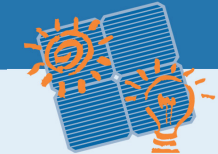


Task 10 - Urban-Scale PV Applications

**New rising era for photovoltaic
integration in buildings**

EU Photovoltaic Technology Platform
Brussels, Belgium
2nd February 2007

Bruno Gaiddon
Hespul, France
Bruno.gaiddon@hespul.org



IEA Work Leading to Task 10

BIPV in IEA Perspective

- IEA SHC Task 16
What is BIPV ?
- IEA PVPS Task 7
How can we do BIPV ?
- IEA PVPS Task 10
Let's do BIPV !

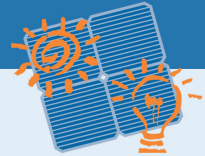




Task 10 - Urban Scale PV Applications

Overall objective

The objective of IEA PVPS Task 10 is to enhance the opportunities for wide-scale, **solution-oriented** application of photovoltaic power electricity production in the **urban environment** as part of an **integrated approach that maximizes building energy efficiency and solar thermal and photovoltaic usage.**



Task 10 Countries Participating

Australia

Austria

Canada

Denmark

France

Italy

Japan

Korea

Malaysia

Netherlands

Norway

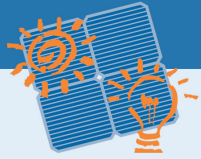
Portugal

Sweden

Switzerland

USA

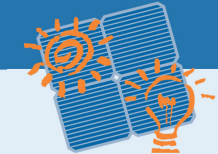
+ PV UPSCALE project
partners



EU funded PV UP-SCALE project

- Objective : contribute to Task 10 work
- Participants : The Netherlands, UK, Germany, Spain, Austria, France
- Addressed issues
 - World Database
 - Urban Planning
 - Grid Issues
 - Economical drivers
 - Dissemination
- www.pvupscale.org





Task 10-Workplan

SUBTASK 1: ECONOMICS AND INSTITUTIONAL FACTORS

- 1.1 Value analysis
- 1.2 Barriers Resolution
- 1.3 Market Drivers
- 1.4 Market Roadmap

SUBTASK 2: PLANNING, DESIGN AND DEVELOPMENT

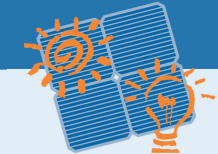
- 2.1 Integrating PV development and design practices
- 2.2 Urban Planning

SUBTASK 3: TECHNICAL FACTORS

- 3.1 Building Industry/BIPV Products and Projects
- 3.2 Codes and Standards
- 3.3 Electricity Networks
- 3.4 Market Driven Approach
- 3.5 Certification Practices

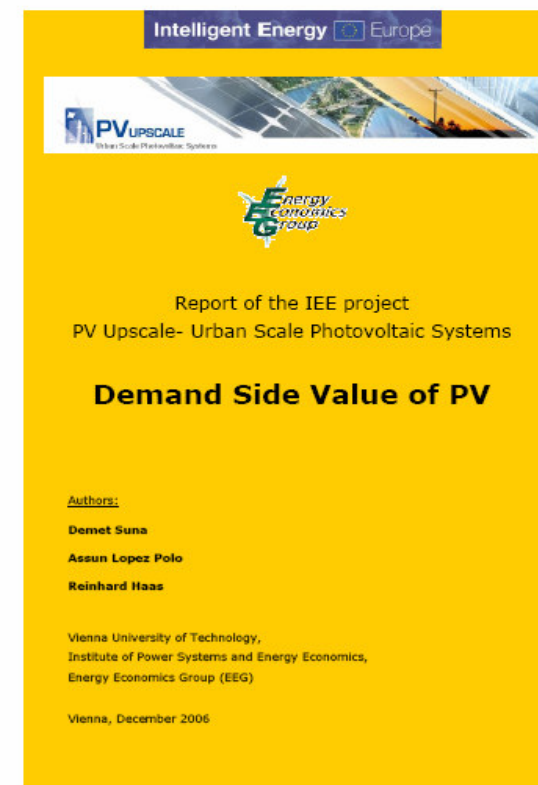
SUBTASK 4: TARGETED INFORMATION DEVELOPMENT

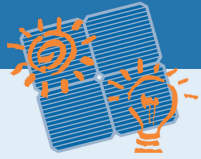
- 4.1 Educational tools
- 4.2 Marketing Competition
- 4.3 Marketing approaches and consumer aides
- 4.4 Stakeholder Perceptions
- 4.5 Continuous communication/results



Economics and Institutional factors – Subtask 1

- Report on demand side value of PV
- Addressed stakeholders :
 - Policy makers
 - Governments
 - Utilities
 - Residential
 - Commercial
 - Architects
 - Developers



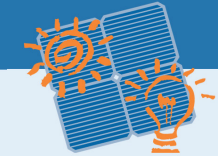


Planning, Design and development – Subtask 2

- Technical workshop with city planners, architects, developers to review existing urban plans



Amersfoort, Netherlands



Planning, Design and development – Subtask 2

- Development of virtual urban plans with city planners, architects and developers



Heerhugowaard, Netherlands



Technical factors – Subtask 3


- Field experience on the effects and impacts of PV systems on distribution grids (Japan)






Technical factors – Subtask 3

- World PV project database



PV DATABASE


Urban Scale Photovoltaic Systems



[Home](#) | [Introduction](#) | [BIPV Projects](#) | [BIPV Products](#) | [Urban scale PV](#) | [Search](#) | [Contact](#) | [Links](#)

BI PV Project Summary

Name project	Fire station Houten
Country	Netherlands
Year	2000-09-00 (Start operation date)
PV application	Inclined roof - transparent roof
PV power total	23.9 kWp
Location	Houten, Utrecht
Latitude/Longitude	52°1'25.3"N 5°9'33.1"E
Summary	In the municipality of Houten a new Fire station has been realized. At the south side the ultra modern roof has been supplied with 400 m ² of semi-transparent PV solar panels. The municipality and the energy company of Eneco (formerly REMU) want to use the project the promotion of sustainable building in general and of solar power in particular. The project has the first segmented solar PV facade/roof with semi-transparent PV panels as building elements.
Keywords	(PV) architecture, (PV) transparent modules

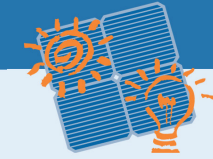


Pictures

PDF's

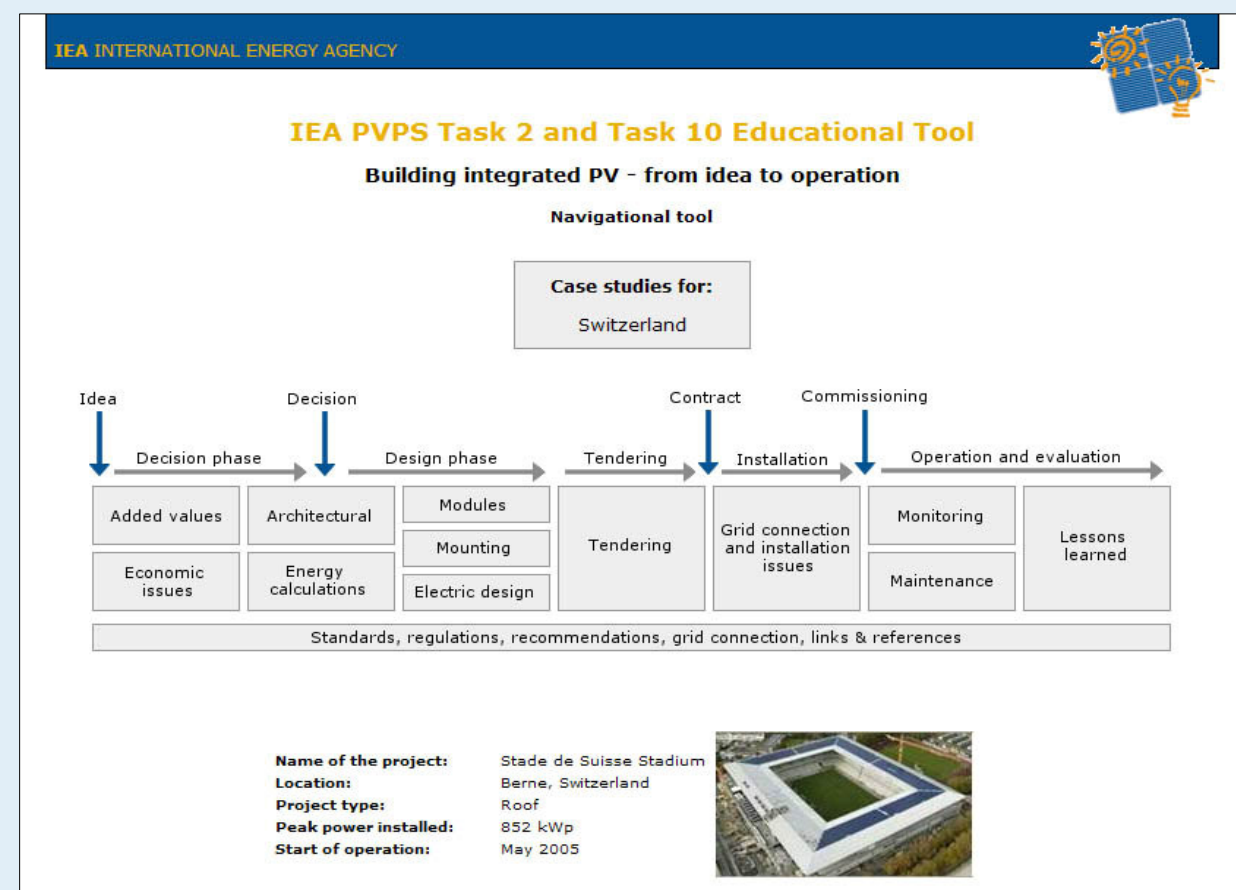
Case studies

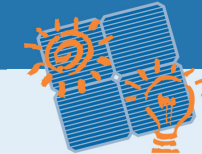
Details



Targeted Information development – Subtask 4

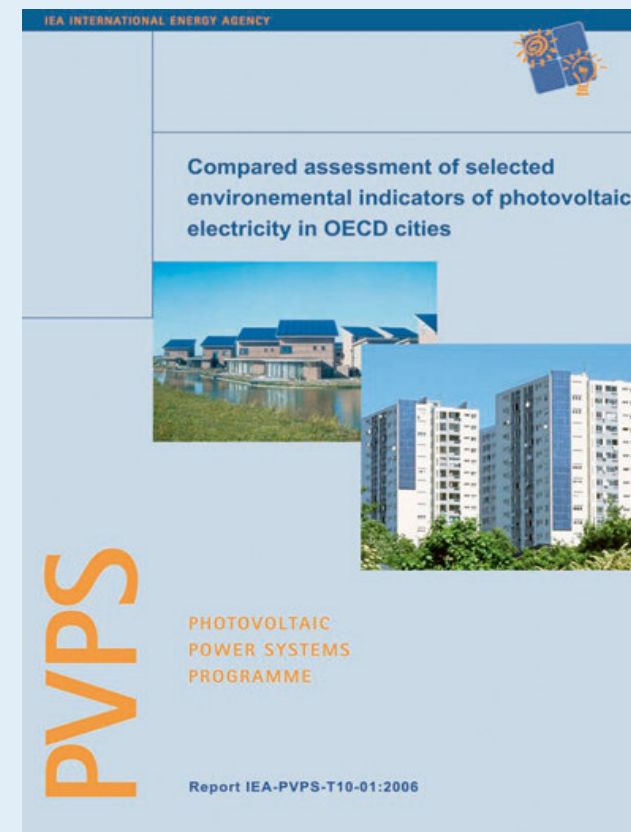
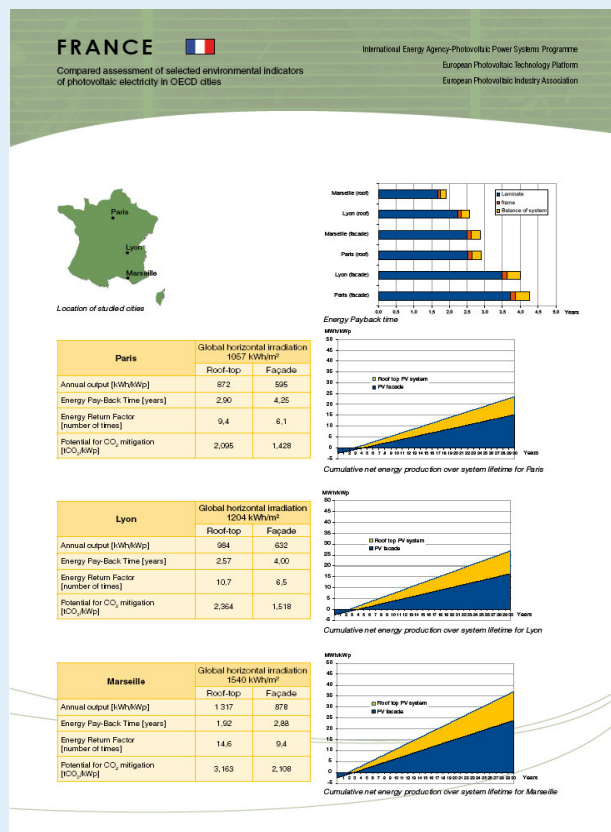
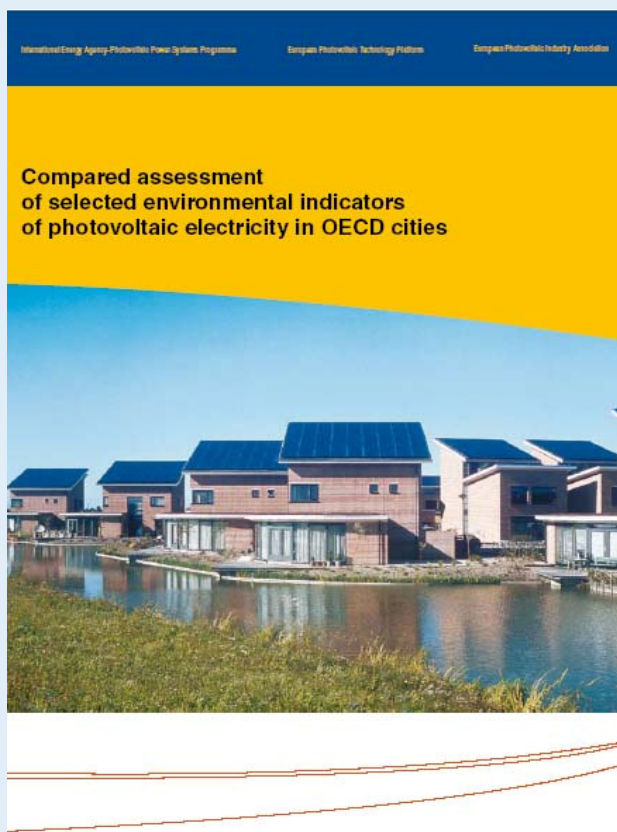
- Online BIPV Education tool

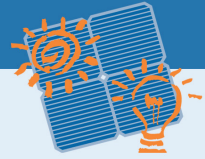




Targeted Information development – Subtask 4

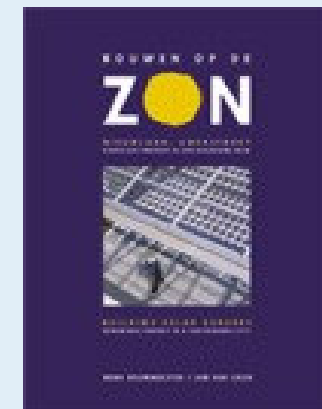
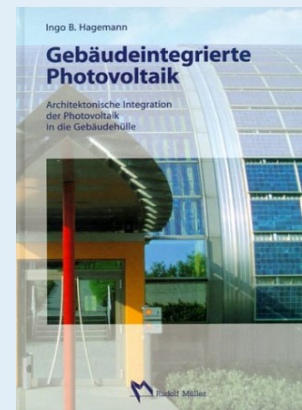
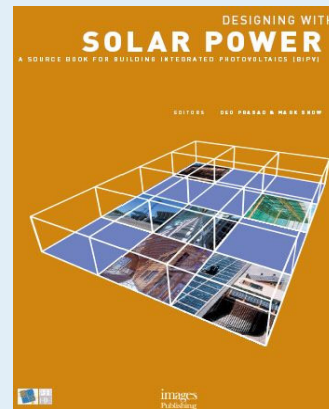
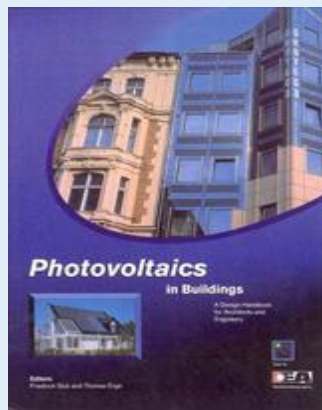
- Report on Energy Pay Back Time of PV systems in OECD cities





Targeted Information development – Subtask 4

- “Designing Solar Cities”
- A book under preparation on Urban Planning and PV



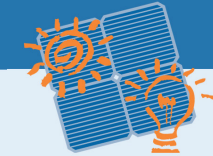


Targeted Information development – Subtask 4

- Lisbon Ideas Challenge – A design competition with photovoltaics



→ Will be presented by the next speaker !



Thank you !

www.iea-pvps-task10.org

www.pvupscale.org



PVPS