

Task 53 

IEA-SHC Task 53

Subtask C Testing and demonstration projects

Workshop 6th International conference Solar air-conditioning, Rome



Richard Thygesen
September 23st 2015





General objective of subtask C

Task 53

- Stimulate, monitor and analyze performance of field test and demonstration projects for next generation solar cooling and heating system



Source: Climatewell



Actively engaged organizations in subtask C

Task 53 

AEE Institut für Nachhaltige Technologien (INTEC)
(Activity leader C1 and C3)

AIT Austrian Institute of Technology GmbH

Mälardalen University

TECSOL SA (Shared activity leader C5)

Universidad Miguel Hernández de Elche
(Activity leader C2 and C4)

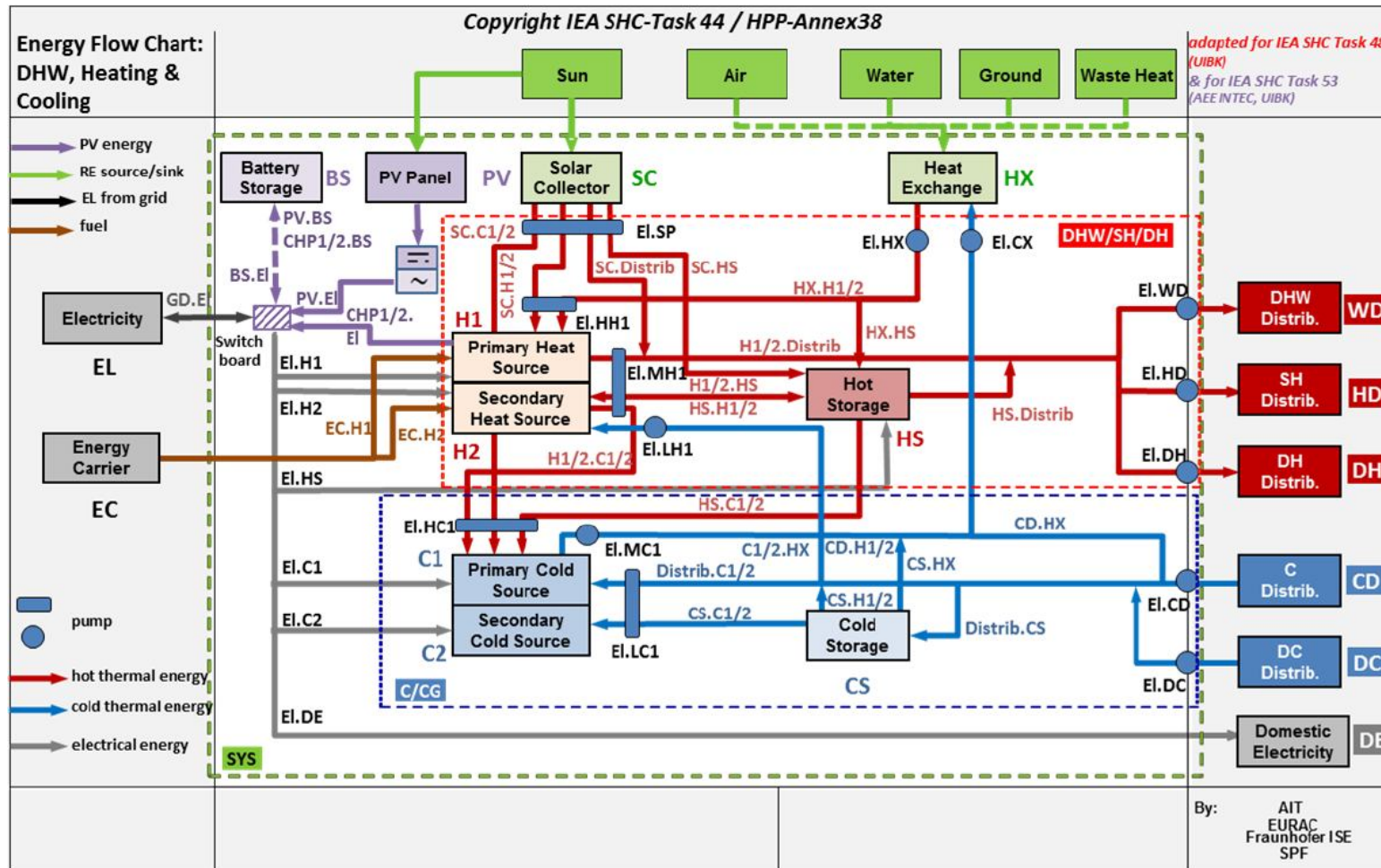
University of Innsbruck



First results

Task 53

Monitoring procedure and monitoring system selection criteria





First results (contd.)

Task 53 

Monitoring procedure and monitoring system selection criteria

- Partial results from this activity is presented in a poster at the conference the 24th of September 15:20

Adapted Monitoring procedure for New Generation Solar Cooling & Heating Systems

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First results (contd.)

Task 53

System description for field test and demo projects

- A template for description of the systems have been produced and sent out to the industry.
- A number of systems sent in by industry and other parties will be chosen for monitoring and analysis.

Please be as detailed as possible when filling in this survey.

Send the completed document to:

Pedro G. Vicente Quiles: pedro.vicente@umh.es

With a copy to:

Richard Thygesen: richard.thygesen@mdh.se

General data	
Country:	Specify in which country the plant is located
City / region:	Specify in which city and region the plant is located
Company:	Specify the owner company
Year of completion:	Specify the year of completion or planned year
Type of application:	specify the application, eg. cooling/heating of offices, residentials, food preservation etc.
Photovoltaic energy technology	
PV modules:	Specify PV installed peak power and type
Orientation/inclin:	Specify PV orientation (east=90) and inclination (horizontal= 0)
Voltage:	Specify system voltage and if and inverter to a.c. is employed
Compressor driven heating/cooling	
Characteristics	Specify the number of units and the system (air/air, air/water, ...)
Heating	Nominal capacity, electrical consumption and COP
Cooling	Nominal capacity, electrical consumption and EER
Manufacturer	Nominal capacity, electrical consumption and COP
Energy storage systems	
Heat storage tank	Specify number of storage tanks and their corresponding volume
Electric storage	Specify number of storage units and their corresponding capacity (Ah or kWh)
Other technologies	Specify type of technology and storage capacity

- If you have a suggestion for a potential new generation solar heating and/or cooling system please contact *Pedro G. Vicente Quiles, pedro.vicente@umh.es*



Future work

Task 53

- Monitoring data analysis on technical issues & on performances

the selected NG SHC systems will be monitored and the data will be analyzed with regards to performance technical issues occurring

- Best practices / feedback

make a synthesis of the practical work of this subtask by producing a Best Practice document.

- Testing method initiation for standards

This activity will make first an analysis of the results produced by the other Tasks on this topic so as to see how to select among existing proposals or properly develop a new way of testing performances.



Thank You!

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