



Bienvenue



Le Thermosolaire est inventé, étudié et expérimenté, depuis 1975, en France, par MEZRI Abdou, ingénieur-artiste-scientifique.



Le THERMOSOLAIRE & L'EUROPE

Le Thermosolaire est désormais un choix européen et mondial incontournable.

MEZRI-THERMOSOLAIRE : références européennes

Ce document présente les références européennes de MEZRI-THERMOSOLAIRE. Une unité spécialisée dans la Recherche scientifique, l'art et l'Innovation technologique dans le domaine du thermosolaire. Active depuis 1993, en France, elle est créée et dirigée par MEZRI Abdou, Ingénieur-artiste-scientifique, auteur du Thermosolaire et du Programme Thermosolaire dont les objectifs :

- **objectif écologique** : maîtrise des énergies fossiles coûteuses et épuisables et lutte contre le réchauffement climatique par la réduction des émissions du dioxyde de carbone dans l'atmosphère ou encore les CFC destructeurs de l'Ozone ;
- **objectif industriel** : création d'entreprises de développement durable utilisant la technologie THERMOSOLAIRE propre pour la production de la chaleur et du froid nécessaires entre autres aux : installations thermiques (eau chaude, dessalement d'eau de mer, centrales électriques, séchage, irrigation et conditionnement) ; bâtiments thermosolaires neufs à construire et existant à réhabiliter ; réglementation...
- **objectif économique** : exploitation de l'énergie thermosolaire propre et gratuite pour la création de nouveaux projets durables générateurs d'emploi et de richesse ;
- **objectif scientifique et technique** : diversification de la formation, stimulation et approfondissement de la recherche dans le domaine de l'énergie solaire notamment dans le secteur du bâtiment, la thermique et le design de l'environnement.

Le Thermosolaire et le Programme thermosolaire sont créés, étudiés et expérimentés par MEZRI-THERMOSOLAIRE. Ils sont entre autres l'objet de publications internationales et d'une thèse de doctorat préparée de 1975 à 1980, dans deux grandes écoles d'ingénieurs en France.

Un nouveau site : www.thermosolaire.fr actuellement ouvert sur le Web, en phase finale de préparation, apportera plus d'informations **inédites** concernant le Thermosolaire, le bâtiment, la thermique, l'art et le design de l'environnement dans le domaine de la recherche, l'art et l'industrie durables.

Le Thermosolaire porte sur des projets stratégique. Il est officiellement choisi comme projet européen de référence par la communauté européenne politique, scientifique, technique et industrielle du solaire et de la thermique (chaud et froid) jusqu'en 2030. Et ce, afin de lutter contre le réchauffement climatique par le développement de la technologie et l'industrie propres.

Le choix et l'encouragement de la recherche sur l'énergie Thermosolaire par l'Europe a permis la création en 2005, des Plates-Formes « **European Solar Thermal Technology Platform (ESTTP)** », site Web : www.esttp.org , dont MEZRI-THERMOSOLAIRE est membre expert pluridisciplinaire.

Le Thermosolaire, désormais une priorité européenne et mondiale incontournable pour le développement durable et la lutte contre l'effet de serre par le dioxyde carbone, est soutenu et encouragé par la **Commission Européenne** dans son communiqué de Presse ci-dessous présenté, qui le qualifie « **d'excellent outil à technologie innovante, créateur de projets industriels et de recherche, générateur de développement économique durable** ».

Ci-dessous le **Communiqué de Presse de la CE N° 242 du 30 mai 2006**, tel qu'il a été publié et diffusé en Anglais et en Français sur le Web Internet, suivi d'une présentation des principaux centres scientifiques européens, dont MEZRI-THERMOSOLAIRE, représentés par leur membre dans les Plates-Formes européennes ESTTP : European Solar Thermal Technologie Platforms et EURAC : European Academy Research.

Page 3 : en anglais, le Communiqué de Presse européen sur le choix et l'encouragement de la recherche sur l'énergie thermosolaire.

Page 4 : en français, le même Communiqué de Presse européen sur le choix du thermosolaire par l'Europe.

Page 5 : le groupe d'experts européens travaillant sur le bâtiment durable à hautes performances thermique et énergétique non polluant.

Pages 6 et 7 : articles de Presse Européen sur la naissance et le rôle des Plateformes européennes du solaire, de la chaleur et du froid.

Page 8, 9, 10, 11, 12, 13, 14, 15 et 16 : les différents projets des Plates-formes européennes par secteur d'application sur lesquels travaillent des groupes de spécialistes européens scientifique, technique et industriel représentant les universités, les instituts et les organismes de recherche de leur pays membre.

MEZRI-THERMOSOLAIRE, marqué volontairement en couleur jaune pour faciliter la lecture, est l'organe scientifique et technique représentant la France, actif dans tous les projets (WG1a, WG1b, WG1c, WG1d, WG1e) des Plates-Formes européennes « www.esttp.org » ci-dessous présentés :

1. **WG 1a: Collectors (DHW, heating and cooling)**
2. **WG 1b: Storage**
3. **WG 1c: New Buildings with High Solar Fraction**
4. **WG 1d: Active Solar Renovation**
5. **WG 1e: System Design and Performance**



IP/06/696

Brussels, May 30, 2006

European Commission encourages research on energy thermosolaire

Andris Piebalgs, Member of the European Commission in charge of energy, greets today the official launching of the European technological platform of thermal solar energy, an initiative of the ESTIF (European federation of the industrialists of solar thermals) aiming at supporting the rise of the research and the development in this sector. The platform will be a tool for exchange of expertise and knowledge and will allow the marketing of new generations of products and processes.

Andris Piebalgs, Member of the European Commission in charge of energy, was delighted by the initiative while declaring: "the thermal solar energy sector has to play an important part in the future and can contribute to the emergence of a durable energy project for the EU. If our will is to ensure the competitiveness of our companies, it is necessary that the EU preserves a strong intensity of innovating products. It is essential, consequently, that the various actors of the market take part together in the search of prospects for the future, and the implication without fault of the private sector can only help us to carry out the objectives of the strategy of Lisbon."

Energy thermosolaire indicates the conversion of the solar radiation into thermal energy, which can then be used for the production of domestic hot water, the heating of buildings or drying. Air-conditioning also forms part of the possible applications of this source of energy. If the industry of the EU is in the world forefront in the field of technologies thermosolaires, the market of the EU in this sector represents however only some 10 % of the world market.

The ESTIF chapeaus a whole of national associations of the thermal solar energy sector and account more than 700 members in all Europe. The European Commission offered its support for the creation of the technological platform in the form of assistance to its secretariat within the framework of an action of specific support of the 6E outline programme. N the other hand, this collaboration must help the Commission to develop the future strategic fields of the 7E outline programme research development for a maximum expansion of the European market of solar energy.

The European technological platforms are initiatives emanating of the ground, i.e. private sector. They aim at joining together the whole of the speakers and the parts concerned in a sector or a given technological field. There already exists of the platforms of this type for photovoltaic energy, the networks of electricity known as "intelligent", hydrogen and the fuel cells, the biocarburants and clean coal. The objective of the European technological platforms is to conceive and put in?uvre a common vision of the development of a sector or a given technological field. They have in particular as a task to develop a vast technological development and research programme in the long run in the field concerned. When the Commission is convinced of the potential interest that a field presents and added value that a technological platform at the European level could bring to the development of the sector in question, it supports the initiative.



Commission européenne
Représentation au Luxembourg

Communiqué de presse

242-2006 – 30 mai 2006

Andris Piebalgs encourage la recherche sur l'énergie thermosolaire

Andris Piebalgs, membre de la Commission européenne chargé de l'énergie, salue aujourd'hui le lancement officiel de la plateforme technologique européenne de l'énergie solaire thermique, une initiative de l'ESTIF (fédération européenne des industriels du solaire thermique) visant à favoriser l'essor de la recherche et du développement dans ce secteur. La plateforme sera un outil d'échange d'expertise et de connaissances et permettra la mise sur le marché de nouvelles générations de produits et de procédés.

Andris Piebalgs, membre de la Commission européenne chargé de l'énergie, s'est réjoui de l'initiative en déclarant: «Le secteur de l'énergie solaire thermique est appelé à jouer un rôle important à l'avenir et peut contribuer à l'émergence d'un projet énergétique durable pour l'UE. Si notre volonté est d'assurer la compétitivité de nos entreprises, il faut que l'UE conserve une forte intensité de produits innovants. Il est essentiel, dès lors, que les divers acteurs du marché participent ensemble à la recherche de perspectives pour l'avenir, et l'implication sans faille du secteur privé ne peut que nous aider à réaliser les objectifs de la stratégie de Lisbonne.»

L'énergie thermosolaire désigne la conversion du rayonnement solaire en énergie thermique, qui peut ensuite être utilisée pour la production d'eau chaude sanitaire, le chauffage de bâtiments ou le séchage. La climatisation fait également partie des applications possibles de cette source d'énergie. Si l'industrie de l'UE est au premier rang mondial dans le domaine des technologies thermosolaires, le marché de l'UE dans ce secteur ne représente toutefois que quelque 10 % du marché mondial.

L'ESTIF chapeaute un ensemble d'associations nationales du secteur de l'énergie solaire thermique et compte plus de 700 membres dans toute l'Europe. La Commission européenne a offert son soutien à la création de la plateforme technologique sous la forme d'une assistance à son secrétariat dans le cadre d'une action de soutien spécifique du 6^e programme-cadre. En contrepartie, cette collaboration doit aider la Commission à mettre au point les futurs domaines stratégiques du 7^e programme-cadre en matière de recherche et de développement en vue d'une expansion maximale du marché européen de l'énergie solaire.

Les plateformes technologiques européennes sont des initiatives émanant du terrain, c'est-à-dire du secteur privé. Elles visent à réunir l'ensemble des intervenants et des parties concernées dans un secteur ou un domaine technologique donné. Il existe déjà des plateformes de ce type pour l'énergie photovoltaïque, les réseaux d'électricité dits «intelligents», l'hydrogène et les piles à combustible, les biocarburants et le charbon propre. L'objectif des plateformes technologiques européennes est de concevoir et de mettre en œuvre une vision commune du développement d'un secteur ou d'un domaine technologique donné. Elles ont notamment pour tâche de mettre au point un vaste programme de recherche et de développement technologique à long terme dans le domaine concerné. Lorsque la Commission est convaincue de l'intérêt potentiel que présente un domaine et de la valeur ajoutée qu'une plateforme technologique à l'échelon européen pourrait apporter au développement du secteur en question, elle soutient l'initiative.

European Academy Research

<http://www.eurac.edu>



New buildings with high solar fraction



Wolfram Sparber
EURAC research | Bolzano

The preliminary Working group 1C – New buildings with high solar fraction is as follows:

Carvalho, Luis	Martifer Solar S.A (Pt)
Filloux, Alain	Alphééis (Fr)
Hastings, Robert	AEU Architektur, Energie & Umwelt GmbH (Ch)
Henning, Hans-Martin	Fraunhofer-Institut für solare Energiesysteme ISE (De)
Medved, Savo	University of Ljubljana, Faculty of Mechanical Engineering (Si)
Mezri Abdou	MEZRI-THERMOSOLAIRE (Fr)
Mieres Royo, Juan Manuel	Acciona Infrastructures (Es)
Navarro Rivero, Pilar	INSTITUTO TECNOLÓGICO DE CANARIAS,S.A. (Es)
Niemeyer, Jens	Yazaki Europe Ltd. (De)
Radu, Adrian	Dept.Civ.Engrg.,Techn.Univ.Iasi,Romania (Ro)
Reyelts, Hinrich	Architekturbüro Reyelts (De)
Roecker, Christian	EPFL / LESO-PB (Ch)
Sparber, Wolfram	EURAC Research (It)



European Solar Thermal Technology Platform (ESTTP) kick-off meeting will take place in Brussels on 06 December 2006

The kick-off meeting for ESTTP will take place in Brussels on the 6 December 2006, 10:00 – 17:00. The upcoming meeting will serve as the first step in determining a concrete research and development strategy in order to achieve the goals set forth in the Solar Thermal Vision 2030. ESTTP wants to mobilize experts from all over Europe to develop this strategy at the European level. The meeting in Brussels will be of extreme importance for the future of solar thermal technology and all organizations that wish to take a leading role therein. Strong participation will attract attention and demonstrate that solar thermal has a strong lobby. [More](#)
Official Launch of the European Solar Thermal Technology Platform on 30 May 2006

After almost one year of preparation and intense discussion on the Solar Thermal Vision 2030, ESTIF (European Solar Thermal Industry Federation) and EUREC Agency (European Renewable Energy Centres Agency) invite the European solar thermal community to the Official Launch of the European Solar Thermal Technology Platform (ESTTP) on 30 May 2006.

The upcoming meeting will serve as the first step in determining a concrete research and development strategy in order to achieve the goals set forth in the [Solar Thermal Vision 2030](#). ESTTP wants to mobilize experts from all over Europe to develop this strategy at the European level.

The [meeting in Brussels](#) will be of extreme importance for the future of solar thermal technology and all organizations that wish to take a leading role therein. Strong participation will attract attention and demonstrate that solar thermal has a strong lobby.

Therefore, the Preliminary Steering Committee of ESTTP is calling upon all major European actors in the solar thermal industry and research and development to participate and take this opportunity to contribute to ESTTP. All experts in the field of solar thermal will have the chance to share their knowledge through one of the Focus or Work Groups and to participate in discussion with fellow experts. Focus Groups will consider general aspects such as solar thermal applications in buildings, and the industry, as well as the overall political and economic framework. Subsequently, smaller Work Groups will examine more specific questions, such as energy storage, the solar thermal renovation of existing houses, components, refrigeration and industrial heat production etc.

Within the next two years, each respective group of experts will meet several times to refine a research and development strategy in their field. International experts will be assisted by the ESTTP-Secretariat. Since the success of the ESTTP depends on impetus and knowledge, all solar thermal experts are invited to participate.

Source: second Platform of 06 December 2006 in Brussels

Press Release

15 December 2006



European Solar Thermal Technology Platform Commences Work

50% of heating and cooling demand could be covered by Solar Heat by 2030

More than 100 experts from all over Europe debated the potential of solar thermal during the kick-off meeting of the European Solar Thermal Technology Platform (ESTTP) on December 6. The meeting served as a starting point for the work of the platform which is convinced that 50 percent of heating and cooling demand can be covered by Solar Heat by 2030. The Platform intends to elaborate detailed research strategies within the next two years to achieve the vision's aims. ESTTP is supported by the European Solar Thermal Industry Federation (ESTIF) and the European Renewable Energy Centres Agency (EUREC Agency). It was founded on May 30 in the presence of EU-Commissioner for Energy, Andris Piebalgs.

By using technology platforms the European Commission intends to further the long term technological leadership of the European industry, in key future technologies. Gerhard Stryi-Hipp, the chairman of the ESTTP states: "The platform is a very useful instrument for solar thermal technology, especially since the potential for its further development has been vastly underestimated in the past. By combining scientific research and industrial developments in our work, we will be able to demonstrate which technologies and products have the capacity to cover a major proportion of Europe's heating and cooling demand".

The solar thermal platform is strongly supported by several EU member states. Joachim Nick-Leptin, Head of Division at the German Ministry for Environment, explained that Germany foresees a huge potential in solar heating and cooling. Due to its positive assessment of the technology, Germany has increased its research funding for solar thermal. The ESTTP plans to establish many National Mirror Groups across Europe. These National Mirror Groups will discuss and promote the development of solar heat technologies at national level.

Three Focus Groups will carry out the work within the ESTTP. These groups concentrate on solar heat applications for buildings, industrial processes and the development of solar thermal markets. Within the three Focus Groups, special Work Groups will deal with specific technological aspects of each of these areas. In mid 2007, the first drafts describing the potential of solar thermal technology will be elaborated.

Participants interested in the Work Groups can apply for membership until mid January 2007. Further information on the platform and a first version for the Solar Thermal Vision 2030 can be found on the website www.esttp.org.

Contact: Uwe Brechlin, ESTTP-Secretariat, Tel: +32-2-546 19 38



European Solar Thermal Technology Platform

www.esttp.org

19 June 2007 Workshop

Company/Organisation Last Name First Name Country

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Solites Mangold Dirk DE
 GREEN - PUC MG Marques Duarte Pereira Elizabeth BR
 edp Energias de Portugal Martins da Silva João PT
 OVM-ICCPET Maruntelu Silvia RO
 arcelor Maseri Fabrizio BE
 Ecole de Mines de Paris Mayer Didier FR
 University of Ljubljana Medved Sašo SI
 JGSEE, The Joint Graduate School of Energy & Environment Menke Christoph TH
 KME Germany Merring Bernhard DE
 Queen's University Mesquita Lucio CA
Mezri Thermosolaire Mezri Abdou FR
 arcelor Mirabella Frédéric BE
 Hidria Mohorič Tanja SI
 POLIMI Motta Mario IT
 TiNOX GmbH Müller-Holst Hendrik DE
 ITW, Institut für Thermodynamik und Wärmetechnik Müller-Steinhagen Hans DE
 Vapo Group Nevalainen Niko FI
 SolarKey Int. Nielsen Jan Erik DK
 Yazaki Europe Ltd. Niemeyer Jens DE
 Sisecam Oğuz Metin TR
 Danfoss O'Hara Martin UK
 S.O.L.I.D. GmbH Ohnewein Philip AT
 Istituto Nazionale di Fisica Nucleare Olcese Marco IT
 Dow Chemical Pan Wei NL
 ines, Institut National de l'Energie Solaire Papillon Philippe FR
 Intersolar SA Paradissiadis Iordanis GR
 Jehin Co Ltd Park MannKwi KR
 Bundesministerium für Verkehr, Innovation Paula Michael DE
 Solites Pauschinger Thomas DE
 Pontificie Catholic University of Minas Gerais Pereira Elizabeth BR
 International Energy Agency Pflüger Antonio DE
 ESTIF - European Solar Thermal Industry Federation Piria Rafaele BE
 New Zealand Solar Systems Ltd Poepsel Ludwig NZ
 Olade Poveda Mentor EC
 voestalpine Stahl GmbH Puntigam Rupert AT
 Tecsol S.A. Quinette Jean-Yves FR
 Dr. Valentin Energiesoftware GmbH Radke Uwe DE
 Swedish Energy Agency Rantil Michael SE
 Conergy Rausch Verena DE
 Paradigma Renz Tuia DE
 Deutsche Gesellschaft für Sonnenenergie Reyelts Hinrich DE
 ThermRen Riedl Wolfgang DE
 European Commission Riesgo Villanueva José BE
 SolarAire, LLC Rodes Don US
 Fraunhofer ISE Rommel Matthias DE

UNIDO, United Nations Industrial Development Org. Salem Janet AT
Hydro Solar Schelling Jan NO
Inholland Schiebaan Lex NL
Vaillant GmbH Schild Rainer DE
ZSW Seyboth Kristin DE
Dublin Energy Lab., Dublin Institute of Technology Shanks Kirk IE
rand energy systems Shilton Eli IL
EnerWorks Sjoberg Lars CA
TiSUN Soder Hans AT
EURAC research Sparber Wolfram IT
ICT - Industrial Consulting & Trading Company Spyropoulos Dimitris GR
DLR Steinmann Wolf-D. DE
Universität Stuttgart Streicher Elke DE
BSW Bundesverband Solarwirtschaft e.V. Stryi-Hipp Gerhard DE
tervak Sulcic Slavko SI
Technische Universität Darmstadt Surrey Florian DE
ICPE-NESL Teodoreanu Dan Ilie RO
innova renewables consult Terbrack Erich DE
Schüco International KG Thole Frank DE
Anu Solar Power Pvt Ltd Thonakkara Joseph IN
ESTIF - European Solar Thermal Industry Federation Trenkner Uwe BE
University of Patras Tripanagnostopoulos Yiannis GR
PSE GmbH Turnwald Astrid DE
Agder University College Vaage Magne Mikal NO
ECN van Helden Wim NL
University of Rome Vannoni Claudia IT
Bundesumweltministerium Viertel Cornelia DE
TEKNIKER Villasante Cristobal ES

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Working Groups of Focus Group 1: Solar Thermal Systems for Buildings Focus Groups of the ESTTP

Focus Group 1: Solar Thermal Systems for Buildings Chairman: Volker Wittwer, Fraunhofer ISE

This focus group deals with the components and the systemic integration of solar thermal technology into buildings and correspondingly, the solar renovation of buildings. It encompasses five working groups that focus on thermal collectors, storage materials and systems, the integration of solar thermal technology into new buildings, the solar renovation of existing buildings, and performance measurement. Their objective is to draft a coherent vision for the year 2030 and to create a comprehensive R&D strategy to be used by the building sector in order to reach the various goals outlined in the drafted vision.

WG 1a: Collectors (DHW, heating and cooling) Leader: Manuel Collares-Pereira, Ao Sol

This working group focuses on the improvements that can be made in collector technology. Collector materials, heat loss, optical aspects and survivability are the key issues. Research should focus on the future challenges that will arise due to new collector shapes and sizes and the systematic integration and manufacturing of collectors. Testing and performance evaluation will correspondingly increase in importance and will therefore be closely considered in this WG.

Member	Organisation
Ajona, JosÈ Inacio	WAGNER & Co. Solartechnik GmbH
Barriga, Javier	FundaciÙn Tekniker / Tekniker - IK4
Bohren, Andreas	SPF Institut fr Solartechnik / Hochschule fr Technik Rapperswil HSR
Bostrom, Tobias	Norut Technology Ltd
Buchinger, Josef	arsenal research - ÷sterreichisches Forschungs- und Prfzentrum Arsenal Ges. m.b.H.

Carvalho, Luis	Martifer Solar, SA
Descy, Gilbert-Gaetan	ESE sa
Eisenmann, Wolfgang	VIESSMANN Werke GmbH & Co
Fischer, Stephan	ITW, Institut für Thermodynamik und Wärmetechnik, Universität Stuttgart
Flahaut, Emmanuel	Institut National de L'Energie Solaire
Frei, Ulrich	Interfloat Corporation
Hoetzel, Jan	SIGA Green Technologies
Horta, Pedro	INETI
Kiss, Tibor	HITECH-SOL KFT.
Kühl, Michael	Fraunhofer Institut für Solare Energiesysteme
Konttinen, Petri	Luvata Pori OY
Kramer, Korbinian	Fraunhofer Institut für Solare Energiesysteme
Kyriakis, Nikolas	Institute of Solar Technology - IST / Process of Equipment Design Laboratory - Mechanical Engineering Dpt. - Aristotle University Thessaloniki
Leinen, Dietmar	University of Malaga
Lokurlu, Ahmet	SOLITEM GmbH
López, Susana	Fundación Tekniker
Meesters, Rob	Solahart Europe / Solahart Industries
MEZRI Abdou	MEZRI-THERMOSOLAIRE
Navarro-Rivero, Pilar	Technological Institute of Canary Islands
Nielsen, Jan Erik	PlanEnergi
Norton, Brian	Dublin Institute of Technology
Orel, Boris	National Institute of Chemistry
Padrós, Asun	Acciona Energía
Papillon, Philippe	INES / CEA (National Institute for Solar Energy)
Pettersson, Ulrik	SP Technical Research Institute of Sweden
Poutanen, Mikko	Outokumpu Poricopper Oy
Rode, Dirk	KME Germany AG & Co. KG
Rommel, Matthias	Fraunhofer Institut für Solare Energiesysteme
Sander, Kirsten	KS environment & architecture
Steinmaurer, Gerald	ASIC, Austria Solar Innovation Center
Villasante, Cristóbal	Fundación Tekniker / Tekniker - IK4
Wölflik, Oliver	Wieland Werke AG

WG 1b: Storage

Leader: Wim van Helden, Energy Research Centre of the Netherlands

While water system technology has matured, further research is needed to reduce the volume of storage systems. The system includes the storage material, the charge and discharge components, the control and the encasement, including thermal insulation.

Examples for promising developments of compact heat storage technologies are „phase change materials“ and „sorption processes“ --both of which are ready for demonstration-- as well as „thermo chemical materials,“ which are still in the early stages of research and development.

WG 1b will start with defining what functions should or can be fulfilled by solar thermal storage technologies in 2030. From these functions, the required R&D activities for the solar thermal field can be defined, along with the more fundamental questions that have to be addressed by research in other scientific areas.

The storage chapter of the strategic research agenda will also pay attention to the identification of common topics for co-operation with other working groups and to topics of interest for other technology platforms.

Member	Organisation
Arias, Santiago	Sener Ingeniería y Sistemas
Arkar, Ciril	University Ljubljana, Faculty of Mechanical Engineering
Carvalho, Luis	Martifer Solar, SA
Gal, Amandine	Acciona Infrastructures
Gantenbein, Paul	SPF Institut für Solartechnik / Hochschule für Technik Rapperswil HSR
Gottwald, Dieter	arsenal research - österreichisches Forschungs- und Pr, fzentrum Arsenal Ges. m.b.H.
Marcaide, Arrate	Fundación Tekniker
Mardaras Adrada, Javier	Acciona Infrastructures
MEZRI Abdou	MEZRI-THERMOSOLAIRE
Mieres Royo, Juan Manuel	Acciona Infrastructures
Norton, Brian	Dublin Institute of Technology
Paksoy, Halime O.	Cukurova University, Chemistry Department
Riederer, Peter	CSTB, Centre Scientifique et Technique du B, timent
Rommel, Matthias	Fraunhofer Institut für Solare Energiesysteme
Schossig, Peter	Fraunhofer Institut für Solare Energiesysteme
Steinmaurer, Gerald	ASIC, Austria Solar Innovation Center
Streicher, Wolfgang	Graz University of Technology, Institute for Resource Efficient & Sustainable Systems
Vinals, Javier	Sener Ingeniería Y Sistemas SA

WG 1c: New Buildings with High Solar Fraction

Leader: Wolfram Sparber, EURAC research

To be addressed in WG 1c are the different ways of achieving high solar fractions in buildings which include:

- the use of solar gains in the heating season, e.g. by facade integrated solar collectors;
- the use of solar heating and cooling;
- the use of summer solar gains by applying seasonal storage;
- and possibly others.

The vision for 2030 should be to develop concepts for high solar fractions using different approaches and evaluating which concept is most favourable under certain climatic and structural conditions.

Realistic thermodynamic limits for low-temperature heat storage lie around 530 kWh/m³, but today's technologies have only been able to achieve a thermodynamic limit of approximately 200 kWh/m³ by using the most advanced (and most expensive) materials. High-standard buildings would need a storage of 500 to 1000 kWh (corresponding to 1-2 m³) if, the for 2030 envisaged factor of 8 in storage density, is to be achieved).

As a first step, WG 1c efforts will concentrate on:

- developing combined solar heating and cooling options for Mediterranean countries;
- considering additional applications for PV-T-systems;
- co-ordination with other WG to define important R&D topics;
- the creation of a solar heating / cooling map for Europe.

Member	Organisation
Bouvy, Claude	RWTH Aachen University, LTT
Filloux, Alain	AlphÈeis
Gal, Amandine	Acciona Infrastructures
Hastings, Robert	AEU Architektur, Energie&Umwelt GmbH
Henning, Hans-Martin	Fraunhofer Institut f _r Solare Energiesysteme
Loyen, Richard	ENERPLAN
Mardaras Adrada, Javier	Acciona Infrastructures
Medved, Sašo	University of Ljubljana
MEZRI Abdou	MEZRI-THERMOSOLAIRE
Mieres Royo, Juan Manuel	Acciona Infrastructures
Nielsen, Jan Erik	PlanEnergi
Niemeyer, Jens	Yazaki Europe Ltd.
Radu, Adrian	Gh. Asachi, Technical University of Iasi
Reyelts, Hinrich	DGS Deutsche Gesellschaft f _r Sonnenenergie
Roecker, Christian	EPFL / LESO-PB
Rommel, Matthias	Fraunhofer Institut f _r Solare Energiesysteme
Streicher, Wolfgang	Graz University of Technology, Institute for Resource Efficient & Sustainable Systems

WG 1d: Active Solar Renovation

**Leader: Ivo Opstelten, Energy Research Centre of the Netherlands
Rainer Schild, Vaillant GmbH**

The market relevance of active solar renovation can be demonstrated by the fact that by the year 2030, 50 % of the building stock will have been renovated (2 % yearly). This is twice the number of annual new constructions (1 %). Of the existing housing stock, only 1 % uses low- temperature heat thus far. An average of 10 % of residents change their housing location per year demonstrating that the opportunities for solar renovation are only compounded if social aspects are taken into consideration as well.

Aims of WG 1d for the Solar Thermal Vision 2030 will include:

- Providing 50 % of all heating energy with solar thermal by 2030;
- Making solar renovation the most cost effective option for renovation.

Essentially, the work of this focus group will imply:

- the collection of facts & figures as a foundation for the strategic research agenda;
- the formulation of technical challenges;
- a systematic approach to reduce thermal heat loss and balance the supply and demand of passive solar heating / cooling;
 - Possibilities to adapt solar technologies to fit the existing housing stock (orientation, weight of modules, facades etc);
 - Enabling solar energy storage integration into the building envelope;
 - Creating complete active solar renovation packages instead of separate measures;
- finding ways to involve all relevant parties and increase the public awareness of the importance of solar renovation.

Member	Organisation
Birnbreier, Kurt	SOLAR Kurt Birnbreier GmbH / SOLAR METAL FLEX
Filloux, Alain	AlphÈeis
Galliker, Valentin	Armacell GmbH
Hastings, Robert	AEU Architektur, Energie&Umwelt GmbH
Loyen, Richard	ENERPLAN
MEZRI Abdou	MEZRI-THERMOSOLAIRE
Mieres Royo, Juan Manuel	Acciona Infrastructures
Reyelts, Hinrich	DGS Deutsche Gesellschaft für Sonnenenergie
Roecker, Christian	EPFL / LESO-PB
Rommel, Matthias	Fraunhofer Institut für Solare Energiesysteme
Sitzmann, Bernd	÷kozentrum Langenbruck
Streicher, Wolfgang	Graz University of Technology, Institute for Resource Efficient & Sustainable Systems

WG 1e: System Design and Performance

Leader: Harald Dr.ck, ITW

So far, clear definitions and methods for the determination of the overall system performance of solar thermal technologies in buildings are lacking. As of yet, no clear indicators for energy savings, CO₂-savings, comfort and environmental aspects exist.

The objectives of WG 1e will encompass the development of new advanced system concepts and components, advanced simulation tools, as well as the development of the corresponding assessment methods.

The work carried out by WG1e will focus on the building in its entirety. Hence, specific components (e.g. solar collectors) will not be assessed separately but as an integral in the context of the entire energy system of the building. New communication technologies, as well as the work results of other WG will be closely considered for recommendations in order to contribute to the Solar Thermal Vision 2030 and the derived research strategy.

Member	Organisation
Caccavelli, Dominique	CSTB, Centre Scientifique et Technique du B, timent
Carvalho, Maria Joao	INETI
Collares Pereira, Manuel	Ao Sol Energias Renovaveis Lda.
Frank, Elimar	SPF Institut f, r Solartechnik / Hochschule f, r Technik Rapperswil HSR
Handke, Volker	Institute for Future Studies and Technology Assessment (IZT) gGmbH / Institut f, r Zukunftsstudien und Technologiebewertung gGmbH
Kramer, Korbinian	Fraunhofer Institut f, r Solare Energiesysteme
Loyen, Richard	ENERPLAN
MEZRI Abdou	MEZRI-THERMOSOLAIRE
Norton, Brian	Dublin Institute of Technology
Opstelten, Ivo J.	Energy research centre of the Netherlands
Papillon, Philippe	INES / CEA (National Institute for Solar Energy)
Peter, Markus	Forschungs-und Testzentrum f, r Sonnenenergie / dp≤ - Energienutzung mit Verstand
Rommel, Matthias	Fraunhofer Institut f, r Solare Energiesysteme
Schild, Rainer	Vaillant GmbH
Steinmaurer, Gerald	ASIC, Austria Solar Innovation Center
Streicher, Wolfgang	Graz University of Technology, Institute for Resource Efficient & Sustainable Systems
Thole, Frank	SCH<CO International KG
Troi, Alexandra	EURAC Research
van Helden, Wim	Energy research centre of the Netherlands
Weyres-Borchert, Bernhard	DGS Deutsche Gesellschaft f, r Sonnenenergie e.V.

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Mars 2009