

# **SOLAR-ERA.NET Cofund Joint Call**

**Guidelines for Proposers** 



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#### 1. Introduction

The SOLAR-ERA.NET Cofund Joint Call is carried out by national research and technology development (RTD) and innovation programmes and national funding agencies in the field of solar electricity generation, i.e. photovoltaics (PV) and concentrating solar power (CSP) / solar thermal electricity (STE). The Joint Call is commonly carried out by eleven countries: Austria, Cyprus, France, Germany, The Netherlands, Poland, Spain, Sweden, Switzerland, Turkey and United Kingdom.

#### Important dates:

- Official opening of the Call: 5 December 2016
- Brokering webinar: 12 December 2016, 12:00-14:00 CET
- Deadline for submitting preproposals: 20 February 2017, 17:00 CET
- Full proposal round: 6 April to 14 June 2017
- Feedback on funding decisions by end of October 2017 and project starts from end of 2017 on

### 2. Participating States, Organisations and Programmes

The participating national SOLAR-ERA.NET partners / contact points are listed in Table 1. Each applicant must check the project idea with the national contact point as early as possible in the preproposal phase, at the latest before submitting any applications.



Organisations involved in promoting the SOLAR-ERA.NET Cofund Joint Call and providing support and funding to innovative industrially relevant projects.



Table 1: National Funding Organisation Contact Points in SOLAR-ERA.NET Cofund Joint Call			
Country / Region	Organisation (Funding Organisation or Contact Point)	Contact(s) and Domain(s)	
Austria	Austrian Promotion Agency (FFG)	Anita Hipfinger: anita.hipfinger (at) ffg.at, +43 5 7755 5025	
Cyprus	Research Promotion Foundation (RPF)	loanna Sergidou Loizou: iloizou (at) research.org.cy, +357 22205047	
France	Agence de l'environne- ment et de la maîtrise de l'énergie (ADEME)	Manon Gerbaud (for CSP): manon.gerbaud (at) ademe.fr, +33 1 47 65 21 49	
Germany	Projektträger Jülich (PtJ)	Geschäftsbereich Energiesystem: Erneuerbare Energien/Kraftwerkstechnik, Fachbereich Photovoltaik (ESE 1) Hermann Bastek: h.bastek (at) fz-juelich.de, +49 2461 61 4849 Dorothea Brockmann: d.brockmann (at) fz-juelich.de, +49 2461 61 96656	
Netherlands	RVO	Otto Bernsen, otto.bernsen (at) rvo.nl	
Poland	NCBR	Magdalena Garlińska: magdalena.garlinska (at) ncbr.gov.pl, + 48 22 39 07 267	
Spain	i) Centre for the Development of Industrial Technology (CDTI) ii) Ministry of Economy and Competitiveness – Agencia Estatal Investi- gacion (MINECO-AEI)	i) Gabriel Barthelemy: gabriel.barthelemy (at ) cdti.es +34 91 5815707 ii) Severino Falcón: severino.falcon (at) mineco.es, +34 91 603 79 59	
Sweden	Swedish Energy Agency (SWEA)	Pierre-Jean Rigole: pierre-jean.rigole (at) swedishenergyagency.se, +46 16 544 21 91 Tobias Walla: tobias.walla (at) swedishenergyagency.se, +46 16 544 20 54	
Switzerland	i) Swiss Federal Office of Energy (SFOE) ii) NET Nowak Energy & Technology Ltd. (NET)	i) Stefan Oberholzer (for CSP and PV topics): stefan.oberholzer (at) bfe.admin.ch, +41 58 465 89 20 ii) Stefan Nowak (for PV topics): stefan.nowak (at) netenergy.ch, +41 26 494 00 30	
United Kingdom	Innovate UK	Amy Oswin: amy.oswin (at) innovateuk.gov.uk for eligibility Alice Goodbrook: alice.goodbrook (at) innovateuk.gov.uk for scope	
Turkey	Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (Tübitak)	Kaan Karaöz: kaan.karaoz (at) tubitak.gov.tr, +90 312 4685300 (TEYDEB)	

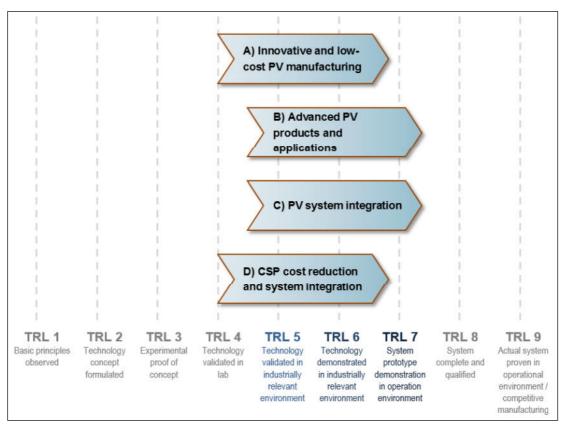


# 3. Scope and Topics of the SOLAR-ERA.NET Cofund Joint Call

The topical focus of the SOLAR-ERA.NET Cofund Joint Call is on strengthening the industrial manufacturing base through innovative manufacturing techniques, mass production, new products and services as well as integration of solar energy technologies in the energy system. The objectives of the proposals submitted must be in line with the strategic targets defined in the SET plan (see "SET-Plan - Declaration on Strategic Targets in the context of an Initiative for Global Leadership in Photovoltaics respectively Solar Thermal Electricity available on the solar-era.net website).

The SOLAR-ERA.NET Cofund Joint Call comprises four topics:

- A) Innovative and low-cost PV manufacturing issues
- B) Advanced PV products and applications
- C) PV system integration
- D) CSP cost reduction and system integration



The topical focus of the SOLAR-ERA.NET Cofund Joint Call is on strengthening the industrial manufacturing base through innovative manufacturing techniques, mass production, new products and services as well as integration of solar energy technologies in the energy system. The figure shows the four topics and their position on mainly TRL 5 and 6, i.e. validation and demonstration of (key enabling) technologies in the industrially relevant environment, stepping up to TRL 7.

Not all programmes / funding agencies will accept applications in all topics (see Table 2 and country-specific tables in the annex), and some will prioritise some topics over others. Applicants **must** check with their national contact points whether the project idea fits within the national constraints as early as possible but at least **before** submitting a preproposal.



Eligible topics are shown in Table 2 for each funding organisation participating in SOLAR-ERA.NET Cofund Joint Call.

Table 2: Eligible Topics per Funding Organisation Participating in SOLAR-ERA.NET Cofund Joint Call					
Country / Region	Organisation	Topic A) Innovative and Iow-cost PV manufacturing issues	Topic B) Advanced PV products and applications	Topic C) PV system integration	Topic D) CSP cost reduction and system integration
Austria	FFG	x	x	х	x
Cyprus	RPF	x	x	x	x
France	ADEME	x	x		x
Germany	PtJ	x	x	1	x
Netherlands, the	RVO	x	x	x	
Poland	NCBR	x	x	x	x
Spain	CDTI	x	x	x	x
Spain	MINECO-AEI	x	x	x	x
Sweden	STEM	x	x	x	x
Switzerland	SFOE	x	x	x	x
Turkey	Tübitak	x	x	x	x
United Kingdom	Innovate UK	x	x	x	2

#### A) Innovative and low-cost PV manufacturing issues

Demonstration of advanced and innovative equipment in pilot and pre-pilot line environment for highly performing technologies with high-yield throughput and cost-effective industrial production, ultimately targeting at or being compatible with GW-scale. The following issues shall be addressed and goals pursued:

- An improved quality of silicon wafers, through a deeper understanding of the silicon structure and composition depending on the crystallisation processes.
- The development of wafer tracking software systems in order to further improve the yield and the operating costs of the manufacturing processes, and to get feedback for the development of the next generation of processing equipment.
- The thin wafer handling up to the module encapsulation process.
- The development of in line tool characterisation yielding higher throughput.
- Innovative formation of PV layers (dielectrics, transparent conductive oxides, metallization, junction, etc.).

<sup>1</sup> for Germany, PV system integration is funded under the "ERA-NET cofund Smart Grids Plus" scheme

<sup>&</sup>lt;sup>2</sup> For United Kingdom, Please see national guidelines for further information on eligibility in Topic D



- Innovative cells interconnection processes and schemes enabling the design of low loss / low current modules.
- Concentrator PV (CPV) and High Concentrator PV (HCPV) technologies: advanced designs
  aiming at very high efficiency of solar cells and modules, optics for high concentration, industrial
  manufacturing processes as well as cost-efficient and reliable tracking systems.
- Processes and manufacturing issues related to production of other (non-silicon) solar cell technologies.

#### B) Advanced PV products and applications (e.g. building-integrated PV)

The focus is on innovative manufacturing of and solutions for building- and product-integrated PV systems. The following issues shall be addressed and goals pursued:

- Dimensional and outlook flexibility with customised sizes, shapes and colours, freeform module technology, and bifacial solar cells and modules, electrical design for energy output optimisation (shadows, various tilt and orientation angles, safety issues).
- Holistic approach for the energy performance.
- Easiness of installation / application.

#### C) PV system integration

The focus is on grid integration of PV power, installations and products, decreasing the costs of electricity and increasing the value of solar power. (Only PV specific issues are addressed, more general issues are addressed by smart grid, smart cities initiatives. Links to other initiatives are welcome.)

The following issues shall be addressed and goals pursued:

- An integrated approach should seek a combination of load management / self consumption, power management of the distributed PV generators and storage systems and dispatchable flexible capacities, which altogether assure a stable grid in spite of fluctuations of demand and generation.
- Design tools for the sizing of storage power as a function of PV power, load demands and share of controllable loads should be developed.
- An e-infrastructure allowing the development of innovative services in the field of PV system
  integration would be very beneficial to both researchers (power prediction) and end-users
  (remote fault detection). Then, business and market models should be developed which assure
  the active contributions of all stakeholders (PV system operators, storage system operator,
  aggregators consumers, etc.) to a stable grid.
- Development of better battery management systems based on a combination of hardware (which allows to better assess the state-of-charge and state-of-health) of batteries in combination with software for a better energy management incorporating short-term energy yield forecasting for PV-system.
- Demonstrations of solutions should be realised on a grid where the PV penetration may exceed 50% in terms of annual energy consumption.

For all PV topics, novel aspects of sustainability and safety issues can be addressed (e.g. resource efficiency, life cycle analysis, critical substances).



#### D) CSP cost reduction and system integration

The focus is on significant reduction in specific investment costs and thereby electricity production costs by addressing system components, storage / dispatchability and hybrid systems. The following issues shall be addressed and goals pursued:

- Innovative HTF: increased operating temperature, lower water consumption, environmental
  acceptability, lower storage volume. All new concepts must demonstrate full dispatchability and
  scalability features. The increased conversion cycle efficiency must be compared with the
  decrease of collector efficiency when increasing the HTF temperature.
- Improved mirrors and support structure to reduce the cost of the solar field (40 % of the cost of the power plant).
- Improved selective coatings for receivers (absorber tubes and central receivers).
- Integration of direct steam generation into process heat for industrial applications.
- Innovative storage: advantage of dispatchability, 24 h operation, grid stability.
- New smart hybridisation and better integration concepts: dispatchability, firmness, attractive concept for countries with gas/oil resources or bio mass (MENA-Region), grid stability.
- Improved control and operation tools: reduction of O&M costs.

# 4. Application Issues for the SOLAR-ERA.NET Cofund Joint Call

#### 4.1 Timeline and Process

The call is set up as a two-step submission procedure, consisting of a preproposal phase and a full proposal phase. Further information is available with the Guidelines for Users of the Electronic Submission System available on the solar-era.net website (pre-screen of what will be required in the application). The most relevant dates and deadlines are given in Table 3.

Table 3: Dates and Deadlines for SOLAR-ERA.NET Cofund Joint Call			
Date	Activities		
21 November 2016, 12:00 – 13:00 CET	Pre-opening information webinar		
5 December 2016	Publication of the SOLAR-ERA.NET Cofund Joint Call		
12 December 2016; 12:00 – 14:00 CET	Brokering webinar		
20 February 2017, 17:00 CET	Submission of preproposals		
6 April 2017	Communication on applications selected for full proposal round		
14 June 2017, 17:00 CET	Submission of full proposals		
End of October 2017	Final funding decisions communicated to proposers		
End 2017 / early 2018	Start of projects funded		



- 1. Before submitting a preproposal, all project partners **must** contact their respective national programme funding organisations in order to discuss the project line-up and funding conditions.
- 2. A preproposal is mandatory. It has to be submitted by the coordinator and partners through an online application form accessible via <a href="https://www.solar-era.net">www.solar-era.net</a> within the deadline set.
- 3. National organisations will then carry out their eligibility check (and pre-evaluation) based on the preproposal and the respective national funding rules. Independent international experts will evaluate the preproposals. Applicants will be provided with feedback after the review of their preproposal, including the information on whether or not they are selected for submitting a full proposal. More specifically, the Joint Call secretariat will inform the coordinator of the application by e-mail by 6<sup>th</sup> April 2017. Recommendations for the full proposals according to the national rules and principles may then be provided.
- 4. The full proposal must be submitted by the applicants through an online application form accessible via <a href="www.solar-era.net">www.solar-era.net</a> within the deadline set. Additionally, national funding applications may have to be submitted separately according to their specific rules (see Annex National Requirements).
- 5. An evaluation will be performed by independent international evaluators and the funding organisations concerned, according to the evaluation criteria specified in the call. Based on the result of the international evaluation within SOLAR-ERA.NET, projects will be selected (or not) for funding.

#### 4.2 Eligibility Issues

Different eligibility aspects have to be considered:

- Applications must be submitted through the Electronic Submission System within the deadline set.
- Eligible consortia shall consist of a minimum of 2 partners from 2 different countries participating
  in the SOLAR-ERA.NET Cofund joint call. At least one partner in the consortium must be from
  industry. The project consortia may involve as many partners as necessary to successfully deliver
  the project. Partners from countries that are not members of the SOLAR-ERA.NET Cofund (see
  list of funding partners under section 2) can join a project consortium as additional partners
  providing added-value to the project. However, these additional partners must finance their
  activities from other sources, as each funding agency will only fund partners from their own
  country.
- Applicants have to fulfil (additional) eligibility criteria of their respective national programme / funding organisation and must contact their national agency as early as possible in the process to understand if their project is within scope/eligible.
- SMEs, large companies, academic research groups, universities, public research organisations or other research organisations may participate according to their national financing regulations (see Annex – National Requirements).
- The project duration is limited to max. 36 months.



#### 4.3 Funding Rules

Within this SOLAR-ERA.NET Cofund Joint Call, the funding rules of the national agencies apply. Prior to submitting a preproposal, all project partners seeking funds have to contact their funding agency / contact point. The level of funding available will be determined by the rules of the relevant funding agency. Information about the specific funding rules and applicable topics will be provided via the person in charge of the respective national agencies (see Table 1). Some relevant information is provided in Annex – National Requirements. Each project partner will receive funds from his / her national agency. Each project partner will be responsible for the preparation and submission of all necessary reports required by their funding agency in order to obtain funding in full accordance with national rules. The European Commission (as support to SOLAR-ERA.NET Cofund (N° 691664) within the EU Framework Programme for Research and Innovation HORIZON 2020 grant) reimburses 33% of the action's eligible costs by max. EUR 5'930'149. The estimated eligible costs of the action are EUR 19'670'150.

#### 4.4 Confidentiality

Project proposals and any information relating to them shall be kept confidential in accordance with the applicable national legislation. Project proposals shall not be used for any purpose other than the evaluation of the applications, making funding decisions and monitoring of the project. International experts, which will be invited to evaluate the proposals, are required to sign a confidentiality agreement prior to evaluating proposals.

Successful projects have to provide a non-confidential project summary and concise annual reports that will be published on the SOLAR-ERA.NET website (see section 5) in the interests of knowledge exchange. Further details of projects are strictly kept confidential.

#### 4.5 Consortium Agreement

A consortium agreement between the project partners will be required. In order to accelerate the selection and contract offer process, a statement on the signature of the consortium agreement should be submitted with the full proposal. Models for consortium agreements can be obtained from national funding agencies or from the EC IPR Helpdesk: <a href="http://www.ipr-helpdesk.org">http://www.ipr-helpdesk.org</a>. The project proposal must be the foundation for the consortium agreement. The purpose of the consortium agreement is to clarify the responsibilities of the partners, decision processes inside the project, management of any change of partners, how to exploit and/or commercialise the results (for each partner) and IPR issues.



#### 4.6 Evaluation

The evaluation is carried out on a national level and by independent international evaluation experts. The international evaluation criteria are listed in Table 4.

	Table 4: Set of International Evalution Criterion Used
Main criterion	Sub-criterion
Excellence	<ul> <li>Clarity and relevance of the project's objectives;</li> <li>Credibility of the proposed technology/concept – including trans-disciplinary considerations, where relevant;</li> <li>Credibility of the proposed project approach;</li> <li>Ambition and innovation potential - e.g. beyond the current state of the art.</li> </ul>
Impact	<ul> <li>Expected contribution to the reduction in the cost of solar power, low carbon energy system and other relevant Key Performance Indicators (see "SET-Plan - Declaration on Strategic Targets in the context of an Initiative for Global Leadership in Photovoltaics respectively Solar Thermal Electricity available on the solar-era.net website);</li> <li>Expected ability of the project to enhance innovation capacity and integration of new knowledge in the European solar power industry;</li> <li>Future market deployment potential of the proposed innovation;</li> <li>Project's ability to strengthen the competitiveness and growth of European companies by developing innovations that meet the needs of European and global solar power markets and, where relevant, deliver these innovations to the market;</li> <li>Strength of the proposed research data management, exploitation and dissemination plans (including IPR management proposals, where relevant);</li> <li>Any other environmental or socially important impacts.</li> </ul>
Quality and Efficiency of Implementation	<ul> <li>Coherence and expected effectiveness of the project plan, including the appropriateness of task and resource allocation;</li> <li>Strength of management structures and governance procedures, including risk management;</li> <li>Consortium strengths and complementarity of project partners.</li> <li>Added-value through the transnational consortium</li> </ul>



# 5. Funding and Reporting

#### **5.1 Contract**

Funding contracts for successful applications are dealt with directly between the project partners and their national funding agencies.

#### 5.2 Start and Instalments

Depending on the national regulations, a pre-condition for transferring the first funding instalments is the existence of a consortium agreement that also includes IPR related issues.

As the national funding contracts may not all become effective at the same time, the project parties i) usually do not receive the instalments and ii) usually are not reviewed / monitored on national level at exactly the same time. The national funders will however aim to agree a common start date for recommended projects.

#### **5.3 Monitoring**

Each project partner will be responsible for the necessary reporting to their funding agency according to national rules in order to obtain and maintain funding during the lifetime of their portion of the project. Apart from the national project review, the transnational cooperation aspects will be monitored on the SOLAR-ERA.NET level. The project coordinator is responsible for reporting according to the requirements (reporting at the start, during the course and at the end of project with a publishable summary and further information for internal reporting, participation in questionnaires, provide the Consortium Agreement signed).

Any substantial change in an on-going project must be reported immediately to the involved funding organisations and the Cofund Joint Call Secretariat. The project partners should be aware that changes might have effects on funding.

#### **5.4 Dissemination**

Project partners are required to refer to SOLAR-ERA.NET Cofund in their publications, exhibitions, lectures and press information concerning results of the SOLAR-ERA.NET Cofund projects. Acknowledgement should be: Project xy is supported under the umbrella of SOLAR-ERA.NET Cofund by (list of all national agencies supporting the project).

To demonstrate the added value of transnational cooperation projects, results from the call shall be disseminated. This process can be tackled via different channels, e.g.:

- Conferences with relevant stakeholders to inform about the project results.
- Publication of a short outline of funded projects on the SOLAR-ERA.NET and national websites.
   This information may also be used by SOLAR-ERA.NET for further dissemination. Further details of projects are strictly kept confidential. They can be published only in agreement with the project partners and where there is value in doing so.
- Press conferences and workshops.



# **Annex – National Requirements**

#### Austria

Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	Austrian Promotion Agency (FFG) – Austria
Contact	Anita Hipfinger: anita.hipfinger (at) ffg.at, +43 5 7755 5025
Topics	The Agency potentially supports projects in the following topics:
	Innovative and low-cost PV manufacturing issues
	Advanced PV products and applications
	PV system integration
	CSP cost reduction and system integration
Type of RTD	The Agency potentially supports the following types of RTD, namely:
	Industrial / applied research
	Experimental development
Eligible	The Agency potentially supports all private and public applicants, namely:
applicants	Large Enterprises
	Small and Medium Enterprises
	Public Research Institutions
	Non-Profit-Organisations
	The national rules on eligible costs for Austrian participants are available from the FFG at
	www.ffg.at/kostenleitfaden.
	For further Information (possible Instruments, usual funding rules) please go to
	www.ffg.at/SOLARERANETCOFUND
Budget	EUR 1'000'000 (provided by the Climate and Energy Fund in the framework of the energy
	research programme 2016)
Further	FFG conducts a formal review of all nationally relevant project proposals including the
specification	examination of the application formalities, especially the fulfilment of prerequisites specific
	to the offered funding instruments; reporting on relevant projects previously funded by FFG
	programmes; examining the financial aspects of the proposal; financial audit of applicants;
	available funding budget vs. requested budget by individual partners; relevance to the call
	goals.



# Cyprus

# Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	Research Promotion Foundation (RPF), Cyprus
Contact	Ioanna Sergidou Loizou, iloizou (at) research.org.cy, +357 22205047
Topics	The Agency potentially supports projects in the following topics:
	Innovative and low-cost PV manufacturing issues
	Advanced PV products and applications
	PV system integration
	CSP cost reduction and system integration
Type of RTD	The Agency potentially supports the following types of RTD, namely:
	Industrial / applied research
	Experimental development
Eligible	The RPF potentially supports, through its relevant national call, participation of Research
applicants	Organisations, Enterprises and Other Organisations, as specified in the Work Programme
	RESTART 2016 - 2020
Budget	EUR 400'000 (national budget covering both PV and CSP)
Further	Please refer to the National call documents and the Work Programme RESTART 2016 –
specifications	2020 (available on RPF webpage: http://www.research.org.cy)



#### France

# Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	ADEME (France)	
Contact	Manon GERBAUD - manon.gerbaud (at) ademe.fr - +33 (0) 147 65 21 49	
Topics	The Agency potentially supports projects in the following topics:	
	Innovative and low-cost PV manufacturing issues	
	Advanced PV products and applications	
	CSP cost reduction and system integration	
Type of RTD	The Agency potentially supports the following types of RTD, namely:	
	Industrial / applied research	
	Experimental development	
	Fundamental / basic research	
Eligible	The Agency potentially supports all private and public applicants, namely:	
applicants	Large Enterprises	
	Small and Medium Enterprises	
	Public Research Institutions	
	Non-Profit-Organisations	
	More precisely, public research labs and other research organisations (public and private),	
	i.e. organisations wich are involved in continuous scientific research or experimental	
	development activity which are legal entities.	
	The maximum rate of support for public research organisations is 70% of total costs (only	
	for Basic Research) and max 50% for industrial research; for SMEs: max. 70% for	
	Industrial research (or applied research) and max. 45% for Experimental Development; for	
	LE's: max. 50% for Industrial research and max 25% for Experimental Development.	
Budget	Approx. EUR 300'000 (in total over the PV and CSP area)	
Further	National application forms are required at the full proposal stage. More information:	
specifications	contact manon.gerbaud (at) ademe.fr.	



# Germany

# Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	Project Management Jülich, Division Renewable Energies, Photovoltaics (ESE 1)
Contact	Hermann Bastek: h.bastek (at) fz-juelich.de, +49 2461 61 4849
	Dorothea Brockmann: d.brockmann (at) fz-juelich.de, +49 2461 61 96656
Topics	The Agency potentially supports projects in the following topics:
	Innovative and low-cost PV manufacturing issues
	Advanced PV products and applications
	CSP cost reduction and system integration
Type of RTD	The Agency potentially supports the following types of RTD, namely:
	Industrial / applied research
	Experimental Development
Eligible	The Agency potentially supports all private and public applicants, namely:
applicants	Large Enterprises
	Small and Medium Enterprises
	Public Research Institutions
	Non-Profit-Organisations
	The maximum rate of support for research organisations is 100% of total costs (for all type
	of R&D); for SMEs: max. 60% for Industrial research and max. 35% for Experimental
	Development of total costs; for LE's: max. 50% for Industrial research and max. 25% for
	Experimental Development
Budget	EUR 3'000'000 (national budget)
Further	Only consortia under industrial leadership are eligible for funding.
specifications	National application forms ("easy-Online Antrag") have to be used for the full proposal
	phase, submission via https://foerderportal.bund.de/easyonline/
	A financial viability check (if applicable) has to be carried out in parallel to the full proposal
	phase.
	Please contact Projektträger Jülich in advance.



#### Netherlands

# Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	RVO (Directorate Energy Innovation), Netherlands
Contact	Otto Bernsen, otto.bernsen (at) rvo.nl
Topics	The Agency potentially supports projects in the following topics:
	Innovative and low-cost PV manufacturing issues
	Advanced PV products and applications
	PV system integration
Type of RTD	The following RTD activity types are eligible for Dutch subsidies:
	Industrial / applied research
	Experimental development
	Fundamental / basic research
Budget	EUR 500'000 (national budget)
Further	Dutch consortium partners in SOLAR-ERA.NET Cofund project proposals, that wish
specification	to receive subsidy for financing their part of the project budget, additionally need to
	submit an <b>Urban Energy</b> project proposal in the Dutch subsidy tender of the 'Topsector
	Energie'. All information about this Dutch subsidy tender, including eligibility criteria,
	budgets and deadlines can be found on http://www.rvo.nl/subsidies-regelingen/urban-
	energy. The TKI Urban Energy invites all Dutch project consortium partners to discuss the
	content of their SOLAR-ERA.NET / Urban Energy project proposal before submission.
	More information about the TKI Urban Energy, including contact information, can be found
	on www.tki-urbanenergy.nl.



#### **Poland**

# Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	NCBR, Poland
Contact	Magdalena Garlińska, magdalena.garlinska (at) ncbr.gov.pl, +48 22 39 07 267
Topics	The Agency potentially supports projects in the following topics:
	Innovative and low-cost PV manufacturing issues
	Advanced PV products and applications
	PV system integration
	CSP cost reduction and system integration
Type of RTD	The Agency potentially supports the following types of RTD, namely:
. , , , , , , , , , , ,	Industrial / applied research
	Experimental development
Eligible	According to the Act of 30 April 2010 on the National Centre for Research and
applicants	Development, the following entities are eligible to apply:
арриозино	scientific institutions,
	scientific consortia,
	scientific networks,
	centres of science and industry,
	<ul> <li>centres of science and industry,</li> <li>centres of science of the Polish Academy of Sciences,</li> </ul>
	<ul> <li>entrepreneurs with the status of a research and development centre,</li> </ul>
	<ul> <li>organisation units with the status of a legal person and registered in the territory of</li> </ul>
	the Republic of Poland,
Budget	<ul> <li>enterprises conducting R&amp;D activity in other than aforementioned organisational form.</li> <li>EUR 500 000 (national budget), available from 2017</li> </ul>
Further	National funding applications must be submitted by Polish project partners to the NCBR.
specifications	All Polish project partners submitting national funding applications are obliged to use the
3pccilication3	rate of exchange of the European Central Bank, dated on the day of opening the call.
	The general rules for the maximum rate of support for:
	<ul> <li>research organisations - 100% of total costs (for all types of R&amp;D);</li> </ul>
	<ul> <li>small enterprises: fundamental research (<u>not financed in this call</u>) – 100% of total</li> </ul>
	costs of fundamental research, industrial research – max. 80% of total costs of that
	type of research, experimental development – max. 60% of total costs for that
	research;
	medium enterprises: fundamental research ( <u>not financed in this call</u> ) – 100% of total
	costs, industrial research – max. 75% of total costs, experimental development – max.
	50% of total costs for respective type of research;
	<ul> <li>large enterprises: fundamental research (not financed in this call) – 100% of total</li> </ul>
	costs, industrial research – max. 65% of total costs, experimental development – max.
	40% of total costs for respective type of research.
	Additional overheads incurred indirectly as a result of the research project: general and
	Additional overheads incurred indirectly as a result of the research project: general and administrative expenses are accounted for a lump sum, up to 25% of remaining eligible
	administrative expenses are accounted for a lump sum, up to 25% of remaining eligible
	administrative expenses are accounted for a lump sum, up to 25% of remaining eligible costs in the project, without category of "studies, analyses and experts' opinions",
	administrative expenses are accounted for a lump sum, up to 25% of remaining eligible costs in the project, without category of "studies, analyses and experts' opinions", according to the formula:



# Spain - CDTI

# Specifications for SOLAR-ERA.NET Cofund Joint Call

CDTI - Centro para el Desarrollo Tecnológico Industrial		
Gabriel Barthelemy: gabriel.barthelemy (at ) cdti.es, +34 91 5815707		
The Agency potentially supports projects in the following topics:		
Innovative and low-cost PV manufacturing issues		
Advanced PV products and applications		
PV system integration		
CSP cost reduction and system integration		
The Agency potentially supports the following types of RTD, namely industrial research or		
experimental development		
The entities eligible for CDTI's funding are companies established and carrying out R&D		
activities in Spain.		
EUR 1'330'000 (national budget)		
• Eligible expenditure in R&D projects: Personnel, Instrument and Material, Contractual		
research, Technical knowledge and Patents consulting and equivalent services intended		
exclusively for the research activity. Other operating expenses derived from the research		
project.		
Length of the project: The length of these projects may be from 12 to 36 months.		
<ul> <li>Project budget: The minimum fundable budget is around EUR 175'000</li> </ul>		
Specific financial conditions could be required according to CDTI funding rules. For more		
information on the applicable funding rules please see: www.cdti.es		
For applications with Spanish partners, the Spanish applicants have to submit a formal		
application through CDTI proposals submission system (http://www.cdti.es/) with the		
information related with the Spanish participation for the National Eligibility check.		



# Spain - MINECO-AEI

# Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	MINECO - AEI/ Spain
Contact	era-energia (at) mineco.es
	Severino FALCON, severino.falcon (at) mineco.es
Topics	The Agency potentially supports projects in all topics.
Type of RTD	The Agency potentially supports all type of RTD, namely:
	Experimental development
	Fundamental / basic research
Eligible	Eligible legal entities for MINECO funding:
applicants	Non-profit research organisations according to the APCIN call or the equivalent one in
аррисанть	the new National Research Plan
	Final rules on eligibility will be described in the APCIN2017 call, to be published on the
	MINECO-AEI web page.
	Williaco-Aci web page.
	Additional eligibility criteria
	Mandatory:
	Spanish Principal investigators <b>must be</b> eligible according to the APCIN 2017 call and
	must have experience as investigators in projects funded by the <i>Plan Nacional I+D+I</i>
	2008-2011, the Plan Estatal I+D+I 2013-2016, ERC Grants, or European Framework
	Programmes.
	r rogrammes.
	Not allowed:
	- <u>Principal Investigators</u> are not allowed to apply for funding in more than one proposal
	of this SOLAR-ERA.NET Cofund (5 <sup>th</sup> ) Joint Call.
	- <u>Principal investigators</u> are not allowed to apply for funding in more than one proposal
	in APCIN 2017 (or equivalent) call. This must be taken into account when participating in
	different ERA-Nets or other international initiatives.
	- <u>Important note</u> : Principal investigators granted in the APCIN 2016 call are not allowed
	to apply neither in APCIN 2017 nor in the transnational SOLAR-ERA.NET Cofund / 5 <sup>th</sup>
	joint call. Principal investigators granted in the APCIN 2015 call are allowed to apply in
	APCIN 2017 and in the transnational SOLAR COFUND call if their projects are finished
	, ,
	before the kick off meeting of the new projects.
	MINECO-AEI will avoid double funding (overlapping with other EU or National funding),
	and will not grant projects or parts of projects already funded.
	Spanish PIs have to remain unchanged between the preproposal stage, the full proposal
	stage, and the National APCIN call.
	Spanish non-profit research organisations are invited to participate in cooperation with at
	least one profit organisation funded by the CDTI in this call.
Rudget	Maximum funding for the SOLAR-ERA.NET Cofund (5th) Joint Call: EUR 350'000
Budget	(national budget)
	(Halional budget)
	Eligible costs
	Personnel costs for temporary contracts (fellowships are not eligible).
	- Current costs, small scientific equipment, disposable materials, travelling expenses
	and other costs that can be justified as necessary to carry out the proposed activities.
	and other costs that can be justified as necessary to carry out the proposed activities.



- <u>Indirect costs (overheads) or clinical assays (proofs of concept, proofs of principle) are</u> not eligible for funding in the APCIN call.

The following funding limits are considered eligibility criteria. Proposals not respecting these limits could be declared non eligible:

- Maximum per legal entity and proposal eligible for MINECO should not exceed EUR 37'000 per year. If two or more legal entities participate in the same proposal the MINECO part should not exceed EUR 47'000 per year.
- For entities carrying out experimental work, maximum per legal entity and per proposal eligible for MINECO should not exceed EUR 57'000 per year. If two or more legal entities participate in the same proposal the MINECO part should not exceed EUR 72'000 per year.
- If the transnational proposal is led by a PI eligible for MINECO a maximum of EUR 7'000 per year in addition.

Centres formed by different Spanish legal entities will be considered as a unique entity, and thus the maximum funding should not exceed the limits per proposal established above (for example mixed centres).

The final funding will take into account the transnational evaluation of the collaborative proposal, the scientific quality of the Spanish group, the added value of the international collaboration, the participation of the industrial sector, and the financial resources available.

# Further specifications

Programa Estatal de Investigación, Desarrollo e Innovación Orientada a los Retos de la Sociedad, *Plan Estatal de Investigación Científica Técnica y de Innovación 2013-2016* and the one replacing it.

The instrument for funding the Spanish groups will be the Spanish Call on International Joint Programming Actions (Acciones de Programación Conjunta Internacional), which will be launched in 2017 (APCIN 2017) or the equivalent. Only as a reference, the beneficiaries are advised to read the call APCIN 2016.

The Spanish legal entities granted are obliged by the regulations established in this APCIN call and by the funding limits specified herein.

#### Purpose of funding:

The projects granted by the MINECO-AEI must be aligned with the main objectives described in the *Programa Estatal*.

#### Mandatory acknowledgement

Any publication or dissemination activity resulting from the granted projects must acknowledge MINECO-AEI funding even after the end of the project: "Project (reference n° XX) funded by MINECO-AEI through APCIN 2017".



#### Sweden

# Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	Swedish Energy Agency (Energimyndigheten)
Contact	Pierre-Jean Rigole: pierre-jean.rigole (at) swedishenergyagency.se, +46 16 544 21 91
	Tobias Walla: tobias.walla (at) swedishenergyagency.se, +46 16 544 20 54
Topics	The Agency potentially supports projects in the following topics:
	Innovative and low-cost PV manufacturing issues
	Advanced PV products and applications
	PV system integration
	CSP cost reduction and system integration
Type of RTD	The Agency potentially supports the following types of RTD, namely:
	Industrial / applied research
	Experimental development
	Fundamental / basic research
Eligible	The Agency potentially supports all private and public applicants, namely:
applicants	Large Enterprises
	Small and Medium-sized Enterprises
	Public Research Institutions
	Research organisations
	Other types of organisations
Budget	EUR 860'000
Further	The SOLAR-ERA.NET proposal forms can be used for the preproposal stage.
specifications	Swedish partners need to submit a national application for its part in the project in parallel
	with the full proposal application to the call. Further information can be obtained from the
	national contact points.
	• For the Swedish part of the application, the same conditions apply as for ordinary
	national applications. Projects need to contribute to the Swedish Energy Agency's target
	under the energy research bill (2012/13:21), that is, they must either be beneficial for the
	Swedish energy system, or beneficial for business in Sweden.
	Funding of enterprise RTD is subject to Swedish ordinance: Förordning om statligt stöd till forskning och utveckling samt innovation inom energiområdet (SFS2008:761).



#### **Switzerland**

# Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	Swiss Federal Office of Energy (SFOE)
Contact	Stefan Oberholzer, stefan.oberholzer (at) bfe.admin.ch
	Stefan Nowak, stefan.nowak (at) netenergy.ch
Topics	The Office (or other agencies) potentially supports projects in the following topics:
	Innovative and low-cost PV manufacturing issues
	Advanced PV products and applications
	PV system integration
	CSP cost reduction and system integration
Type of RTD	The Office potentially supports the following types of projects, namely:
Type of ICID	Pilot- and demonstration projects, including industrial processes and pilot
	manufacturing
	Industrial / applied research
	Experimental development
Eligible	The Office potentially supports all private and public applicants, namely:
applicants	Large Enterprises
арриосино	Small and Medium-sized Enterprises
	Public Research Institutions
	Research organisations
	Other types of organisations
Budget	EUR 1'000'000
Further	The SOLAR-ERA.NET proposal forms / electronic submission system can be used for the
specification	preproposal phase.
opcomodion	Funding of Swiss participants primarily underlies the SFOE (Swiss Federal Office of Energy)
	pilot- and demonstration programme application rules. The funding of Swiss participants is
	limited to 40% (in exceptional cases 60%) of the eligible project costs. Eligible project costs
	are defined as the additional project costs which cannot be amortized over the expected
	lifetime of the developed installation or solution. Additional project costs are the additional
	project costs compared to the costs of implementing an equivalent, conventional technology
	or solution. Eligible funding recipients are private and public sector entities (companies,
	research institutes, municipalities, or communities consisting of several of the former).
	Admission criteria include:
	1) Project topic contributes to increasing energy efficiency or use of renewable energy;
	2) High application and success potential;
	3) Project topic in line with the Swiss energy policy;
	4) Gathered results are publically accessible and disseminated among interested circles.
	More criteria might be added depending on the topic / adjudication mode.
	In exceptional cases, smaller research type projects can be supported through the SFOE
	research programme application rules. The maximum rate of support for applied research
	is max. 100% of total costs for non-profit research organisations, max. 50% of total costs
	for SMEs and LEs; for <i>experimental development</i> is max. 50% of total costs for non-profit
	research organisations and max. 50% of total costs for SMEs and for LEs.
	Preproposals selected for the full proposal round (further communication by mid-April
	2017): Applicants have to use <i>both</i> SOLAR-ERA.NET <i>and</i> SFOE full proposal forms.
	Further information is available at the office.



# Turkey

# Specifications for SOLAR-ERA.NET Cofund Joint Call

Agency	TÜBİTAK
Contact	Kaan Karaöz: kaan.karaoz (at) tubitak.gov.tr, +90 312 2981816
Topics	The Agency potentially supports projects in the following topics:
	Innovative and low-cost PV manufacturing issues
	Advanced PV products and applications
	PV system integration
	CSP cost reduction and system integration
Type of RTD	The Agency potentially supports the following types of RTD, namely:
	Industrial / applied research
	Experimental development
	Fundamental / basic research
Eligible	The Agency potentially supports all private and public applicants, namely:
applicants	Large Enterprises
	Small and Medium Enterprises
	Public Research Institutions
	The rates of support for large enterprises and SMEs are 60% and 75% of total costs for
	industrial research, respectively.
	The rate of support for fundamental research is 100% of total costs for applicants.
Budget	EUR 3'500'000
Further	National application forms have to be used for the full proposal phase – download from
specifications	http://www.tubitak.gov.tr.
	A financial viability check has to be carried out before being recommended for full
	proposal.



# **United Kingdom**

Specifications for SOLAR-ERA.NET Cofund Joint Call

Specifications for SOLAR-ERA.NET Cofund Joint Call		
Agency	Innovate UK – United Kingdom	
Contact	Alice Goodbrook, alice.goodbrook (at) innovateuk.gov.uk for technical scope Amy Oswin, amy.oswin (at) innovateuk.gov.uk for eligibility issues Customer Support Services helpline <a href="mailto:support@innovateuk.gov.uk">support@innovateuk.gov.uk</a> tel: +44(0)300 321 4357 (open Mon-Fri 9am-5:30pm) for general enquiries	
Topics	<ul> <li>The Agency potentially supports projects in the following topics:</li> <li>Innovative and low-cost PV manufacturing issues</li> <li>Advanced PV products and applications</li> <li>PV system integration</li> <li>CSP cost reduction and system integration (*high temperature materials focus)</li> </ul>	
Type of RTD	<ul> <li>The Agency potentially supports:</li> <li>Industrial / applied research</li> <li>Experimental development</li> <li>The agency does not support academic fundamental research, this is covered by other national programmes.</li> </ul>	
Eligible applicants	The Agency potentially supports:  • Large Enterprises  • Micro/Small/Medium Enterprises  Up to 50% grant funding for Large Enterprises, up to 60% grant funding for Medium Enterprises, up to 70% for Small and Micro Enterprises  Industrially focused Research Technology Organisations are eligible to apply but only in combination with a UK business	
Budget	Up to £455'000 Great Britain Pounds (exchange rate to be taken on close of full proposal application stage)	
Further specifications	Universities must self-fund – RTOs may come in as a business but must have another UK business in the UK collaboration. RTOs satisfying this criteria can lead with prior agreement from Innovate UK) Industrially focussed Research Technology Organisations are eligible for no more than 30% of the UK total project costs. All UK participants must be separate legal entities. Companies must have been trading for at least 12 months prior to preproposal stage close, VAT registered and provide evidence they have the resources and finances to undertake the project. Projects led by a UK company must be managed by the lead partner, project management cannot be subcontracted. Companies with fewer than 5 Full Time staff cannot lead a project, unless agreed prior to application with Innovate UK. Subcontracting is limited to 30% of the UK partner grant. There is a 75% max cap on country participation. There is a 75% max cap on partner participation. Maximum grant limit is EUR 300'000 for total UK partner grant in any single project. No single organisation can;  - receive more than 0,30 million euro grant from the UK budget be involved in more than 2 applications for funding from the UK call, but can only lead on 1 application. Applications will be reviewed to identify if there are any obvious reasons for exclusion on the basis of national track record such as the participant having already received funding for the same or a very similar activity.	