

PV-EC-NET
Thematic Network for Co-ordination of European and National
RTD Programmes on Photovoltaic Solar Energy

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ABSTRACT: At this moment Europe is one of the leading players in the field of Photovoltaic solar energy (PV). However, the funding for PV in the European countries has not kept track with those in other countries such as Japan and the USA. Moreover the co-ordination of funding in Europe is poor since 90 % of the total funding budget in Europe is provided by national governments through independent national programmes. In order to consolidate its position amongst the top three regions in the field of PV in the world, a better co-ordination of national activities is necessary. PV-EC-NET, a network of co-ordinators of national programmes within Europe, has been launched to provide this necessary co-ordination. To achieve this PV-EC-NET will collect, investigate and disseminate information on the national programmes, carry out a programme – benchmark, and formulate a commonly supported European PV RTD Road Map

Keywords: Strategy – 1: R&D and Demonstration Programmes – 2: National Programme - 3

1. INTRODUCTION

From the renewable energy sources PV is one of the, if not the, most promising source. After a slow start caused by the initial excessive costs of PV, the market for PV is now growing strongly with an average annual growth of approximately 25% over the last 5 years. This success is mainly derived through market stimulation and intensive RTD work during the past 10 years in Japan, the USA and Europe. This has caused a price reduction of a factor 3 since 1990. Still, with 'Business as usual' and thus with the present growth rate, the contribution of PV to the energy production in Europe in 2020 will not exceed 2,4%. For another price reduction by a factor 3 to 5, which is needed for PV to become competitive with present consumer electricity price, an even greater RTD activity is required during at least the coming 10 years.

At this moment Europe is amongst the top three players of the world in the field of PV. For the year 2000, however, the budgets for funding for PV within the European Community are at an average of only 7 MEuro per member country. In that same year the budgets for funding and incentives in Japan and the USA added up to 480 MEuro and 61 MEuro respectively.

Though the total budget in Europe adds up to 120 MEuro, not less than 90% of this budget is allocated to the independent national programmes, with different objectives, targets and approaches, whereas the budgets in Japan and the USA are strongly focussed on coherence of activities.

To consolidate and preferably improve the position of the European Community in the world PV market under these circumstances better tuning of the national and EC programmes seems vital.

To provide the necessary co-ordination to improve the coherence of national and EC programmes a group of experts, brought together by the EC to discuss the future of PV solar energy in Europe, launched the idea to set up a

PV RTD Co-ordination Network of national programme co-ordinators. This idea has resulted in the formation of PV-EC-NET: PhotoVoltaic European Coherence NETWORK:

Netherlands:	Novem b.v., Nederlandse Onderneming Voor Energie en Milieu b.v.,
Switzerland	NET, Nowak Energy & Technology Ltd.,
Denmark:	ENS, Energistyrelsen (Danish Energy Agency),
Greece:	CRES, Centre for Renewable Energy Sources,
France:	ADEME, Agence de l'Environnement et de la Maitrise de l'Energie,
Italy:	ENEA, Ente per le Nuove Tecnologie, Energia e l'Ambiente,
United Kingdom:	DTI, The Department of Trade and Industry,
Austria:	ÖFP Arsenal, Österreichisches Forschungs- und Prüfzentrum Arsenal G.m.b.H,
Belgium:	IWT, Instituut voor de Aanmoediging van Innovatie door Wetenschap en Technologie in Vlaanderen,
Spain:	CIEMAT, Centro de Investigaciones Energéticas Medioambientales y Tecnológicas,
Finland	NAPS, NAPS Systems Oy,
Portugal:	INETI, Instituto Nacional de Engenharia e Tecnologia Industrial,
Poland:	WUT, Warsaw University of Technology,
Sweden:	FORMAS, The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning,
Sweden:	STEM, The Swedish National Energy Administration.

2. OBJECTIVES

The main goal of PV-EC-NET is to increase the effectiveness and coherence of the PV RTD Programmes of the EU and the independent EU member- and associated countries (hereafter indicated as 'European PV RTD programmes'). Since the most important prerequisite for coherence is the exchange of information, PV-EC-NET will first collect, analyse and disseminate information about these European PV RTD programmes. Based on the analyses PV-EC-NET will formulate a commonly accepted European PV RTD Road Map.

3. PROJECT WORK PLAN

The activities of PV-EC-NET are divided over 7 work packages:

- Work Package 1: Network Management
- Work Package 2: Co-ordination with other Platforms
- Work Package 3: Collection of Information
- Work Package 4: Analysis of the National and EU Programmes
- Work Package 5: Formulation of a European PV RTD Road Map
- Work Package 6: Dissemination of Information.
- Work Package 7: Proposing Recommendations for National Governments and the European Commission

3.1. Work Package 1: Network Management

Within the work package Network Management all activities concerning the co-ordination of the different work packages and the management of the whole project are assembled. Co-ordination of the work packages includes 6 meetings of the work package leaders, 6 meetings of the whole project group and 2 meetings with the European Commission. Management of the project also includes preparation of the interim and final reports to the EC and the financial administration.

3.2. Work Package 2: Co-ordination with other Platforms

To avoid undesired overlap, PV-EC-NET co-ordinated her activities with those of other existing and future platforms. The platforms of importance to PV-EC-NET can be divided into two groups:

1. Independent International networks and organisations, such as EPIA, CENELEC, IEA, etc. and
2. EC - funded networks such as PVNET, aSiNet, etc.

Before the actual co-ordination work will start, an inventory will be made of all networks of interest including their goals and activities. PV-EC-NET will preferably co-ordinate her activities with these networks through her own members, who already participate in these networks.

3.3. Work Package 3: Collection of Information

As mentioned before, collection of information is the basis for increased coherence. Within work package 3, information on national programmes, the visions and strategies behind them, the budgets and methods available for them and the results achieved with them will be collected. A Central European Photovoltaic Information Office will be installed for this purpose. This will be done in collaboration with WP 6. This office will become the

central office in Europe for all information concerning all European PV RTD programmes.

3.4. Work Package 4: Analysis of the National and EU Programmes

In order to increase the coherence of the European PV RTD programmes, profound knowledge of the programmes and their effectiveness is required. PV-EC-NET will therefore perform a benchmark of the European PV RTD Programmes and a survey of the non-European activities in the field of PV. In order to safeguard the objectiveness, both the benchmark and the international survey will be carried out by an independent subcontractor.

Part of the international survey, will be the analysis of the programmes of the 3 most important non-European countries in the PV market, being Japan, the USA and Australia.

The result of this work will be a report, giving an overview of the programmes, describing for each of them the advantages and disadvantages and the effectiveness in relation to the targets. For this a proven analysis method will be applied, analysing the 'IMPACT' of the different programmes.

3.5. Work Package 5: Formulation of a European PV RTD Road Map

Given the results of the benchmark and the international survey PV-EC-NET will formulate a commonly shared PV RTD Road Map for European PV RTD Programmes. The European PV RTD Road Map will describe targets and approach for PV RTD for the European Union and the independent European Governments involved.

Based on a SWOT (Strengths, Weaknesses, Opportunities and Threats) – analysis the PV RTD Road Map will be formulated during a three days workshop. The final European PV RTD Road Map will preferably be presented at the 18th World Photovoltaic Solar Energy Meeting and Exhibition, which will take place in Osaka, in May 2003.

3.6. Work Package 6: Dissemination of Information.

This work package concentrates on one of the most important aspects of this Accompanying Measure: the improvement of the accessibility of information on the above mentioned programmes.

An important part of this work package will be the improvement of the uniformity of the information. Making available an easily accessible database of all larger projects running under the European PV RTD programmes will be a part of this effort.

A search will be done to find the most appropriate set of channels for dissemination of the acquired information to the target groups. This set will at least contain the following three means of information dissemination:

1. An internet site, containing at least the following pages:
 - An overview of the activities of PV-EC-NET and other international co-ordinating activities, including at least EPIA, CENELEC, EnR and EIA.
 - A database containing information on the European programme and the different European national programmes, including visions, strategies, budgets, methods, and results
 - A database containing all projects, supported by one or more of the above mentioned programmes.

- The results of the benchmark.
 - A portal to the Internet sites of the above mentioned programmes and other international co-ordinating networks, AM's, TN's, and CA's.
2. A 4-monthly written communication preferably added as an annex to mayor European journals on PV, such as Photon, and to the monthly communication of the EC on RTD programmes.
 3. The direct communication from the members of PV-EC-NET to the governments they represent (these hours are part of the work normally done by the members of PV-EC-NET in order of their own governments, and are therefore included at a 0% EC contribution).

3.7. Work Package 7:

Defining Recommendations for National Governments and the European Commission

Based on the benchmark and the European PV RTD Roadmap, PV-EC-NET will formulate a proposal for a set of recommendations for both the national governments and the European Commission concerning the national and EC PV RTD programmes. The actual formulation of the recommendations will be done in close consultation with representatives of the EC during a 3 days workshop, preferably organised in one of the candidate member countries of the EU.

Within this work package the communication from PV-EC-NET to the national governments will go through the established channels of the PV-EC-NET members as mentioned in WP 6. Unless supported by the representatives of the EC, recommendations to the national governments should be presented as private recommendations of the representatives to their own governments.

4. THE CONSORTIUM

PV-EC-NET consists of the organisations co-ordinating the PV RTD programmes in the different countries of the EU and some of the Associated countries. All members are deeply involved in the strategies of their countries concerning PV. Most members have a highly appreciated advisory function concerning the PV strategies in their countries.

Since the members of PV-EC-NET all have the responsibility to carry out the PV strategies in their countries, they are the organisations most suited to collect the information on the visions, strategies, methods, budgets and results of these programmes. Furthermore they are the parties most likely to be able to influence the national strategies and thus to increase where possible the coherence of the PV RTD programmes in Europe

5. DELIVERABLES

The two most important product of PV-EC-NET will be:

- a benchmark report of the different national and international programmes
 - a commonly shared European PV RTD Road Map
- During the process PV-EC-NET will other deliverables, necessary to achieve its objectives. The most important of these process supporting deliverables are:
- a central European PV information office
 - a PV RTD information web – site
 - a periodical containing up to date information concerning the European PV RTD programmes