



Intelligent Energy



Europe



International meeting Project PURE

PROMOTING THE USE OF PHOTOVOLTAIC SYSTEMS
in the Urban Environment through Demo Relay Nodes



Promotion of Building Integrated Photovoltaics



Banska Bystrica, 25th September 2008



Intelligent Energy Europe



Energy environmental Provincial Program (PEAP)

The PEAP, approved through the **Provincial Committee Resolution n°4 of 23rd January 2007**, represents a instrument sector directed to actions aimed at the promotion and the diffusion of renewable sources and energy saving.

STRUCTURE OF THE PROGRAM

- Socio-economic characterization of the territory.
- Programmatic and normative reference framework.
- Provincial energy balance.
- Energetic potential of the renewable sources.
- Energy saving, efficiency, certification.
- Provincial energy policies.
- Program of actions.



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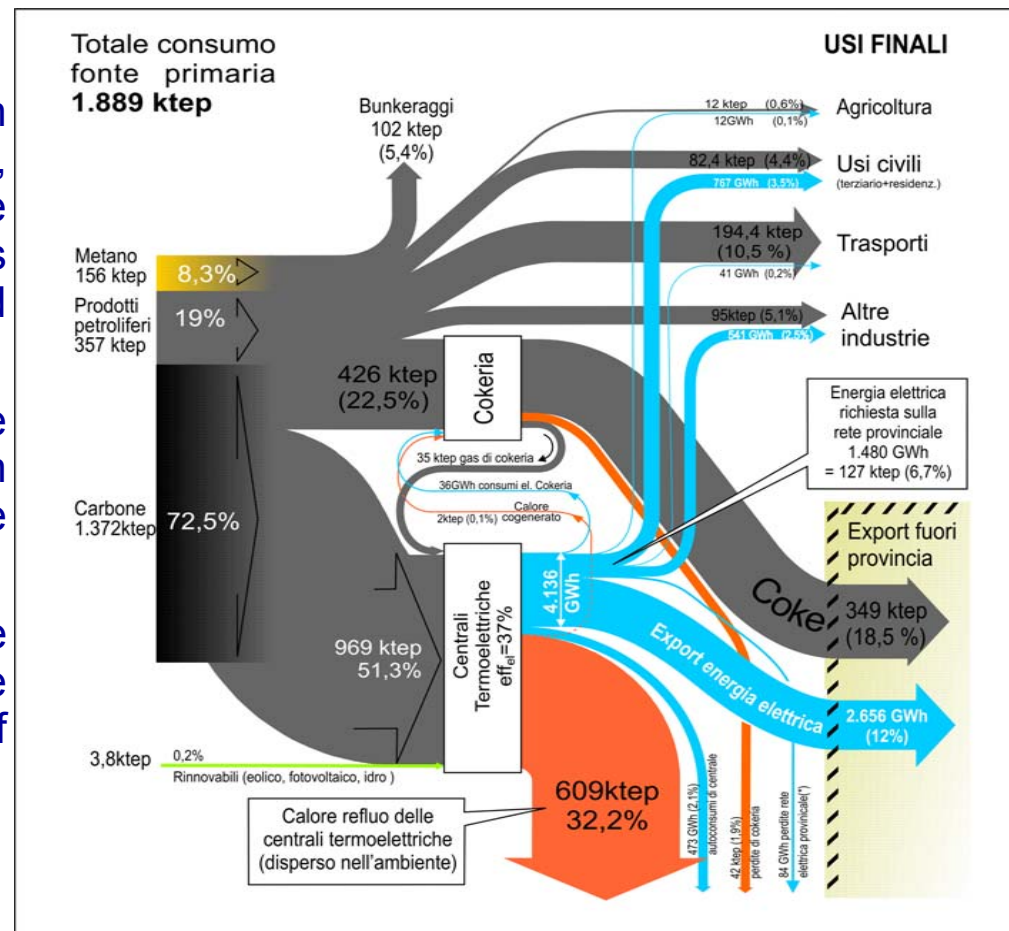
Energy environmental Provincial Program (PEAP)

Energy balance

It consists in a useful representation to illustrate the quantities, the origin, the transformation and the destinations of the main energy fluxes and of all types of energy consumed in the Province of Savona.

On the left are represented the primary sources, the energy input in the territory; on the right there are the final uses.

At the top and bottom, there are the losses during the transformation, the transport and the distribution of energy.





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Energy environmental Provincial Program (PEAP)

PROGRAM OF ACTIONS

- ✓ Diffusion of the solar energy, especially in the touristic sector
- ✓ Valorisation of the wood biomass
- ✓ Energy efficiency in the residential sector
- ✓ Assistance to the Local Authorities on renewable sources and efficiency
- ✓ Recovery or improvement of hydroelectric systems
- ✓ Individuation of areas aimed at Eolic/ mini-Eolic energies
- ✓ Energy efficiency in industrial areas
- ✓ Information and communication
- ✓ Actions which take place in the buildings of the Province propriety
- ✓ Teaching-information laboratory (Project PURE)
- ✓ Internet page in the Province of Savona website
- ✓ Energy front-office located in the head-office building of the Province
- ✓ Formation projects (professional orders, craftsmen, enterprises)
- ✓ Participation to events (ex: Educambiente, SoleVento, Energhetica)



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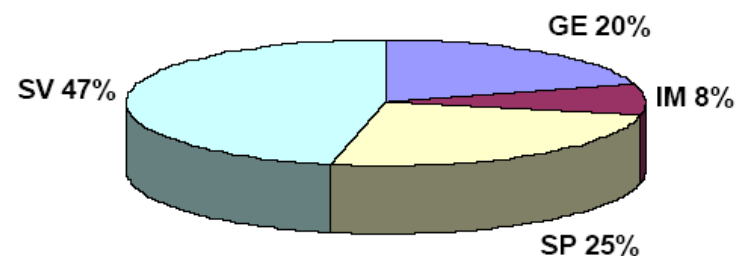
Energy environmental Provincial Program (PEAP)

Energy saving, efficiency, certification - Actions:

- Energetic analysis of buildings, in the province to evaluate their problems and to improve their energetic efficiency:
- The Province of Savona, with the collaboration of the constructors School organized a training course to become a specialist in energy evaluation in the building sector; directed, in its first edition, to technicians of Local Authorities in order to create professional figures able to evaluate documents about energy and, at the same time, capable to carry out analysis on the buildings of Local Authorities;
- Campaigns to aware citizens, through the distribution of light bulbs to promote the energy efficiency



Photovoltaic in Liguria: Provincia di Savona



Power installation in Liguria al 2006: 762 kWp;

Power installation a Savona al 2006: 357 kWp

FONTE: Regione Liguria – Ufficio Energia



Provincia di Savona



Savona: Towards a Solar Province

- **Local authorities interested in PV plants**
- **Bardinetto** 5,4 kWp
- **Calice Ligure** kWp
- **Casanova Lerrone** 3,3 kWp e 1,3 kWp
- **Ceriale** 7,8 kWp e 19,44 kWp
- **Giustenice** 3,9 kWp
- **Noli** 3,6 kWp e 7,6 kWp)
- **Provincia di Savona** 19,44 kWp (su Istituto Boselli)
- **Toirano** 4,5 kWp
- **Tovo San Giacomo** 9,8 kWp
- **Vendone** 1,3 kWp



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On going installations – Photovoltaic systems

After the approval of the **PEAP**, the provincial council prepared an operative plan to project and, where it is possible, to realize the installation of photovoltaic plants, located mainly on provincial buildings.

Installation completed, waiting for grid connection:

- Building of the Province in Savona, 12,9 kWp;
- Technical and professional Institute Alberti-Da Vinci placed in Savona, 6,3 kWp;
- Primary school of Carcare, 5,4 kWp;
- Technical Institute Galileo Ferraris in Savona, 12,9 kWp;

In phase of realization:

- Technical Institute Alberti in Loano, 9,45 kWp;
- Technical Institute Pertini in Varazze, 6,3 kWp;
- Technical Institute Boselli, 20 kWp (regional funding of 75% - 80.250,00€);





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Photovoltaic plant, with power equal to 12,96 kWp, realized in Palazzo Nervi – Building of the Province of Savona



The photovoltaic field will be made of rigid silicon modulus, ling on a specific metal structure positioned at 30°, to south direction

Power of each modulus: 180 W

Modulus number: 72

Nominal power: 12.960 KWp

Surface:

Average energy deliverable: 13.950 kWh/year

Avoided CO2 emissions: 9.750 kg/ year

Energy cover percentage : about 5%





Photovoltaic plant with a power of 12,96 kWp at Itis (State Industrial and technical Institute) Via alla Rocca - Savona





Photovoltaic plant with the power of 15 kWp School "Angelo Bianco" - Andora (SV)





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Energy front office



Energy front office, activated in June 2006 in the head office building of the Province of Savona with the collaboration of Tecnocivis S.p.A, is direct to public agencies, citizens, professionals and firms, to provide information about:

- procedures of authorization for the realisation of renewable energies plants;
- Funding and contributions available to realise renewable energies plants;
- events, exhibitions in the energy field organized at regional and national level;

Opening hours: Tuesday and Thursday from 10.00 a.m. to 12.30 a.m.

Contacts: Tel. 019 83 13 436 - Fax. 019 83 13 315

E-mail: energia@provincia.savona.it



Contact Point





Training/Meeting Room and Multimedia Room





External room and exhibition centre



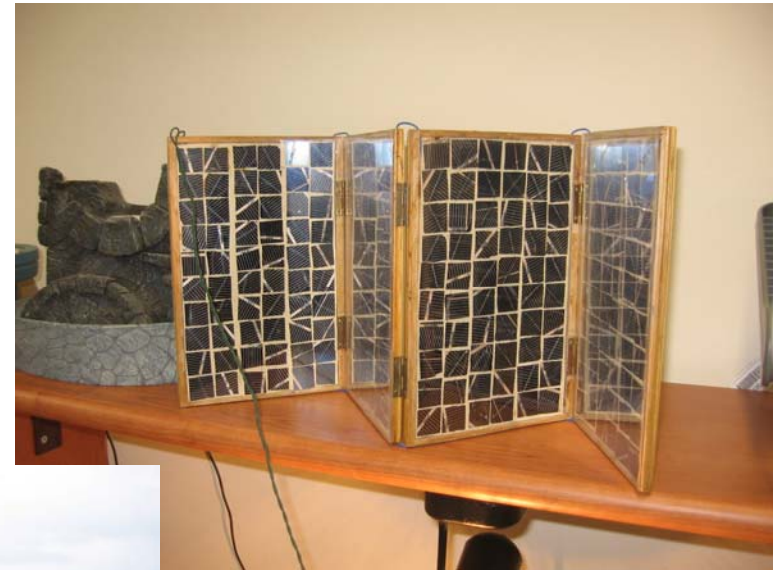
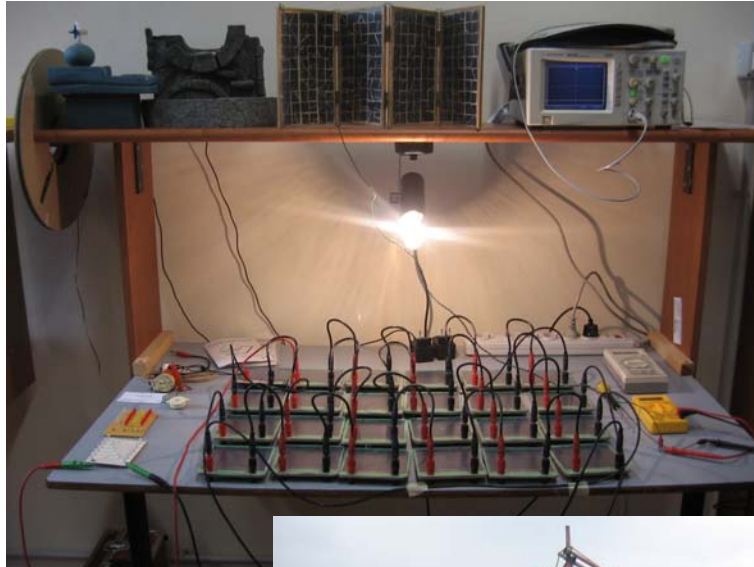


Permanent room





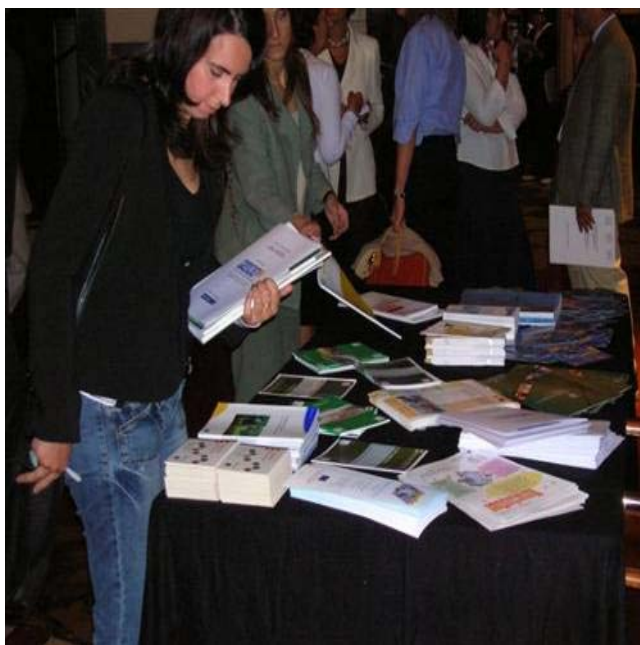
Experimental/Interactive area





DISSEMINATION ACTIVITIES

Project PURE





Provincia di Savona



Project PURE Dissemination activities

Photovoltaic: experiences in Italy and in Europe"

Date: 17th april 2008

Province Of Savona conference room

Number of participants: 100

Summary of the event: The conference was an opportunity to know the best experiences of photovoltaic integration in the buildings of the partners of the PURE project.

Technical and regulatory aspects in the field of photovoltaic were presented as well as the PV Delay Relay Nodes of each partner.





Provincia di Savona

Project PURE Dissemination activities



“Energetic qualification in the buildings”

Loano2 Village – Loano (SV)

Date: 13th June 2008

Number of participants: 200

The conference was an opportunity to offer a contribution to the general knowledge regarding the national and regional normatives related to energy theme in the buildings.

It was a good opportunity to disseminate the project PURE since the audience was representative of the energy field at national level.





Provincia di Savona

Project PURE Dissemination activities

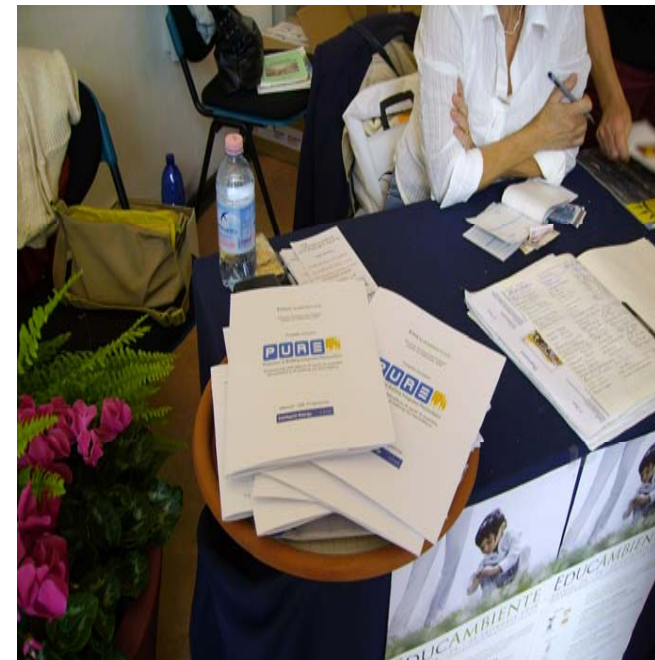


Info day: Intelligent Energy for Europe (IEE II)- Call 2008":

Date: 28th March 2008

Number of participants: 80

Summary of the event: The that took place in Genova, Palazzo della Borsa last 28th march 2008 promoted by Unioncamere Liguria, in collaboration with the Regione Liguria and (Energy Agency of Liguria). Brochures of the project PURE were distributed to the participants.





Provincia di Savona



Project PURE Dissemination activities

The Public Administration and the photovoltaic: promotion on the urban development"

Date: 5th March 2008

Number of participants: 90

The Environment Alderman of the Provincia di Savona, Ing. Enrico Paliotto, has participated in a seminar entitled: **"The Public Administration and the photovoltaic: promotion on the urban development"** that took place last 5th June 2008 in Rimini - Salone EuroP.A. In that occasion the project PURE was disseminated through a powerpoint presentation.





Provincia di Savona

Project PURE Dissemination activities



Foreseen seminars:

“EducAmbiente” Savona, 2-3 October 2008

Annual event organised by the Administration of the Province of Savona -Environmental Education Department.

Conferences and meetings will take place about ecological sustainability, climate change, bio-architecture and renewable energies.

The “EducAmbiente” event is addressed not only to the private and public operators of sector, but also to the students and people interested to the topics of the edition of 2008.





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THANK YOU



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CALENDAR OF THE NEXT ACTIVITIES

Date	Description	Theme	Target	Participants
20th October 2008	Guided visit	Photovoltaic: principles of functioning, the misure of the solar energy and the story of the solar technology.	Students of the high schools of the province of Savona territory.	25
24th October 2008	Seminar	The PV roofs and the solar furniture plants.	Students of the high schools of the province of Savona territory.	30
10th Novembre 2008	Guided visit	Photovoltaic: principles of functioning, the misure of the solar energy and the story of the solar technology.	Students of the high schools of the province of Savona territory.	25
21th Novembre 2008	Seminario	The application choices Poles, mono and amorphous.	Enterprises and building constructors.	15
10th December 2008	Guided visit	Photovoltaic: principles of functioning, the misure of the solar energy and the story of the solar technology.	Students of the high schools of the province of Savona territory.	25
18 December 2008	Info Day	Presentazione dei risultati del progetto	PV community, Local Authorities, european partners	50