

PV-ERA-NET – A PROGRAMMERS’ APPROACH TO STRENGTHEN EUROPE’S POSITION IN PV RESEARCH AND TECHNOLOGY

I. Arzberger¹, A. Claverie², C. Diamanti³, M. Gutschner⁴, M. Hall⁵, M. Hübner⁶,
M. Montes Ponce de León⁷, K. Newell⁸, S. Nowak⁴, S. Pietruszko⁹, C. Protogeropoulos¹⁰, M. Ranttil¹¹, W. Schöll¹²,
A. Suska-Bulawa¹³, J. Swens¹⁴, R. Urban¹⁵, J. Windeleff¹⁶, U. Wolfer¹⁷, T. Zillner¹⁸

¹Forschungszentrum Juelich, Project Management Organization Energy-Technology-Sustainability (ETN), D-52425 Juelich, Germany,

email: i.arzberger@fz-juelich.de.

²ADEME, Sophia Antipolis, France,

³General Secretariat for Research and Technology, Athens, Greece,

⁴NET Nowak Energy & Technology Ltd., St. Ursen, Switzerland,

⁵Swedish Energy Agency, Eskilstuna, Sweden,

⁶Oesterreichische Forschungsförderungsgesellschaft, Vienna, Austria,

⁷Ministry of Education and Science, Madrid, Spain,

⁸DTI, London, U.K.,

⁹Warsaw University of Technology, Warsaw, Poland,

¹⁰CRES, Pikermi, Greece,

¹¹FORMAS, Stockholm, Sweden,

¹²Ministry of Transport, Energy and Spatial Planning NRW, Duesseldorf, Germany,

¹³Ministry of Scientific Research and Information Technology, Warsaw, Poland,

¹⁴SenterNovem, Utrecht, Netherlands,

¹⁵Ministry of Science and Research NRW, Duesseldorf, Germany,

¹⁶Danish Energy Authority, Copenhagen, Denmark,

¹⁷Swiss Federal Office of Energy, Bern, Switzerland,

¹⁸Federal Ministry of Transport, Innovation and Technology, Vienna, Austria

ABSTRACT: Including 17 institutions from 11 countries, PV-ERA-NET aims at promoting cooperation and coherence of national and regional funding programmes in the field of PV RTD in order to strengthen the European PV RTD landscape. The project’s overall objective shall be achieved by a three-step approach ranging from structured information exchange over the assessment of best practices in programming towards common strategies and joint activities. First results are based on programme reports including best practice analysis and consist of tools for structured and sustainable information exchange on programmes and programming.

Keywords: European cooperation, R&D and Demonstration Programmes, National Programmes

1 INTRODUCTION

1.1 State of the Art

Solar photovoltaic electricity research and technical development (PV RTD) has a solid basis within Europe’s high tech landscape, facing a rapidly growing market with fast innovation cycles as they are typical for relatively young high technologies. Since the late 1980s, a growing number of European nations and regions have included PV RTD into their different frameworks for research and innovation funding and thereby generated an active and strong RTD community in this sector. In recent years, the public funding on national level summed up to approximately 75% of the whole European PV RTD spend [1]. However, national efforts from the European point of view are still relatively fragmented in the way that they often lack transnational coherence in terms of mutual knowledge, topics, approaches and cooperation. The overall strategic objective of PV-ERA-NET is thus to strengthen coherence and cooperation of PV RTD programming on the transnational level in order to create a durable impact on innovation strength and economic growth in the European PV sector.

1.2 Project Framework

PV-ERA-NET, in full: “Networking and Integration of National and Regional Programmes in the Field of

Photovoltaic (PV) Solar Energy Research and Technological Development (RTD) in the European Research Area (ERA)” is a 4-year project within EU 6th Framework Programme. As an ERA-NET coordination action it is located within the EU FP6 cross-section activity “Strengthening the European Research Area”. It addresses owners and managers of PV programmes or more general funding frameworks – often related to renewable energies - comprising PV within their thematic framework. Consequently, PV-ERA-NET partners consist of ministries and programme management agencies responsible for developing, carrying out and monitoring those programmes.

PV-ERA-NET started in October 2004 with 17 participants from 11 countries, comprising more than 20 national and two regional PV RTD programmes (or parts of programmes) and thus covering a major part of PV programming activities within Europe.

2 OBJECTIVES

2.1 General objectives

The overall strategic objective of PV-ERA-NET is to strengthen Europe’s position and competitiveness in PV technology by improving the coherence of PV RTD programming efforts within the European Research Area.

PV-ERA-NET is situated in a context that can be described by a triangle with the corner points: PV RTD technology, funding programmes, i.e. RTD support and finally the networking structure to be achieved [Fig. 1]. Those corner points represent at the same time the activity range in which PV-ERA-NET operates.

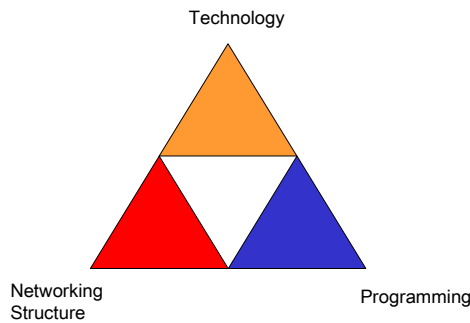


Figure 1: PV-ERA-NET activity field

In view of the above-mentioned fragmentation of PV RTD efforts in Europe, PV-ERA-NET is meant to provide structures for increased coordination and cooperation with a long-term perspective and a durable structuring effect for PV research programmes. The goal is to enhance coherence, i.e. to close gaps and to form a common basis for PV RTD programming in order to achieve more general benefits for European PV stakeholders and markets as well as from the cross-sectional viewpoint of contributing to a world-wide sustainable energy supply structure [Fig. 2]. The national and regional programmes, represented by the circle sectors, are meant to grow together in their context of PV RTD stakeholders, supporting markets and contributing to overall energy and climate policy goals.

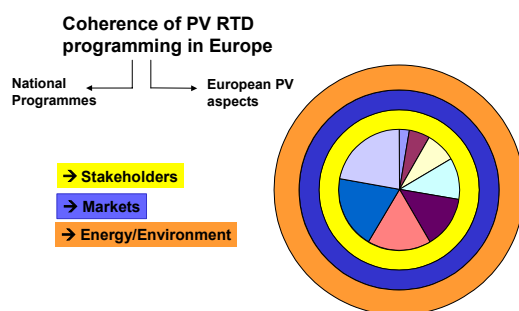


Figure 2: PV-ERA-NET general objectives

2.2 Project objectives

The general project goals related to these overall strategic objectives are:

1. Enhanced and sustained coordination, cooperation and coherence of photovoltaic RTD programming activities.

The development of efficient information structures is as well part of this as the identification of common strategy issues.

2. Improvement and corroboration of the structure and effectiveness of photovoltaic RTD activities.

Examples for key issues are: setting standards for best practices in transnational programming cooperation, mobilisation of resources with respect to different programming aspects and encouraging technology transfer.

3. Development of common transnational activities in photovoltaic RTD programming.

3 APPROACH AND ACTIVITIES

The general project objectives shall be reached by means of a three-step approach consisting of:

1. Structured information exchange and development of sustainable dissemination strategies.
2. Identification of complementarities, gaps and opportunities as well as barriers and solutions regarding the cooperation between different PV RTD programmes in order to assess suitable strategies for sustained coordination and cooperation.
3. Development of a strategy plan and implementation of joint activities and approaches.

The overall structure is translated into a variety of planned networking activities as explained below. With regard to all activities, an emphasis shall be put on the creation of a durable structuring effect, reaching out beyond the time and framework of the project itself.

3.1 Information exchange

The main activities within this first step are to develop tools for the improved information exchange on PV RTD programmes and to elaborate on best practice models for programming. The partners will create structures for gathering information about contents, approaches and context of the participating programmes and by this build the basis for sustainable future cooperation. After setting standards for the description of the programmes, information is summed up in a programme survey report and in a PV RTD community report in order to enable the partners to gain mutual knowledge about each other's activity fields and to learn from each other. The project activities include dissemination practices such as a website presentation, public reports and others.

3.2 Strategy development

On the basis of the overview gained, an analysis of gaps and opportunities leads to first ideas on structure and topics for transnational PV RTD programme cooperation. Possible issues will be for instance formal aspects as common evaluation systems, IPR arrangements and dissemination strategies as well as general PV topics and technological questions. The results will be summed up in a strategy report showing the key issues for future joint activities.

3.3 Joint activities

The concluding step of PV-ERA-NET will be the development of a joint action plan, respectively a common work programme for implementing the cooperation mechanisms identified in the two foregoing work packages. It shall be followed by the launch of joint transnational activities on programming level based on

the opportunities identified. Possible activities comprise dissemination strategies as well as cooperation in the field of reviews and evaluation procedures or training activities. Additionally, within the given legal and technological framework there will be an approach towards common transnational programme activities, e.g. joint calls and the outline of a joint programming structure suitable for a sustained cooperation.

4 RESULTS

After a project starting phase at the end of the year 2004, during which the mutual knowledge of partners and PV RTD programmes involved in PV-ERA-NET was in the centre of interest, several activities in the context of structured information/dissemination strategies were started.

In a first step, an overview of PV RTD programming activities in the partner states and regions was assembled. In country reports, all partners contributed detailed information on how PV RTD funding is carried out in the different national and regional frameworks. The general format to provide this information was set as a standard in order to cover all relevant aspects of programming. It comprises overall issues, as objectives and general strategies as well as stakeholders and technological focus of the respective programmes, but also concrete questions on technical aspects, for instance the description of procedures from proposal to project, dissemination strategies and others. The mutual review of this reports and thus exchange between partners on programming practices and issues already created a first learning effect. Further, a first overview over complementarities and gaps between programmes was given as well as an insight in barriers and opportunities for joint activities and shall provide the analytical basis to indicate ways towards future transnational PV RTD activities.

Those detailed reports were then brought into a more concentrated structure, which is suitable to be easily perceived and regularly updated in order to ensure a sustained information flow instead of simply reflecting a transient status.

PV-ERA-NET is presented in the Internet on the website www.pv-era.net. Apart from general information on the project, major results will be made publicly available in order to spread the results achieved and thus to provide information on and best practice models for PV RTD programming.

5 CONCLUSION

The PV-ERA-NET project assembles a major part of European PV RTD support programme owners and managers from 11 European countries which have formulated an initiative towards improved cooperation and coordination on programming level as their common objective. Various project activities ranging from structured information exchange over common strategy and best practices development towards joint transnational activities will be implemented in order to enhance coherence within the PV RTD programming sector on European level. First results are detailed

overviews over activities and procedures in the over 20 participating national and regional programmes, a structure for sustained information exchange and a first insight into barriers and opportunities for a future cooperation.

PV-ERA-NET thus serves as a nucleus for improved cooperation and coordination in PV RTD strategy development in the European Research Area. By this, it shall contribute to establish a strong European Research Area and to create a durable structuring effect of the European PV landscape in terms of coherence, innovation and economic growth.

6 ACKNOWLEDGEMENT

The PV-ERA-NET project is supported by the European Commission within EU 6th Framework Programme.

REFERENCES

- [1] PV-EC-NET European PV RTD Benchmark Report. By Henry Parkinson (ed.). Oktober 2003. www.pv-ec.net.