



# The IEA Photovoltaic Power Systems Programme

into the second decade of  
International Co-operation

PVPS

Pedro Paes



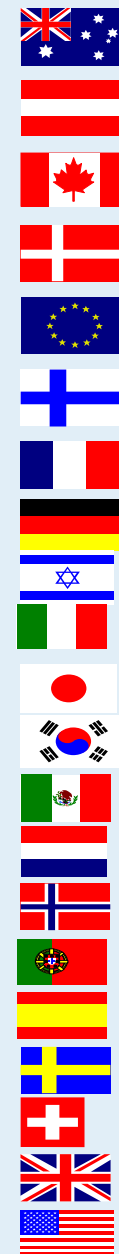
# The IEA PVPS Mission

To enhance the **international collaboration** efforts which **accelerate the development and deployment** of photovoltaic solar energy as a **significant and sustainable renewable energy option**

21 member countries

120 - 150 experts, ~ 4 Mio. Euro

PVPS





# The PVPS Objectives

- To stimulate activities that will lead to a **cost reduction** of PV power systems applications;
- To **increase the awareness** of PV Power Systems potential and value;
- To foster the removal of **technical and non-technical barriers** of PV power systems for the emerging applications in OECD countries;
- To enhance **co-operation with non-OECD countries** and address both technical and non-technical issues of PV applications in those countries.



# PVPS working aspects

Global network of expertise

Broad variety of stakeholders

Independent, objective, neutral

Country based, task-shared

Collect & disseminate information

Perform analysis and draw conclusions

Provide recommendations and advice

Communication & interaction



# Task 1

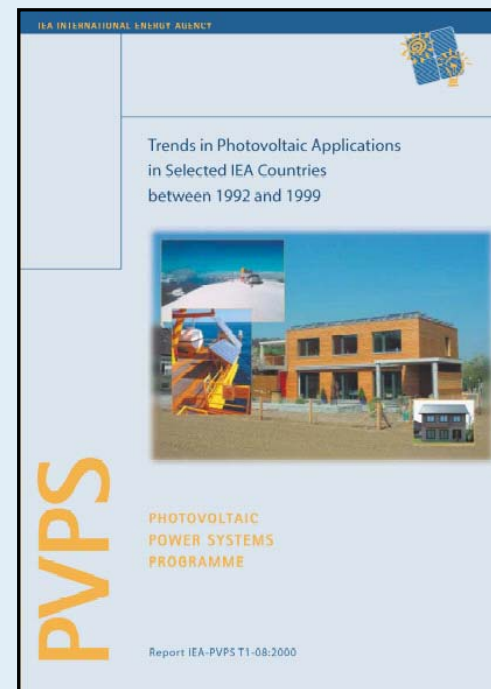
Exchange and dissemination  
of information on  
photovoltaic power systems

Trends in photovoltaic applications  
in selected IEA countries  
1992 - 2003

Added values of  
photovoltaic power systems

Newsletter PVPower

PVPS website [www.iea-pvps.org](http://www.iea-pvps.org)





# Task 2

Operational performance,  
maintenance and sizing of photovoltaic  
power systems and subsystems

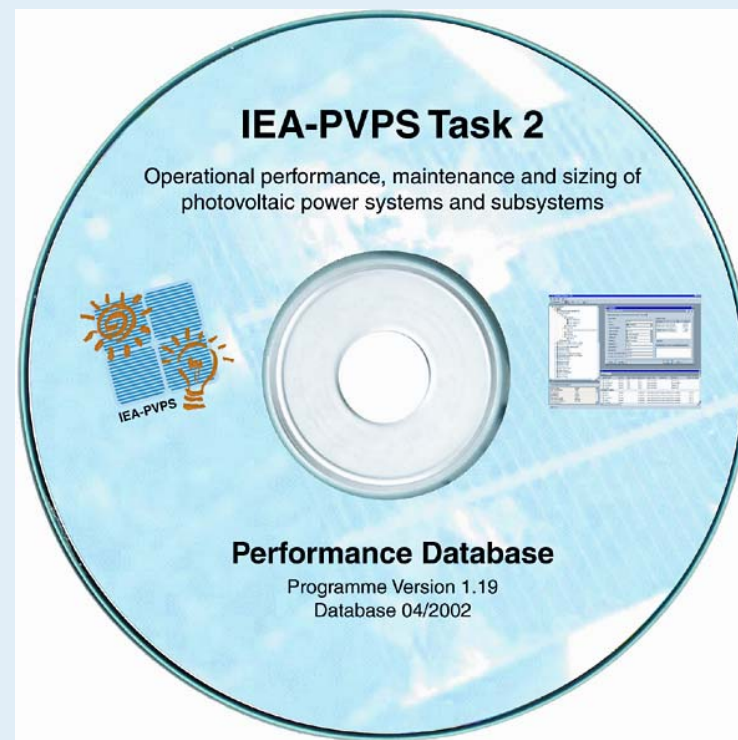
IEA PVPS Data base

> 400 PV systems

High quality data

Analysis

[www.task2.org](http://www.task2.org)



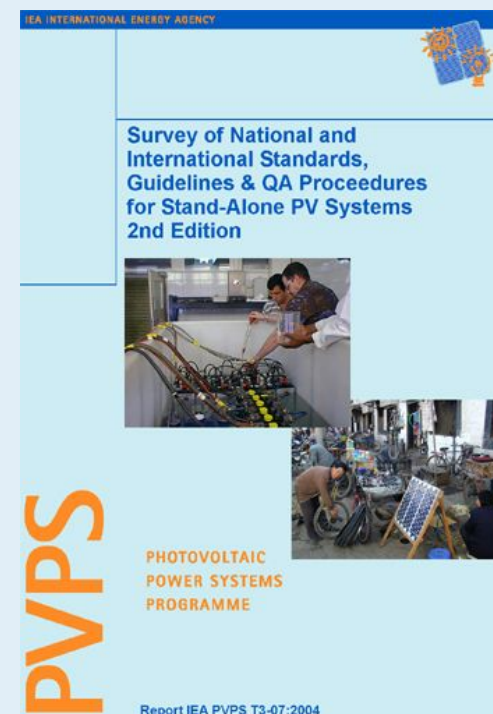


# Task 3 Use of photovoltaic power systems in stand-alone and island applications

Survey of international standards, guidelines and QA procedures for stand alone PV systems

Guidelines for Selecting Stand Alone PV Power Supply Systems

Testing of Batteries





# Task 5

## Grid interconnection of building integrated and other dispersed photovoltaic power systems

International guidelines for certification

Islanding: risk analysis, detection, probability

Impacts in distribution networks

Power and value of grid-connected systems





# Task 7 Photovoltaic power systems in the built environment

Market deployment models for building  
integrated PV

PV in non-building structures

Potential of BIPV

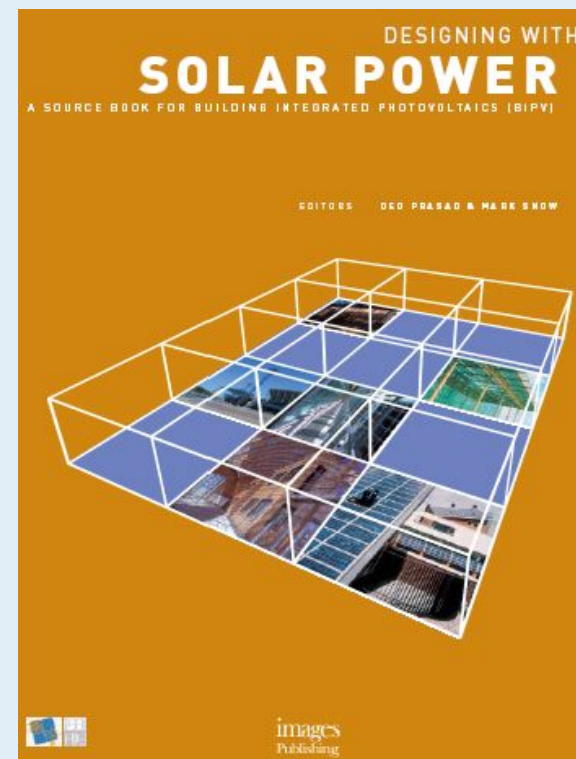
Guidelines for economic evaluation

Reliability of BIPV

[www.pvdatabase.com](http://www.pvdatabase.com)

[www.demosite.ch](http://www.demosite.ch)

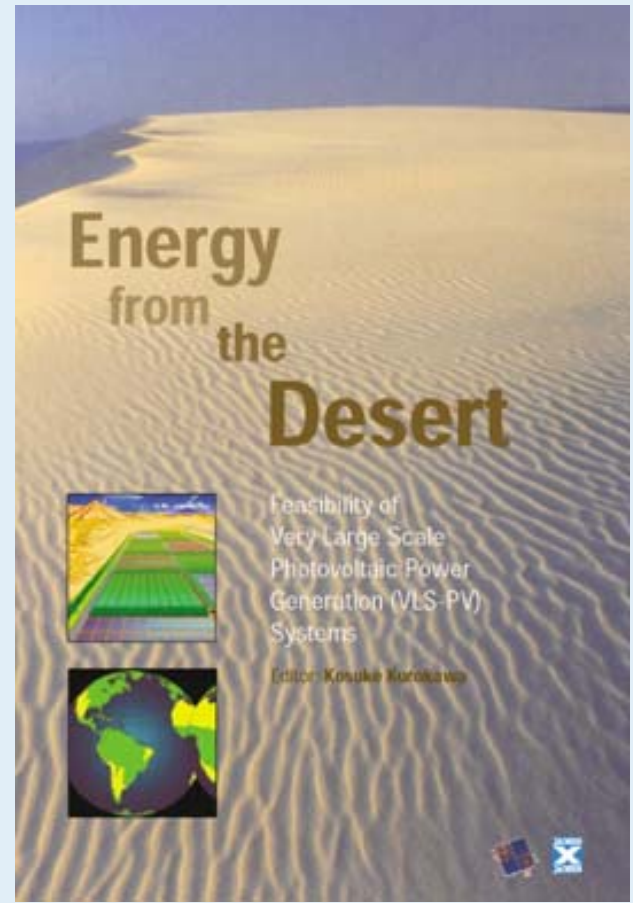
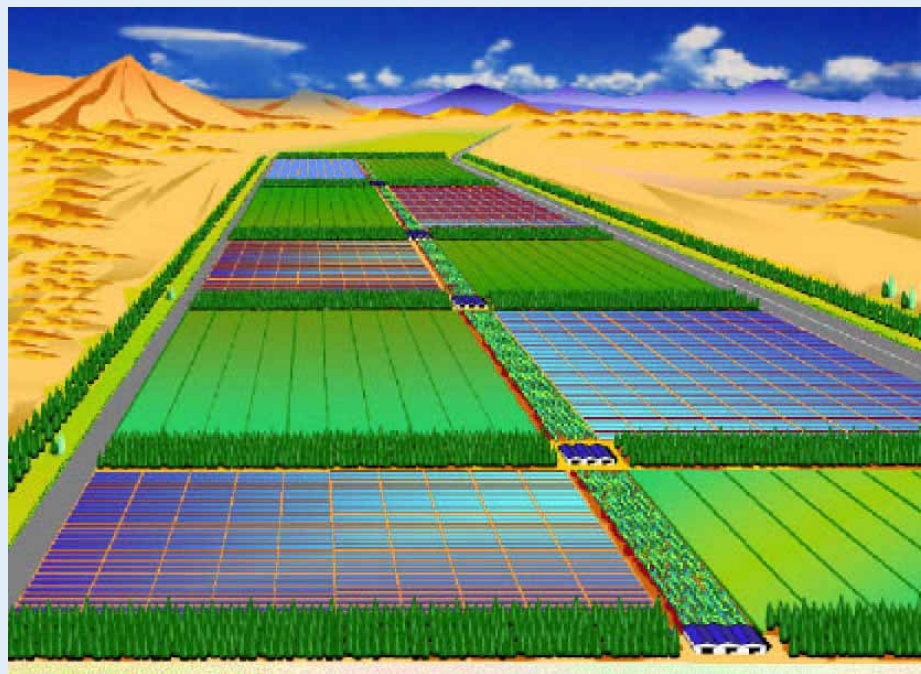
[www.pvsyst.ch](http://www.pvsyst.ch)





# Task 8 Very large-scale photovoltaic power generation systems in remote areas

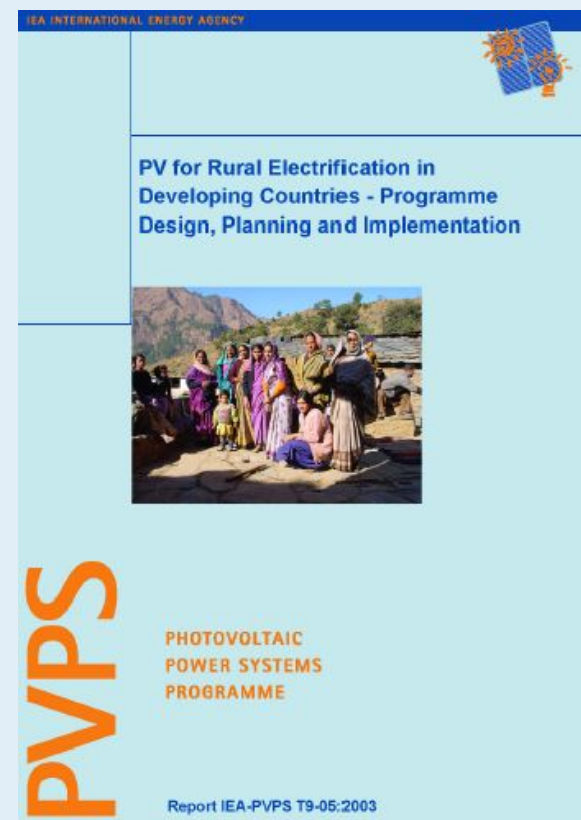
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# Task 9 Photovoltaic services for Developing Countries

To increase the **sustainable** use of PV in developing countries (and contribute to meeting the Millennium Development Goals)





# Task 10 Urban scale PV applications

Economics and institutional factors

Urban Planning, Design and Development

Technical Factors

Targeted Information Development and Dissemination





# Portugal participation

Contracting party: INETI

ExCo member: P. Paes (EDP)

**Task 1:** DGGE / ADENE (L. Silva)

**Task 3:** INETI (A. Joyce, C. Rodrigues)

**Task 5:** EDP (A. Venâncio, P. Paes)

**Task 6:** EDP (A. Mano)

**Task 10:** IN+ (M. J. Rodrigues)



# To conclude

- Well-established international programme in PV
- Global, independent network
- Provides independent information and advice to a wide range of stakeholders (gov., industry, utilities, research)
- Ambition of contributing to the market deployment of this young technology in various applications

PVPS open for suggestions and recommendations for improvement