

# REPORT 3rd LOCAL INFORMATION SEMINAR - FOCUS GROUP



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# **BUILDING INTEGRATION OF PHOTOVOLTAICS**

Opportunities and problems in the diffusion of the application in  
Liguria

Opportunity for dialogue between institutions and operators on sustainable  
architecture in areas with high historical value and landscape

## Objectives

The overall objective of the **Local Information Seminar – Focus Group** is the collection in qualitative assessments, opinions and analysis in order to receive feedback for the development and further reflection on the **SCORE** project.

The collection of qualified points of view allows to collect proposals, strengths and problems to report on a topic still in progress, such as that of sustainability, green building and, in particular, concerning **BUILDING INTEGRATION OF PHOTOVOLTAICS**.

## Contributors

The Seminar was presented and moderated by:

- **Luigi Bussalai:** Vice President for territorial planning
- **Arch. Antonio Schizzi:** Technical Coordinator
- **Arch. Adriano Magliocco:** Department of Sciences for Architecture – Univ. of Genoa

The round table discussion was animated by:

- **CCIAA - CeRSAA Savona: DR. AGR. GIOVANNI MINUTO**
- **Municipality of Cairo Montenotte: ARCH. VALENTINA RIVERA**
- **Legambiente Liguria: DOTT.SSA ELENA DINI**
- **Order of Architects of Savona: ARCH. ILARIA BECCO**
- **Photovoltaic manufacturers: ING. DIEGO BRIGNONE**

## Contributors - CCIAA - CeRSAA Savona: DR. AGR. GIOVANNI MINUTO

### COMPATIBILITY ISSUES BETWEEN PHOTOVOLTAIC AND AGRICULTURE

- The essential problem is the development of a screen above the plants because it creates competition between them and photovoltaic panels.
- The movement of shadows makes reflect upon the importance of photovoltaics as integration of agricultural income and not as a complete replacement to the plants.

### NON-TECHNOLOGICAL BARRIERS

- It is not the system, but the opinion that the farmer or the civil society have about photovoltaic.

### ALTERNATIVE MATERIALS TO SILICON

- The problem is that while there may be technological solutions, we have come up against the market and of course give solutions not too improbable. It's necessary at this time to think about what is important for business.

## Contributors - Municipality of Cairo Montenotte: ARCH. VALENTINA RIVERA

### ■ MUNICIPALY OF CAIRO MONTENOTTE EXPERIENCE

- The municipality has set up a partnership with Sorgenia and Ferrania Solis to promote the installation of photovoltaic panels on existing roofs, for private citizens and businesses, collecting in 10 months more than 110 accessions for single-family houses, small buildings and sheds.
- The Municipality of Cairo is considering the possibility of installing similar panels on public buildings (21 sites), providing for 2012 estimated an annual reduction of approximately 1,200 tons of CO<sub>2</sub>.

## Contributors - Municipality of Cairo Montenotte: ARCH. VALENTINA RIVERA

### LEGISLATION CONSIDERATIONS

- The legislation has gaps and there are contradictions between the national and regional levels. The guidelines are very rigid or prescriptive rules or they are subject to interpretation.
- I think the Region Liguria, which has a key role in the approval of a local planning instruments, should be made more flexible adaptation of the “Municipal Town Planning” rules to national or regional level. The risk otherwise is to create a "block" to the approval of the projects, particularly aimed at innovative technologies.

## Contributors - Legambiente Liguria: DOTT.SSA ELENA DINI

### SOLAR PURCHASING GROUPS - GRUPPI DI ACQUISTO SOLARE (GAS)

- G.A.S. are groups of people helped by a moderator of “Legambiente” that have a common interest to install energy-efficient technologies at a fair price and with guaranteed quality and safety.
  - Later, the citizen really interested and supported in choosing the best quote, personally manages the contact with the company and the procedure of installation.
- ### DIFFICULTIES AND PROBLEMS
- Users who would like to join the GAS but who live in the historic center can not do this due to architectural constraints and structural level of bureaucracy.
  - There are people who would like to buy a photovoltaic system but do not have the cash to fund the system. GAS seeks to facilitate the contact with the banks doing conventions. If there is an agreement with the banks, people are involved in the GAS, but do not close the project and the construction does not take place.



## Contributors - Order of Architects of Savona: ARCH. ILARIA BECCO

### THE ISSUE OF INTEGRATION

- The experts are willing to realize a strong integration, namely to analyze the photovoltaic elements that can be a substitute of the building. We no longer speak of an object that goes to overlap the roof of the building, but of an object that replaces part of the external facing of the building itself.

### PHOTOVOLTAICS AND URBAN CONTEXTS

- We must be careful with the use of solar panel in an indiscriminate manner, the concept of the incentive alone may not be enough, particularly in contexts of high cultural and historic value.
- Despite this, we should reflect on the strong constraints especially for those who live in apartments in historical contexts for which there are limitations to the application of photovoltaics.

## Contributors - Photovoltaic manufacturers: ING. DIEGO BRIGNONE

### ENERGY AND ECONOMIC COSTS OF INTEGRATION OF PHOTOVOLTAICS

- Eg: red panels: The cells normally are blue. It's not an aesthetic choice, but a energy choice. It is possible to do red cells with a different surface treatment, but it costs approximately three as much compared to standard cells and red cells have an efficiency of a 20, 25% lower.
- Eg: black panels: The impact in terms of economic and/or energy is minimal: the cost of these modules is 5% more than the cost of a standard form and have an efficiency slightly lower.

These types of modules are also useful to minimize the phenomena of dazzle created by the installation with the addition of anti-reflective glass. (Eg.: please see the installations in “Terminal Messina” in Genoa close to the line landing of the “Cristoforo Colombo” airport).

## Conclusions – Open Issues

Thanks to the Seminar, it was possible to define important open issues that will be open to future discussions, proposals and operational solution.

This report has been sent in Italian to the key players and the stakeholders involved in the Local Information Seminar – Focus Group with the aim to share the proposals and solutions to support **SCORE** Project.

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- Province of Savona (ITALY)



**Project Partner**

- Region of South Aegean (GREECE)
  - Read S.A. (GREECE)
- Local Energy Agency Pomurje (SLOVENE)
- Agência Regional de Energia do Centro e Baixo - Alentejo (PORTUGAL)
- Official Chamber of Commerce, Industry and Shipping of Seville (SPAIN)
- Rhône Chamber of Crafts (FRANCE)
- Development Company of Kefalonia & Ithaki S.A. - Kefalonia (GREECE)
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- Chamber of Commerce & Industry Marseille Provence (FRANCE)

