

# Proposal Evaluation Form



## EUROPEAN COMMISSION

Horizon 2020 - Research and Innovation Framework Programme

## Evaluation Summary Report - Research and innovation actions/Innovation actions

**Call:** H2020-LCE-2016-ERA  
**Funding scheme:** RIA  
**Proposal number:** 731287  
**Proposal acronym:** INSHIP  
**Duration (months):** 48  
**Proposal title:** Integrating National Research Agendas on Solar Heat for Industrial Processes  
**Activity:** ECRIA

N.	Proposer name	Country	Total Cost	%	Grant Requested	%
1	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	DE	557,101	19.49%	557,101	22.30%
2	CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT	ES	299,546	10.48%	299,546	11.99%
3	ARBEITSGEMEINSCHAFT - ERNEUERBARE ENERGIE - INSTITUT FUR NACHHALTIGE TECHNOLOGIEN	AT	204,474	7.15%	204,474	8.18%
4	FONDAZIONE BRUNO KESSLER	IT	200,000	7.00%	200,000	8.00%
5	UNIVERSIDADE DE EVORA	PT	201,581	7.05%	201,581	8.07%
6	THE CYPRUS INSTITUTE LIMITED	CY	204,025	7.14%	204,025	8.17%
7	CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING FONDATION	EL	200,000	7.00%	200,000	8.00%
8	EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH	CH	360,138	12.60%	0	0.00%
9	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	FR	200,071	7.00%	200,071	8.01%
10	MIDDLE EAST TECHNICAL UNIVERSITY	TR	199,988	7.00%	199,988	8.00%
11	EUROPEAN ENERGY RESEARCH ALLIANCE EERA AISBL	BE	61,875	2.16%	61,875	2.48%
12	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	FR	10,000	0.35%	10,000	0.40%
13	DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV	DE	10,000	0.35%	10,000	0.40%
14	AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE	IT	10,000	0.35%	10,000	0.40%
15	CONSIGLIO NAZIONALE DELLE RICERCHE	IT	10,000	0.35%	10,000	0.40%
16	UNIVERSITA DEGLI STUDI DI PALERMO	IT	10,000	0.35%	10,000	0.40%
17	UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II.	IT	10,000	0.35%	10,000	0.40%
18	UNIVERSITA DEGLI STUDI DI FIRENZE	IT	10,000	0.35%	10,000	0.40%
19	Laboratorio Nacional de Energia e Geologia I.P.	PT	10,000	0.35%	10,000	0.40%
20	ASSOCIACAO DO INSTITUTO SUPERIOR TECNICO PARA A INVESTIGACAO E DESENVOLVIMENTO	PT	10,000	0.35%	10,000	0.40%
21	FUNDACION GENER-CIEMAT	ES	10,000	0.35%	10,000	0.40%
22	Fundacion IMDEA Energia	ES	10,000	0.35%	10,000	0.40%
23	FUNDACION CENTRO TECNOLOGICO AVANZADO DE ENERGIAS RENOVABLES DE ANDALUCIA	ES	10,000	0.35%	10,000	0.40%
24	FUNDACION TECNALIA RESEARCH & INNOVATION	ES	10,000	0.35%	10,000	0.40%
25	FUNDACION TEKNIKER	ES	10,000	0.35%	10,000	0.40%
26	UNIVERSIDAD DE SEVILLA	ES	10,000	0.35%	10,000	0.40%
27	CENTRO DE INVESTIGACION COOPERATIVA DE ENERGIAS ALTERNATIVAS FUNDACION	ES	10,000	0.35%	10,000	0.40%
28	CRANFIELD UNIVERSITY	UK	10,000	0.35%	10,000	0.40%
Total:			2,858,799		2,498,661	

### Abstract:

Despite process heat is recognized as the application with highest potential among solar heating and cooling applications, Solar Heat for Industrial Processes (SHIP) still presents a modest share of about 0.3% of total installed solar thermal capacity. As of today's technology development stage – economic competitiveness restricted to low temperature applications; technology implementation requiring interference with existing heat production systems, heat distribution networks or even heat consuming processes - Solar thermal potential is mainly identified for new industrial capacity in outside Americas and Europe. In this context, INSHIP aims at the definition of a ECRIA engaging major European research institutes with recognized activities on SHIP, into an integrated structure that could successfully achieve the coordination objectives of: more effective and intense cooperation between EU research institutions; alignment of different SHIP related national research and funding programs, avoiding overlaps and duplications and identifying gaps; acceleration of knowledge transfer to the European industry, to be the reference organization to promote and coordinate the international cooperation in SHIP research from and to Europe, while developing coordinated R&D TRLs 2-5 activities with the ambition of progressing SHIP beyond the state-of-the-art through: an easier integration of low and medium temperature technologies suiting the operation, durability and reliability requirements of industrial end users; expanding the range of SHIP applications to the EI sector through the development of suitable process embedded solar concentrating technologies, overcoming the present barrier of applications only in the low and medium temperature ranges; increasing the synergies within industrial parks, through centralized heat distribution networks and exploiting the potential synergies of these networks with district heating and with the electricity grid.

## Evaluation Summary Report

### Evaluation Result

Total score: 11.50 (Threshold: 10)

### Form information

#### SCORING

Scores must be in the range 0-5.

#### Interpretation of the score:

- 0** The proposal fails to address the criterion or cannot be assessed due to missing or incomplete information.
- 1 Poor.** The criterion is inadequately addressed, or there are serious inherent weaknesses.
- 2 Fair.** The proposal broadly addresses the criterion, but there are significant weaknesses.
- 3 Good.** The proposal addresses the criterion well, but a number of shortcomings are present.
- 4 Very good.** The proposal addresses the criterion very well, but a small number of shortcomings are present.
- 5 Excellent.** The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

### Criterion 1 - Excellence

Score: **4.00** (Threshold: 3/5.00 , Weight: -)

The following aspects will be taken into account, to the extent that the proposed work corresponds to the topic description in the work programme:

**Clarity and pertinence of the objectives**

**Soundness of the concept, and credibility of the proposed methodology**

**Extent that proposed work is beyond the state of the art, and demonstrates innovation potential (e.g. ground-breaking objectives, novel concepts and approaches, new products, services or business and organisational models)**

**Appropriate consideration of interdisciplinary approaches and, where relevant, use of stakeholder knowledge**

*The proposal identifies an area of significant importance and presents a credible programme for defining a European Common Research and Innovation Agenda which addresses a key sector with a high potential to contribute to the implementation of the SET Action Plan.*

*The objectives are clearly identified, relevant, and of very good quality.*

*The concept is sound, well defined and clearly illustrated. The proposal recognises the complexity and importance of integration in the overall energy system and addresses solar thermal technologies for different process temperature levels, cross-linkage with other renewable sources, and complementarity with other heat distribution networks, e.g. district heating.*

*The KPI-driven methodology is detailed and appropriate for the successful undertaking of the project.*

*The topic has a very clear interdisciplinary content. The multidisciplinary aspects of the proposal are well demonstrated.*

*The state of the art is only generally described. The claimed potential advances are not demonstrated in quantitative terms.*

*Inter-sectoral aspects are only presented in a general way. The means to involve important and relevant stakeholders is not convincingly presented. Although the joint activities amongst research centres are ambitious and aim to bring added value to innovation and industry-driven technology, it is not sufficiently clear which barriers are to be overcome to spread Solar Heat for Industrial Processes (SHIP) technologies to the various industrial sectors, and how these barriers will be overcome.*

*Technical innovation with respect to solar thermal low and medium temperature processes is not sufficiently detailed and is over estimated. Low temperature solar thermal process heat applications are already established at a high level of system performance.*

### Criterion 2 - Impact

Score: **3.50** (Threshold: 3/5.00 , Weight: -)

The following aspects will be taken into account:

**The extent to which the outputs of the project would contribute to each of the expected impacts mentioned in the work programme under the relevant topic**

**Any substantial impacts not mentioned in the work programme, that would enhance innovation capacity, create new market opportunities, strengthen competitiveness and growth of companies, address issues related to climate change or the environment, or bring other important benefits for society**

**Quality of the proposed measures to:**

- exploit and disseminate the project results (including management of IPR), and to manage research data where relevant
- communicate the project activities to different target audiences

*The project aims to bridge existing gaps within national programmes and activities by taking into consideration the complexity of SHIP integration into the energy system.*

*The project can establish lasting collaboration of the participating European organisations, and create a competitive research platform for the SHIP sector which may promote the translation of advances into accepted industrial practices. Short term impacts (replacement of fossil fuels and reduction of CO2 in industry through low/medium temperature large scale solar thermal process heat) can be expected from the implementation of promising results from supporting long-term national and international research projects.*

*The project can generate new market opportunities for solar heat at the industrial level.*

*The dissemination strategy and actions for the exploitation of the project results are very well detailed and include a number of important measures. They are sound and of good quality.*

*The expected impact is summarised but contains too many generalities for almost all topics. For example, it is not sufficiently clear how and what impact is expected on stakeholders' activities which may enhance the use of solar heat at various industrial levels.*

*Although there is a strong commitment to make an effective contribution to promote the use of solar thermal energy systems in order to lower energy intensity in industrial processes, it is unclear which sectors are to be targeted and at which size.*

*The means to overcome the high costs of concentrating solar thermal systems and encourage industry acceptance are not addressed.*

### **Criterion 3 - Quality and efficiency of the implementation**

Score: **4.00** (Threshold: 3/5.00 , Weight: -)

**The following aspects will be taken into account:**

**Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables**

**Appropriateness of the management structures and procedures, including risk and innovation management**

**Complementarity of the participants and extent to which the consortium as a whole brings together the necessary expertise**

**Appropriateness of the allocation of tasks, ensuring that all participants have a valid role and adequate resources in the project to fulfil that role**

*The work plan combines coordination and support actions with coordinated projects on parallel joint research activities. The work plan has a coherent structure and is consistent with the objectives and the proposed methodological approach.*

*The work packages, especially the technical tasks and actions, are very well detailed and organised in a logical sequence. The deliverables are appropriate, properly listed and are sufficiently clear.*

*The management structure and associated procedures are suitable for the effective running of the project. The project coordinator has extensive relevant experience.*

*The consortium is very well balanced and complementary, and the expertise of the organisations and individuals involved is very convincingly presented. The participation of additional partners brings significant further benefits to the whole project. The roles and responsibilities of all partners are well defined.*

*The infrastructure facilities and available equipment at the different institutions are very well suited to supporting the project.*

*The overall budget is well balanced and the allocation of resources between partners and work packages is appropriate and in line with the objectives and deliverables.*

*Management of relevant intellectual property is properly foreseen.*

*Although the management of risk is addressed, the risks identified for medium temperature (WP3) and high temperature (WP4) solar thermal industrial processes are underestimated.*

*The role of the Stakeholder Group is very important for a project with strong industrial potential; however its membership and its participation in the project are not convincingly addressed.*

*The proposal does not clearly differentiate work that will be undertaken as part of ongoing and future national efforts in order to identify a limited number of research topics for the purpose of creating a European Common Research and Innovation Agenda.*

### **Scope of the proposal**

Status: **Yes**

**Comments (in case the proposal is out of scope)**

*Not provided*

### **Operational Capacity**

Status: **Operational Capacity: Yes**

**If No, please list the concerned partner(s), the reasons for the rejection, and the requested amount.**

*Not provided*

### **Exceptional funding of third country participants/international organisations**

***A third country participant/international organisation not listed in [General Annex A to the Main Work Programme](#) may exceptionally receive funding if their participation is essential for carrying out the project (for instance due to outstanding expertise, access to unique know-how, access to research infrastructure, access to particular geographical environments, possibility to involve key partners in emerging markets, access to data, etc.). ( For more information, see the [Online Manual](#) )***

**Based on the information provided in the proposal, we consider that the following participant(s)/international organisation(s) that requested funding should exceptionally be funded:**

**(Please list the Name and acronym of the applicant, Reasons for exceptional funding and the Requested grant amount.)**

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NA

**Based on the information provided in the proposal, we consider that the following participant(s)/international organisation(s) that requested funding should NOT be funded:**

**(Please list the Name and acronym of the applicant, Reasons for exceptional funding and the Requested grant amount.)**

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NA

**Use of human embryonic stem cells (hESC)**

Status: **No**

**If yes, please state whether the use of hESC is, or is not, in your opinion, necessary to achieve the scientific objectives of the proposal and the reasons why. Alternatively, please also state if it cannot be assessed whether the use of hESC is necessary or not because of a lack of information.**

*Not provided*