

4th expert meeting

IEA SHC Task 53

New Generation Solar Cooling & Heating Systems (PV or solar thermally driven systems)

Eurac main building, Viale Druso, 1, Bolzano (Italy)

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Meeting Agenda – Final Version

Monday September 21st, 2015, 9:00am – 17:00pm

Tuesday September 22nd, 2015, 9:00am – 16:00am

Task 53 website : <http://task53.iea-shc.org/>

Participation fee:

Registration fee is determined based on different activities (including dinner, lunch, and Coffee break, et al).

The amount is 100 EURO + VAT and the registration process is managed by EURAC.

Please fill in the Excel form and send it by email to both Roberto Fedrizzi (roberto.fedrizzi@eurac.edu) and Laura Scafidi (Laura.Scafidi@eurac.edu). They will organize the invoice and the payment (Bank transfer, NO CASH possible) with you directly.

Logistics special matters:

Specific tips are given in Annex 2 to join and stay in Bolzano.

The 4th expert meeting is ending on 22/09 at 4pm so as to permit Task 53 to join Roma and the 6th OTTI conference in the late afternoon by train (see Annex 3). A night at Roma city center is advised so as to join the OTTI conference place (Fiumicino airport) on 23/09 morning and take part to the OTTI Special SHC Task 53 workshop which will take place at Leonardo Da Vinci Hotel from 14.00 to 17.30

Special Task 53 workshop before 6th OTTI conference on solar cooling in Roma on 23/09 : see Annex4

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Day 1 - Agenda for Monday September 21st, 2015 (9:00pm-17:00pm)

1st block : Plenary

09.00-09.15	Welcome and Organisational issues	Daniel Mugnier Roberto Fedrizzi	TECSOL EURAC
09.15-09.30	Welcome, Introduction, Structure of the meeting Presentation of new participants/observers (SPF, Velasolaris)	Daniel Mugnier New attendees	TECSOL
09.30-10:00	Subtask A : Goals, structures, deliverables <i>Components, Systems & Quality</i>	Tim Selke	AIT
10.00-10:30	Subtask B : Goals, structures, deliverables <i>Control, Simulation & Design</i>	Robert Fedrizzi	EURAC
10.30- 10:45	Coffee Break		
10.45-11:15	Subtask C : Goals, structures, deliverables <i>Testing and demonstration projects</i>	Richard Thygesen	MDH Uni
11.15-11:30	Subtask D : Goals, structures, deliverables <i>Dissemination & market deployment</i>	Daniel Mugnier	TECSOL

12.00-13:30 Lunch Break at EURAC

2nd Block : Latest developments & results session

13.30-13.40	New Austrian project on Façade cooling : Coolskin	Tim Selke	AIT
13.40-13.50	TRNSYS simulation of an inverter heat pump driven simultaneously by the grid and PV panels	Pedro Vicente Quiles	UMH
13.50-14.00	The use of batteries in a domestic hot water heat pump driven by PV panels	Pedro Vicente Quiles	UMH
14.00-14.10	Adapted Monitoring procedure for New Generation Solar Cooling & Heating Systems	Bettina Nocke	AEE INTEC
14.10-14.25	Performance of a generic PV + HP system	Chiara Dipasquale	EURAC
14.25-14.40	Simulation study of façade integrated PV and cooling.	Andreas Witzig	VELASOLARIS
14.40-14.50	SPF PV cooling facility	Lukas Omkin	SPF

14:50- 15:15 Coffee Break

3rd Block : Working groups session 1 :

15:15-15:30 Organization of Group discussions on Work Package level (5-6 people max per item) Daniel Mugnier TECSOL

15:30-17:30 Meeting in parallel on Working groups level; Suggested topics are:

*** Subtask A :**

A1. Reference systems (AIT) / A2. New generation systems configurations (TECSOL)

*** Subtask B :**

B1/B3. Reference conditions & Models (EURAC) / B2. Grid access conditions and building load management analysis (AIT)

End of the working Day 1

Dinner: Restaurant at 19:00 PM

Agenda for Tuesday 22nd of September 2015 (9:00am-16:00am)

4th Block : Working groups session 2 :

09:00-09:15 Organization of Group discussions on Work Package level (5-6 people max per item) Daniel Mugnier TECSOL

09:15-11:15 Meeting in parallel on Working groups level; Suggested topics are:

*** Subtask A :**

A3. Storage concepts & management (HEFR) / A5: LCA and techno-eco comparison between reference and new systems (DREAM)

*** Subtask C :**

C1: Monitoring procedure and monitoring system selection criteria (AEE Intec)
C2: System description for field test and demo project (UMH)

11:15- 11:30 Coffee Break

11:30- 12:30 Technical tour at EURAC for visiting labs and test facilities

12.30-14:00 Lunch Break at EURAC

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4th Block : Plenary & overall – Room XX

14.00-14.30	Subtask A : Report on working group items; planning of next steps; distribution of work; action items	Tim Selke	AIT
14.30 -15.00	Subtask B : Report on working group items; planning of next steps; distribution of work; action items	Roberto Fedrizzi	EURAC
15.00-15.30	Subtask C : Report on working group items; planning of next steps; distribution of work; action items	Richard Thygesen	MDH
15.30-15.45	Subtask D : Report on working group items; planning of next steps; distribution of work; action items	Daniel Mugnier	TECSOL
15.45-16.00	General items, next meetings, miscellaneous	Daniel Mugnier	TECSOL
16:00 End of Task 4 th expert meeting			

16.00-22.00 Transfer by train from Bolzano to Roma (central station)
(details, see Annex 3)

Agenda for Wednesday 23rd of September 2015

Workshop on The New Generation Solar Cooling & Heating Systems (PV or solar thermally driven systems) / IEA SHC Task 53

**Leonardo da Vinci Hotel Rome Airport Hotel,
Wednesday, September 23, 2015, 14.00 – 17.30 hrs**

Seminar Chairman: Dr. Daniel Mugnier, Operating Agent, IEA SHC Task 53

Whereas renewable cooling is more and more an hot topic in the World energy issues, a new generation of solar cooling systems is appearing from labs and in the market. Consisting both in solar thermal or photovoltaic, the concepts are oriented to cost reduction and reliability. A new IEA Solar Heating and Cooling programme name Task 53 is exactly addressing this New generation.

Programme:

General presentation of Task 53 and first results

- Introduction (Daniel Mugnier, TECSOL, France)
- Subtask A: Components, systems and quality (Tim Selke, AIT, Austria)
- Subtask B: Control, simulation and design (Roberto Fedrizzi, EURAC, Italy)
- Subtask C: Market support measures (Richard Thygesen, Mälardalen University, Sweden)

Presentation of latest ongoing results and developments among Industry

- Compact small solar Desiccant Cooling system (Pietro Finochiaro, Frescoo, Italy)
- PV reversible heat pump (E.L Niederhauser, HEF)
- PV cooling concept (Philippe Esparcieux, ATISYS, France)

Coffee break

- Large scale solar cooling concept (Wei Zheng, YAZAKI, Japan)
- Small solar thermal cooling machine (Henk De Beijer, SOLABCOOL, Netherlands)
- PV cooling and PV DHW R&D (Pedro Quiles, UMH, Spain)

Future of the New Generation of Solar cooling systems: which barriers?

- PV versus cooling and self consumption challenges IEA PVPS Task 1 operation agent (Gaetan Masson)
- Discussion on the barriers for the development of solar cooling

This workshop can only be attended by participants of the 6th International Conference on Solar Air-Conditioning. The admission to the Workshop therefore is free of charge.

Please register via: <http://www.otti.eu/registration/SAC-4880/>

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Annex 1: Meeting Participant list

No.	Name	Institute	Country	e-mail
1	Daniel Mugnier	TECSOL	France	daniel.mugnier@tecsol.fr
2	Richard Thygesen	MDH	Sweden	richard.thygesen@mdh.se
3	Pedro Vicente Quiles	UMH	Spain	pedro.vicente@umh.es
4	Bettina Nocke	AEE INTEC	Austria	b.nocke@aee.at
5	Tim Selke	AIT	Austria	tim.selke@ait.ac.at
6	Roberto Fedrizzi	EURAC	Italy	roberto.fedrizzi@eurac.edu
7	Antonio Paone	HEF	Switzerland	
8	Alexander Thür	UIBK	Austria	alexander.thuer@uibk.ac.at
9	Andreas Witzig	VELASOLARIS	Switzerland	andreas.witzig@velasolaris.com
10	Salvatore Vasta	CNR ITAE	Italy	salvatore.vasta@itae.cnr.it
11	Philip Horn	AIT	Austria	
12	Pietro Finocchiaro	UNIPA	Italy	
13	Lukas Omlin	SPF	Switzerland	Lukas.Omlin@spf.ch
14	Roberto Fedrizzi	EURAC	Italy	

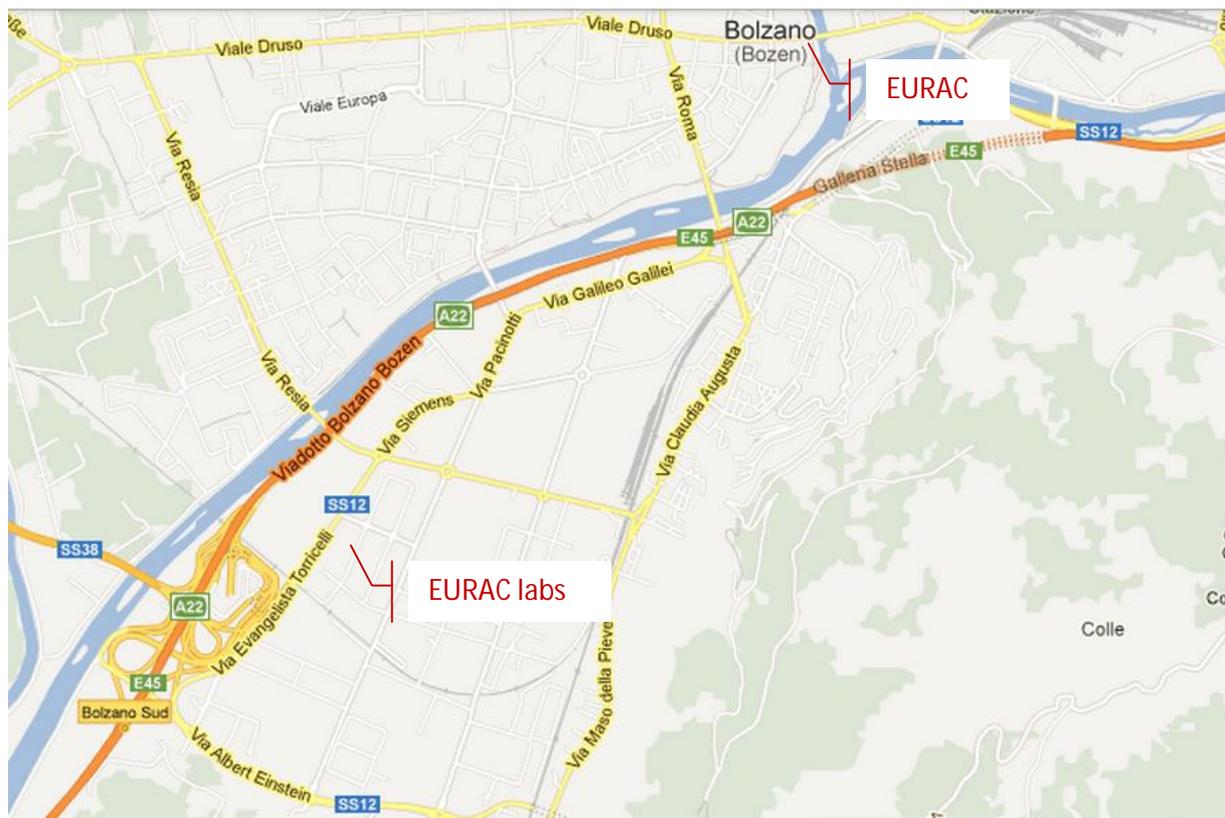
Annex 2: LOGISTICS FOR THE MEETING

Arrival to Bolzano:

By Plane: The international airports of Verona and Innsbruck are the closest ones. An airport is also present in Bolzano with direct connections only to Rome twice a day. From the airport, you can catch a taxi or a shuttle bus to the city center.

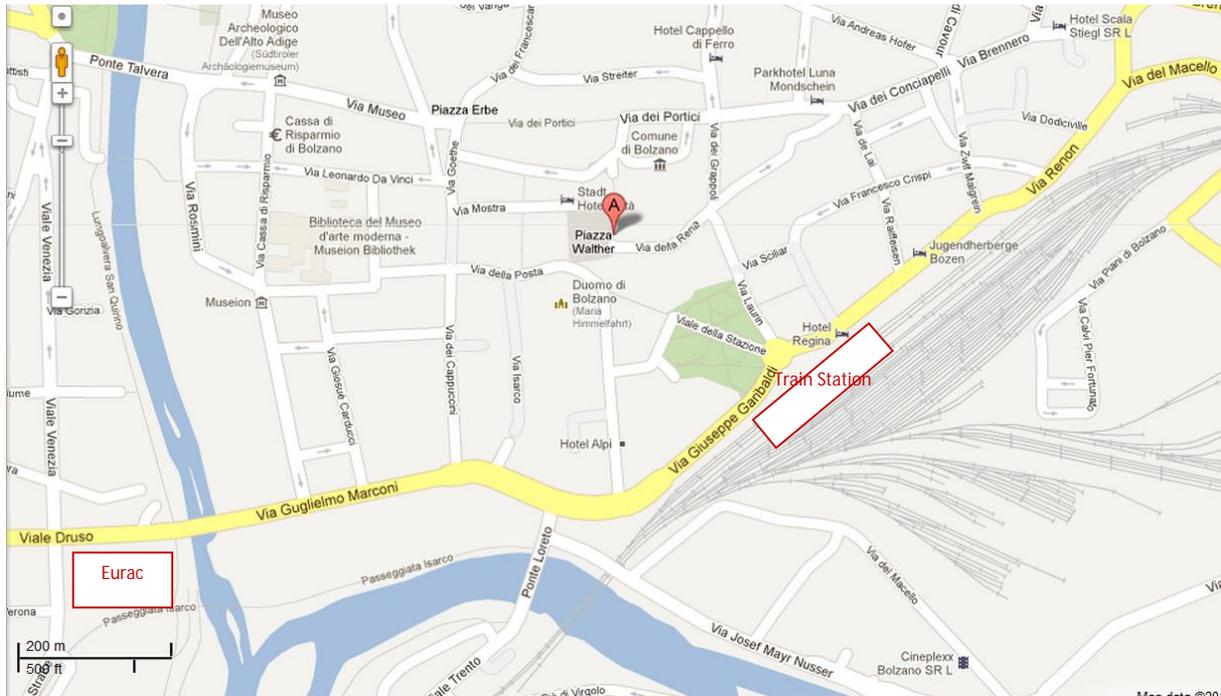
By car: arriving via the "A22-E45" Brennero motorway, either exit "Bolzano Sud" or "Bolzano Nord" (they are equally spaced from the city center), and follow the indication to city center, which is located about 1.5 km from the motorway exit.

By train: The main railway station is located directly next to the city center. Fast trains (FRECCIA ARGENTO, <http://www.trenitalia.com/>) connect both Verona (1.5 hours) and Rome (4.5 hours) to Bolzano. Direct trains are also available from Innsbruck.



Arrival to the meeting place:

The meeting will be held at Eurac main building (Viale Druso, 1) located at walking distance from the city center (point A in the map) and from the train station. At the reception you will find information regarding the meeting room.



Suggested hotels and restaurants:

We usually suggest our guests the following hotels located downtown:

- Parkhotel Luna Mondschein, Via Piave 15
- Hotel Laurin, Via Laurin 4
- Hotel Scala - Via Brennero, 11
- Stadt Hotel Città – Piazza Walter 21
- Hotel Post Gries - Corso Libertá 117 (around 1 km from the city center).

A list of restaurants in Bolzano is in the attached document.



RESTAURANTS

1 Casa al Torchio / Torgglhaus

Museumstraße / Via Museo, 2
0471 978109
Italian cuisine, Pizzeria

2 La Torcia

Via dei Conciapelli / Gerbergasse, 25
0471 973236 0471 981099
Mediterranean cuisine, Pizzeria

3 Osteria Ca' de Bezzi/Batzenhäusl

Andreas Hofer Str./ Via Andreas Hofer, 30
0471 050950
Typical cuisine

4 Nadamas

Piazza delle Erbe / Obstplatz, 44
0471 980684
Italian cuisine, ethnic cuisine (Thai, Marocco, Greece)

5 Forsterbräu Central

Via Goethe / Goethestraße, 6
0471 977243
Typical cuisine

6 Hopfen

Piazza delle Erbe / Obstplatz, 17
0471 300788
Typical cuisine

7 Walther's

Piazza Walther / Waltherplatz, 6
0471 982548
Italian cuisine

8 Zenzero

Via Museo / Museumstraße, 15
0471 301966
Mediterranean, Thai cuisine

9 Bamboo Bar

Via Isarco / Eisackstraße, 3
0471 050358
Sushi, Asiatic cuisine

10 Vögele

Via Goethe / Goethestraße, 3
0471 973938
Typical cuisine

Annex 3 : Transfer from Bolzano to Roma (by train) on Tuesday 22/09 evening

Using TRENITALIA (<http://www.trenitalia.com/tcom-en>), it is possible to transit easily from Bolzano to Roma

Departure	Arrival	Duration	Train	Offer	Price
Departure	Arrival	Duration	Train		Price
17:11 Bolzano Bozen	21:40 Roma Termini	04:29	 Frecciargento		Choose
			9485		starting from
			Offer		27.00 €
			super economy		

Direct link :

<https://www.lefrece.it/B2CWeb/search.do?parameter=searchOutputViewer&cFID=j49sLL5Mb6Bc>

Tip : if you book the ticket later the cost can rise up to 50-60 €

Night in Roma close to the Central Station :

A lot of hotels are available at less than 100€ in Roma city center, close to Termini station.

Possibility to use Booking.com or equivalent (see link below)

http://www.booking.com/searchresults.it.html?sid=924cdedc9cab98c5f4ca60204d4af214;dcid=4;bb_asr=1;checkin_monthday=22;checkin_year_month=2015-9;checkout_monthday=23;checkout_year_month=2015-9;class_interval=1;csflt=%7B%7D;dest_id=1089;dest_type=landmark;group_adults=1;group_children=0;nflt_qf=hotelfacility-96;no_rooms=1;review_score_group=empty;sb_travel_purpose=business;score_min=0;si=ai%2Cco%2Cci%2Cre%2Cdi;src=index;ss=Stazione%20Ferroviaria%20Roma%20Termini%2C%20Roma%2C%20Lazio%2C%20Italia;ss_raw=roma%20termini;ssb=empty&;nflt=hotelfacility%3D96%3Bpri%3D100%3B;unchecked_filter=price#map_closed

Annex 4: OTTI / Task 53 Workshop on The New Generation Solar Cooling & Heating Systems (PV or solar thermally driven systems) / IEA SHC Task 53

(Joint by IEA Solar Heating and Cooling Program Task 53 and OTTI conference)

Place : Leonardo Da Vinci Hotel, Fiumicino airport, Roma

Date : Wednesday 23/09

Schedule : 14.00-17.30

Cost : Free of charge

Draft proposed detailed program (in red still needing confirmation):

1) General presentation of Task 53 and first results (14.00-14.45):

- Introduction (Mugnier)
- Subtask A : Components, systems and quality (Selke)
- Subtask B : Control, simulation and design (Fedrizzi)
- Subtask C : Market support measures (Thygesen)

2) Presentation of latest ongoing results and developments among Industry (20 min for each, 14.45-16.45):

- FRESCO (Finochiaro)
- COSSECO (Niederhauser)
- ATISYS (Esparcieux)

Coffee break (15 min)

- YAZAKI (Zheng)
- **SOLABCOOL** (De Beijer)
- HYUNDAI (Dong Kyu Lee)

4) Future of the New Generation of Solar cooling systems : which barriers ? (17.00-17.30)

- **IEA PVPS Task 1 operatin agent (Gaetan Masson)** : PV vs cooling and selfconsumption challenges (15 min)
- discussion on the barriers for the development of solar cooling