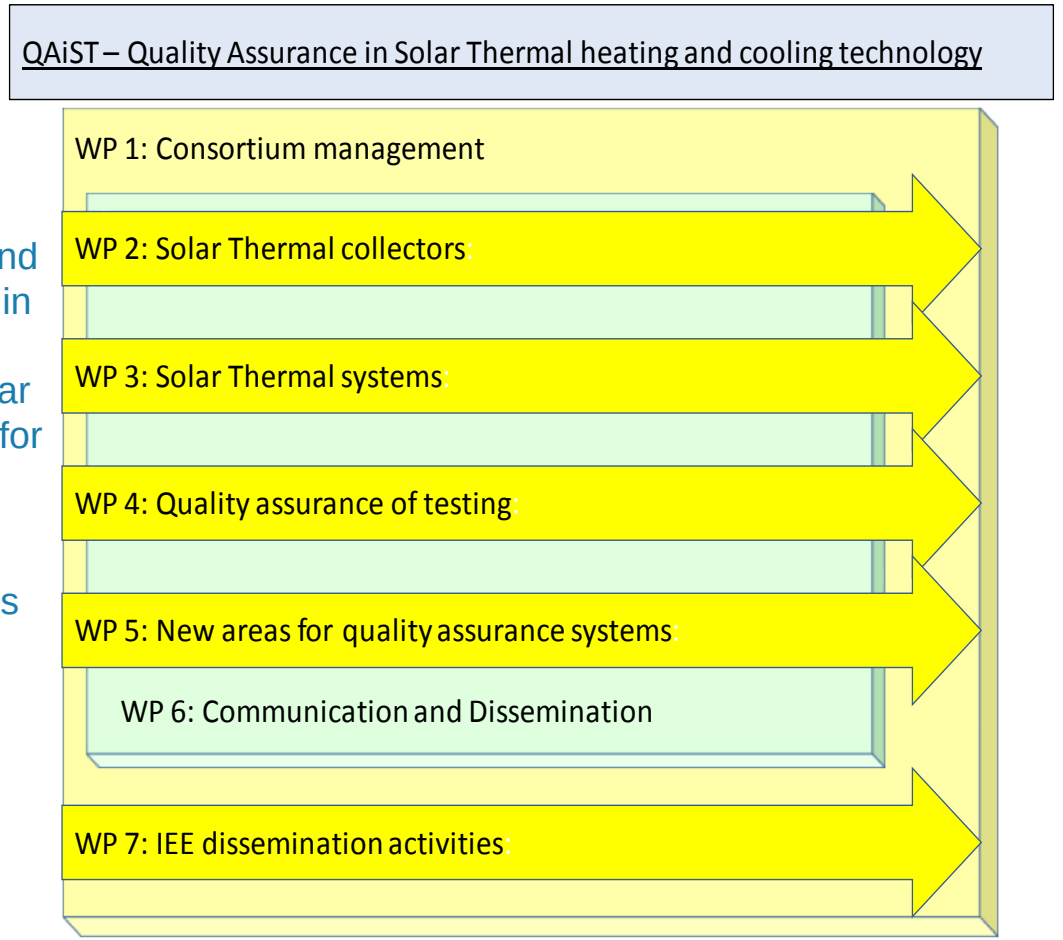
The work in the proposed project is structured in 7 work packages.

WP 1 is for the management of the consortium.

Basic work on standards, procedures and other accompanying measures is done in the WP 2, 3 and 5 as they are dealing with solar thermal collectors (WP2), solar thermal systems (WP3) and new fields for standardisation (WP5).

In WP 4 a very important European quality label for solar thermal products is maintained and enhanced – the Solar Keymark.

In WP 6 all the relevant activities regarding information exchange with national, European and international stakeholders are included.



Speficic tasks of the QAiST project

- Active participation in the revision of EN 12975, including scientific support to the implementation of revision aspects related to new developing products at short and medium term, in order that the standard is not a barrier to development of new technologies
- Development of aspects related to solar thermal systems (factory made and custom built) and adaptation of calculation procedures to Energy Labelling according to Mandate 324
- Giving continuity to the Solar Keymark activities, namely the Solar Keymark Network of laboratories and certification bodies
- Extending Solar Keymark certification activities to new products, actors and countries within Europe
- Strengthening the quality assurance on laboratory tests through inter laboratory comparisons (Round Robin) and development of guidelines and checklists
- Identification of need for standardisation for solar thermal systems in association with heat pumps and cooling machines

Major expected output and results

- Clarification on durability and reliability requirements in the existing European standards for solar thermal products
- Continued assured quality of testing laboratories
- Harmonised approach on Function & Yield Control for large solar thermal systems
- Reduced testing costs for solar domestic hot water systems being part of a common “system family”

Long term objective and ultimate goals

- The long term objective of the QAiST project is to prepare the quality assurance framework so that the European solar thermal heating and cooling industry can sustainably contribute to the targets agreed by the Member states (20% of renewable energy by 2020) and become a technological world leader.
- The ultimate goals for longer term are:
  - Speeding-up of broad market penetration of solar thermal products through the removal of trade barriers and the general acceptance of the Solar Keymark
  - Increasing the share of quality products in the solar thermal market
  - Increasing the uptake of new technologies and encourage new collector and system designs and materials

Project consortium

- Coordinator: ESTIF, Belgium

- Partners:

CENER, Spain
CSTB, France
DEMOKRITOS, Greece
AIT, Austria
LNEG/INETI, Portugal
IPIEO, Poland
ISE, Germany
ISFH, Germany
ITC, Spain
IZES, Germany
PlanEnergi, Denmark
SP, Sweden
TÜV Germany
USTUTT-ITW, Germany

Any questions?

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