

SOLAR-ERA.NET
ERA-NET ON SOLAR ELECTRICITY FOR THE IMPLEMENTATION
OF THE SOLAR EUROPE INDUSTRY INITIATIVE

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ABSTRACT: SOLAR-ERA.NET is a network that brings together more than 20 RTD and innovation programmes in the field of solar electricity technologies in the European Research Area. The network of national and regional funding organisations has been established in order to increase transnational cooperation between RTD and innovation programmes and to contribute to achieving the objectives of the Solar Europe Industry Initiative (SEII) through dedicated transnational activities (especially transnational calls). SOLAR-ERA.NET is an EU funded FP7 project running from 2012 to 2016. Through the support of the funding organisations, more than 100 MEUR shall be mobilised for transnational RTD and innovation projects.

Keywords: R&D and Demonstration Programmes, Photovoltaic, Funding and Incentives, Strategy

1 INTRODUCTION AND CONTEXT

SOLAR-ERA.NET is a European network of national and regional funding organisations and RTD and innovation programmes in the field of solar electricity generation, i.e. photovoltaics (PV) and concentrating solar power (CSP) / solar thermal electricity (STE). SOLAR-ERA.NET shall contribute to reaching the objectives of the Solar Europe Industry Initiative (SEII) by carrying out the coordination and support actions for

the implementation of the SEII between national and regional RTD and innovation programmes.

The SEII is a joint initiative of the industry sector, EC and member states and is embedded in the European Strategic Energy Technology Plan (SET-Plan) which aims to increase, coordinate and focus EU support on key low-carbon energy technologies in order to achieve Europe's 2020 energy objectives in the future.

2 NETWORK AND MISSION

2.1 Network

As the largest ERA-NET (network in the European Research Area) ever in the solar power field, SOLAR-ERA.NET involves more than 20 national and regional RTD and innovation programmes dealing with PV and CSP. This high level of involvement of most relevant stakeholders provides excellent outreach and allows for a solid coordination needed for an efficient and coherent approach in the highly diverse and versatile RTD landscape.

The network is composed of 19 organisations being programme owners and / or programme managers (see list of authors). Countries and regions participating in the SOLAR-ERA.NET consortium and / or first set transnational calls are identified in Figure 1. SOLAR-ERA.NET is in principle open to other countries and programmes wishing to join in transnational calls.



Figure 1: Countries and regions involved in the SOLAR-ERA.NET consortium and / or in the first transnational calls

2.2 Missions and goals

SOLAR-ERA.NET has two fundamental missions. As a network funded in the ERA-NET scheme, the mission is to improve the coordination and cooperation between national and regional RTD programmes. In the context of the Solar Europe Industry Initiative (SEII), the mission of the network is to implement central parts of the SEII on a transnational level and thus contribute to achieving the goals defined in the SEII.

The more specific and essential goals and activities of SOLAR-ERA.NET are i) to launch joint calls for RTD proposals by national and regional RTD and innovation programmes and ii) to define and support the best joint activities, strategic information exchange and use of implementation tools.

By identifying and choosing SEII priority topics based on the Implementation Plans for PV respectively

CSP for transnational calls, the SOLAR-ERA.NET network shall select and fund industrially relevant transnational RTD and innovation projects in the field of solar electricity technologies.

In quantitative, financial terms, SOLAR-ERA.NET shall result in a total funding volume by the participating national and regional programmes of approximately 50 MEUR and, in total, mobilise some 125 MEUR for innovative projects.

3 FIRST ACTIVITIES, FACTS AND FIGURES

3.1 Definition of the first transnational call

The network started in November 2012. Within a short preparatory period of a few months only, not less than 15 countries and regions got ready to participate in the first set of transnational calls – launched on 4 March 2013 – with their RTD and innovation programmes.

The first set of transnational SOLAR-ERA.NET calls PV1 and CSP1 is allocated with a total public funding budget of approximately 12 million euros and covers different topics in photovoltaics (PV) and concentrating solar power (CSP) as defined by the SOLAR-ERA.NET team and approved by the participating programmes and countries.

The SOLAR-ERA.NET transnational call PV1 covers the following five topics:

- PV1.1 Innovative processes for inorganic thin-film cells & modules
- PV1.2 Dedicated modules for BIPV design and manufacturing
- PV1.3 Grid integration and large-scale deployment of PV
- PV1.4 High-efficiency PV modules based on next generation c-Si solar cells
- PV1.5 Solar glass and encapsulation materials

The SOLAR-ERA.NET transnational call CSP1 covers the following three topics:

- CSP1.1 Cost reduction and efficiency increase in components
- CSP1.2 Dispatchability through storage and hybridisation
- CSP1.3 New fluids for STE plants

3.2 Participation in the first transnational call

The transnational call is based on a 2-step/stage-procedure with i) a preproposal and ii) a full proposal phase. The participation level of the research and industry sector was very positive: some 60 preproposals with a total project volume of around 90 million euros were submitted. 257 partners are involved in the preproposals showing considerable interest throughout Europe as can be seen in Figure 2.

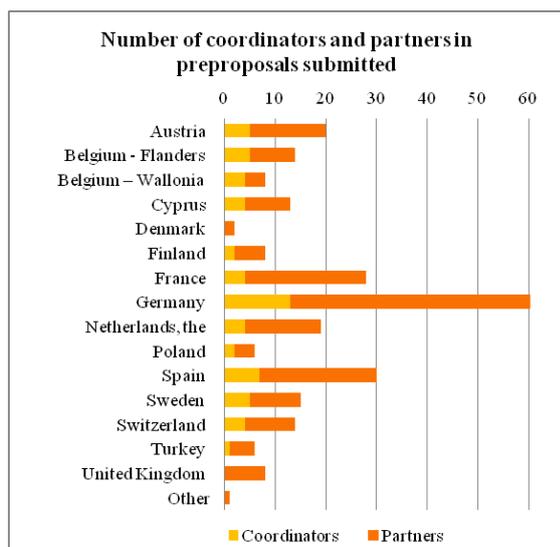


Figure 2: Number of coordinators and partners in preproposals submitted according to the countries / regions participating in the transnational SOLAR-ERA.NET call PV1 and CSP1

The majority (60%) of the organisations involved in the preproposals submitted belong to the categories of small and medium sized enterprises and large enterprises; research organizations have a share of 39%. Figure 3 shows the share of different types of organizations among the partners being involved in the preproposals submitted.

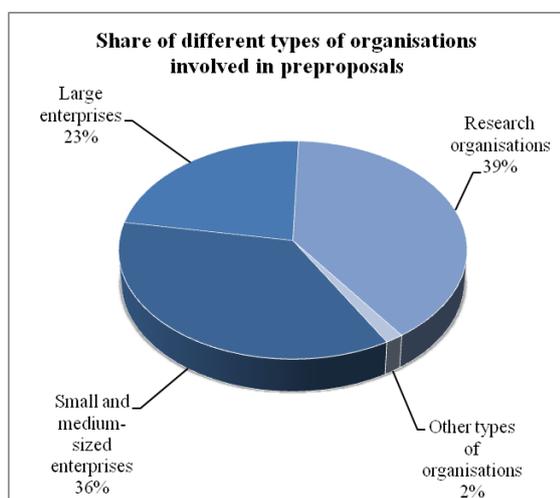


Figure 3: Share of different types of organisations involved in preproposals

47 out of the 60 preproposals were submitted for PV topics, 13 preproposals for CSP topics. Table 1 shows the numbers of preproposals submitted per call topic.

Preproposals were checked for their eligibility and evaluated by SOLAR-ERA.NET. 27 out of 60 preproposals were recommended for submitting a full proposal. The submission deadline is set for 9 October 2013, i.e. just in the week after this 28th EU PVSEC.

Table 1: Transnational SOLAR-ERA.NET call topics and numbers of preproposals submitted

Transnational SOLAR-ERA.NET call topics	N°
PV1.1 - Innovative processes for inorganic thin-film cells & modules	9
PV1.2 - Dedicated modules for BIPV design and manufacturing	16
PV1.3 - Grid integration and large-scale deployment of PV	8
PV1.4 - High-efficiency PV modules based on next generation c-Si solar cells	10
PV1.5 - Solar glass and encapsulation materials	4
CSP1.1 - Cost reduction and efficiency increase in components	9
CSP1.2 - Dispatchability through storage and hybridisation	4
CSP1.3 - New fluids for STE plants	0

4 PRELIMINARY AND EXPECTED RESULTS

4.1 Preliminary results

The first transnational SOLAR-ERA.NET call is still running so only preliminary results are available. First observations are very encouraging:

- 15 countries and regions are participating in the first call.
- 60 preproposals were submitted.
- The preproposals feature a total funding volume / project costs of 90 MEUR.
- The preproposals involve more than 250 partners throughout Europe.
- The first set of calls could be launched within a short preparatory time.

4.2 Expected results

SOLAR-ERA.NET aims at launching joint calls once a year and mobilising substantial resources of more than 100 MEUR for innovative projects.

The project proposals must clearly demonstrate i) potential commercial impact / relevance to industrial and market needs / contribution to the Solar Europe Industry Initiative and added transnational value, ii) scientific and technological excellence and iii) high quality and efficiency of the implementation and the management.

Through these joint calls for RTD and innovation topics in PV and CSP, SOLAR-ERA.NET shall contribute to reaching the objectives of the SEII; namely boosting the development of the PV and CSP sector beyond “business-as-usual,” and of the ERA-NET, while specifically enhancing cooperation between the national / regional programming stakeholders at European level.

REFERENCES

Further information is available on the project website www.solar-era.net.