



Open call for tender

28 July 2016

Terms of Reference

**Renewable Energy in Industry
(RE-INDUSTRY)**

**IEA Renewable Energy Technology Deployment
Technology Collaboration Programme
(IEA RETD TCP)**

www.iea-retd.org

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Acronyms

ExCo	Executive Committee of the IEA RETD TCP
IB	Implementing Body
IEA	International Energy Agency
PSG	Project Steering Group
OA	Operating Agent
RES	Renewable Energy Sources
RET	Renewable Energy Technology
RETD	IEA Renewable Energy Technology Deployment Technology Collaboration Programme, previously referred to as the IEA Implementing Agreement for Renewable Energy Technology Deployment, the official name of the programme.
ToR	Terms of Reference

Introduction to IEA's Technology Collaboration Programme on Renewable Energy Technology Deployment (IEA RETD TCP)¹

The IEA RETD TCP was officially launched in September 2005 with five founding members. Current members of the IEA RETD TCP are Canada, Denmark, the European Commission, France, Germany, Ireland, Japan, Norway, and United Kingdom. The TCP's mandate is to address cross-cutting issues influencing the deployment of renewable energy and act as a vehicle to accelerate the market introduction and deployment of renewable energy technologies. More information on the IEA RETD TCP can be found on the organisation's homepage www.iea-retd.org.

IEA RETD TCP Vision

Significantly higher utilisation of renewable energy technologies will result from international cooperation encouraging more effective, efficient and rapid deployment.

IEA RETD TCP Mission

The IEA RETD TCP will act as a catalyst for an increased rate of renewable energy technologies deployment, by:

- proposing solutions and options to maximize (1) the share of renewable energy technologies in the global, regional, and national energy systems, and (2) the contribution renewables can make to climate change mitigation, security of energy supply and economic growth, and
- providing recommendations on how to overcome barriers and means for significant increased renewable energy deployment..

IEA RETD TCP objectives

The IEA RETD TCP objectives are to provide ways and means for an accelerated deployment and commercialization of renewable energy, by:

1. Empowering energy policy makers and energy market actors through the provision of information and tools:
 - to make transparent and demonstrate the impact of renewable energy action and inaction
 - to facilitate and show the best practice measures
 - to provide solutions for leveling the playing field between renewable energy and other energy technologies
 - to make transparent the market frameworks for renewable energy, including infrastructure and cross-border trade
2. Demonstrating the benefits of involving private and public stakeholders in the accelerated deployment of renewable energy technologies, by:
 - enhancing stakeholder dialogue
 - implementing effective communication and outreach activities.

¹ Previously referred to as the IEA Implementing Agreement for Renewable Energy Technology Deployment, the official name of the programme.

1 The Terms of Reference

The Terms of Reference (ToR) for this project specify the objectives of the solicited project and outline the project tasks envisioned by the IEA RETD TCP Executive Committee. Tenderers are asked to elaborate on how the objectives of the study are best achieved and to propose additional tasks or modifications of the envisioned tasks, if deemed necessary to improve project deliverables.

1.1 Background of the project

The manufacturing industry consumes about 30% of global primary energy with relative small shares of renewable energy (about 20%). In several IEA ETP scenarios (e.g. 2DS and hi-REN) the share of renewable energy, and notably renewable electricity, grows significantly. However, overall current deployment rates are relatively low. Even in countries with high shares of hydro-power, renewable high temperature heat for industrial processes remains a challenge. To reach the goal of the Paris Agreement of a largely decarbonized global economy, the industry sector has to speed up the transition towards (close to) a 100% renewable energy supply. Apart from responding to stricter regulation, there may also be opportunities for first-movers to market their products as “green” compared to conventional competitors.

There is a need for insight in best practices and innovative technologies that could speed up the deployment of RE in industry and help to better integrate RE in the total energy system. In addition there is a need for insight in the role of key drivers and policies for those cases.

As the IEA Secretariat is preparing a roadmap to address the role of RE in industry² which will be published in 2017, the RE-INDUSTRY project will describe relevant case studies that will be used as input to this roadmap and as a reference for IEA RETD TCP member countries.

1.2 Objectives of the project

The overall objective of the project is

to provide inspiration and state-of-the-art applications of renewable energy in industry. It will present best practices and key developments of renewable energy in the manufacturing industry: existing and emerging technologies, drivers, barriers, policies and lessons learned.

1.3 Approach and research questions

The study will contain two main sections: The case studies and a policy section.

² See also <http://www.iea.org/media/workshops/2015/cop21/otherevents/4DecPhilibert.pdf>, <https://www.iea.org/workshops/renewable-energies-for-manufacturing-industries.htm>

1.3.1 Case study section

The case studies form the basis of report. They are supposed to be presented at an IEA event at the end of November 2016. This section will include:

- Some 20 case studies, each one described on about 4-5 pages (plus potentially back-up information).
- Case studies should cover
 - All major industry sectors (iron & steel, non-iron metals, cement, refineries, pulp & paper, textile, food & beverage, pharmaceuticals, etc.)
 - All energy uses, electricity, low and high temperature heat.
 - All main renewable sources (all RES-E like solar PV/CSP, solar thermal, wind, etc. as well as biomass, heat pumps, etc.)
 - International breadth (continents, climate zones, country types)
 - Known as well as recent, new examples
 - Combinations of RE and EE measures where adequate
- Innovative, disruptive ideas can be described as own case studies or as potential future development paths within case studies that describe existing but state-of-the-art technologies.
- Examples which are still in an early R&D phase should only be quoted if they have been peer reviewed.
- Each case study should include the following elements:
 - Industry context
 - Energy challenges
 - Potential technological options/path ways for RE/EE for the sector (potentially in the context of the climate zone/continent)
 - Description of the technological idea/solution
 - Potential impact, pros and cons (or SWOT analysis) of the idea/solution regarding investment and O&M costs, emissions, ...
 - Some pictures, photos, schemes and graphs
 - References

1.3.2 Strategy / Policy section

The findings of the case studies will be synthesized in a strategy or policy part of the study. Research questions include:

- How can the use of RES-E in industry be increased (further electrification of processes)?
- What are the key options for RES-H in industry?

- Which industries may, could or should relocate in order to better capture RE supply or save energy costs? E.g. data centres are currently set up in Northern Sweden in order to save energy costs for cooling. Industries like aluminum production may move from countries or regions where electricity is generated with a large share of fossil fuels, e.g. coal, to regions with high potential of renewable power, not only hydropower but also wind and solar (likely combined with storage).
- In which cases is a local supply of RE to industrial processes possible and in which cases is it difficult or impossible?
- Which industries may or should potentially retract anyways because they are not sustainable in the long term? (oil and gas, certain plastics, fertilizer, ...)
- How can policies help the transition of the industrial sector towards sustainability?
- What are barriers for the large scale uptake of RE in industry (international competition, costs, large investments, ...)?
- Where are opportunities especially for first movers? E.g. cement industry in Morocco uses wind energy already today.

1.4 Scope of work

1.4.1 Sector scope

The scope covers on all industrial sectors and all renewable energy technologies.

1.4.2 Geographical scope

The geographical scope covers IEA RETD TCP member and other countries where innovative industry solutions are being developed (e.g. USA).

1.4.3 Target Audience

Stakeholders targeted are decision makers and experts from the manufacturing industry and policy makers at national and regional level.

1.4.4 Collaboration with other organisations

The project shall duly take into account topic-related activities and reports of other organisations, like the IEA Secretariat and the IEA Technology Collaboration Programmes (e.g. IETS, Solar-PACES, Solar H&C, Bioenergy, Hydrogen, Geothermal), IRENA, Ren21, research institutions, and other organisations.

1.5 Deliverables

The project deliverables include:

- A document compiling the approx. 20 case studies (which can published independently from the policy section)
- a final report including the case studies and the policy section;
- a two-page policy brief;

- a communication plan; and
- a power point presentation.

All deliverables should be written in a style and format that is suitable for policy makers, highlighting key messages and considerations, with more detailed background information in specific sections or annexes.

All deliverables may be presented at IEA RETD TCP and national events, and will be disseminated through the IEA RETD TCP networks.

2 Project phases and tasks

The project will be performed in two main phases:

- A first phase in which the winning tenderer, known as Implementing Body (IB) will prepare an outline of the full report, as well as the reporting of Task 1 of the project.
- The second phase, in which the remaining tasks will be executed.

The first phase will be used as a 'proficiency test' for the IB similar to an extended Inception Phase. The Project Steering Group will evaluate the scope and quality of the material, the time spent on the first phase and decide on a continuation of the project in the second phase. In case of termination of the contract, the actual costs made during the first phase, with the assigned budget for the task(s) in this phase as a maximum, will be paid by IEA RETD TCP.

2.1 Inception/first phase

The inception/first phase will start with the preparation of an outline for the whole report that will be discussed with the Project Steering Group.

Task 1: Initial research and outline

The inception/first phase will start with the preparation of an outline for the whole report that will be discussed with the Project Steering Group. The issues to be addressed are described under point 1.3 above.

It is estimated that this phase will cover about 20% of the budget.

Deliverables:

- *A methodology to address the issues outlined above.*
- *First ideas of potential case studies*
- *An annotated outline of the full report.*
- *Proposed timelines of deliverables*
- *A list of reliable, up-to-date information sources that will be used*
- *First list of potential events where the project can be presented (to ensure timely submission of abstracts)*

2.2 Second phase

Task 2: Case Studies: Research and analysis

Once a long list of case studies has been defined, the final selection will be carried out together with the PSG. In Task 2 the methodology developed in Task 1 will be executed with the necessary research, stakeholder interviews, analysis, etc.

It is estimated that this phase will cover about 50% of the budget.

Deliverables:

- *Long list of case studies based on literature review, interviews with stakeholders and own analysis*
- *Short list of case studies with detailed descriptions in a presentable format*
- *Power point presentation with 3-4 slides per case study, according to the lay-out and structure of the IEA RETD TCP template.*

Task 3: Policy Section: Synthesis, Conclusions and Recommendations

In this task the lessons from the case studies, literature and interviews will be synthesized to extract relevant policy related conclusions, develop an integrated narrative and derive recommendations both for policy makers and energy market actors.

It is estimated that this task will cover about 25% of the budget.

Deliverables:

- *Ready-to-publish report in the IEA RETD TCP template with conclusions, recommendations for policy makers and market actors, and proposed next steps. The case studies of Task 2 will form part of this report.*
- *Power point presentation with 15-20 policy related slides (plus potentially 10-15 back-up slides) according to the lay-out and structure of the IEA RETD TCP template.*
- *2 page policy paper.*

Task 4: Communication

The IB shall develop a communication plan that describes how the results of the project can be utilised to influence the target audience after project completion. This includes a concept, two-page policy paper and a PowerPoint presentation with the project's main approach, findings and recommendations including back-up slides. In addition, potential opportunities to present preliminary results, i.e. prior to the completion of the project, shall be proposed.

It is estimated that this task will cover less than 5% of the budget.

Deliverables:

- *Communication and follow up plan for the project*
- *Excel-List of stakeholders that should receive the report (Organisation, name, title/department, email, country)*
- *Excel-List of potential events where the project can be presented (name, date, website, deadlines for abstracts)*

3 Reporting requirements

The project will be carried out in close co-operation with the Project Steering Group (PSG). Draft reports according to the expected tasks and deliverables defined above must be submitted by the IB to the Operating Agent (OA) for review and feedback by the PSG. The PSG consists of both IEA RETD TCP representatives and international energy experts and is supported by the Operating Agent of the IEA RETD TCP.

The IB must deliver all reports in English, including an inception report after the project contract being signed and within the timeframe indicated below. The share of different tasks in total project budget expressed as percentages in these terms of reference are indicative. The PSG Chairperson, at the proposal of the IB and the IEA RETD TCP's Operating Agent, can re-allocate the resources available from one task to another as deemed necessary.

Progress reports must be delivered to the IEA RETD TCP Operating Agent every three months after the completion of the inception/first phase until the project is completed. The progress reports are intended to provide the PSG and the IEA RETD TCP ExCo members with an update on the progress of the report, both in terms of costs and status of project milestones. The reports shall clearly indicate the methodology used and the results of each task, as well as the resources used for the execution of work (budget vs. actual).

Milestones for the project

The following milestones are foreseen for the completion of the above mentioned tasks:

28 July 2016	Publication of ToR
9 September 2016	Deadline for submitting proposals
15 September 2016	Decision of the Project Steering Group to award the project
Week of 19 September 2016	Contract signed, start of project, kick-off meeting
6 October 2016	Draft deliverables of Task 1 and 4 (stakeholder list and events), 1 st Progress report
13 October 2016	Decision with PSG on short list of case studies
3 November 2016	Draft deliverables of Task 2, 2 nd progress report
24 November 2016	Final deliverables of Task 2 (case studies)
29/30 November 2016	Presentation of case studies at IEA event in Washington (it is still to be decided if this will be done by a PSG member or the IB)
19 January 2016	Draft deliverables of Task 3 (policy section) and Task 4
9 February 2017	Final report, including task 4, final policy paper and power point, final progress report

4 Qualifications and budget

The tenderers qualifications are described under chapter 5 'Evaluation Criteria'.

The proposal shall include:

- A technical proposal, written in English, of no more than 15 pages, excluding annexes and CVs;
- Project team members CVs with a description of experience related to the research areas, including references (maximum two pages per person) and how these relate to the requirements in this Terms of Reference;
- A reference list with a description of 5 to 10 related projects (project name, client, narrative description, date, size, etc.);
- The project budget including time and task allocation for each team member in a document separate from the technical proposal. The budget proposal for the project must be in Euros. The offer should be exclusive of Value Added Tax (VAT) or similar taxes. The offer should contain a breakdown of persons-days over tasks and experts (with tariffs), and any non-personnel costs.

The expected input for the project is appreciated at **80 person-days**.

Any change to both the composition of the team, and the relative contribution of the team members during the execution of the project, requires approval by the PSG.

The technical proposal should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the proposal will be evaluated. Simply repeating the statement contained in the terms of reference is not sufficient. In order to facilitate the evaluation of proposals, IEA RETD TCP requests that tenderers address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, tenderers may refer to different sections of their proposals by identifying the specific paragraph and page number where the subject topic has already been addressed.

A single company/firm or a consortium of companies is eligible for this study. Consortium bids must identify a Project Leader, who will be the contact for the Project Authority throughout the study and will be responsible for managing the Consortium and for submitting various deliverables of the study on behalf of the Consortium. Payments will be made to the company of the Project Lead, which will be responsible for allocating the payment between consortium members.

The tenderer can assume a one-day attendance and presentation at an IEA RETD TCP meeting or another event in Europe or North America. Travel costs are not part of the evaluation of the budget of the proposal, but rough estimates should be given.

5 Evaluation criteria

The project proposal will be evaluated on the following criteria:

1. **Approach/methodology/vision:** Thorough understanding of the importance and objectives of the project, approach and methodology to meet each element of the proposed tasks, recognition of possible problems and proposed solutions; includes

innovative aspects, i.e. ideas, proposals and aspects that were either not mentioned in the ToR and that can increase the value of the deliverables.

2. **Project Management:** Consistent, feasible and coherent work plan: scheduling of deliverables and necessary sub-steps; quality control, contingency plan, organization of tasks and suitability of each team members assigned to each task; readability of project proposal and quality of English language;
3. **Experience:** Significant and recent knowledge and experience of the company/consortium and the proposed team members in the topical area of this tender and in providing advice and reporting on issues related to renewable and conventional energy, policies and programs including presentations to international audiences.

Significant means a minimum of 5 reports/projects; recent means in the last 5 years. Dates of completion are required.

Bidders shall include (a) only projects that were undertaken by the proposed team members and (b) a brief explanation briefly how that reference/project is relevant to the ToR, in terms of data, experience, similar conditions, transferable knowledge, deliverables, etc. The latter point may be shown in a table format.

Experience of PSG members with the bidder and/or proposed team members will be considered in the evaluation.

4. **Price:** The total price of the proposal, excluding any travel and subsistence costs. As a guiding principle, a proposal whose price is more than 25% below or above the average price of all bids received may not be further considered. The range of points will be given according to five equal intervals over the range of eligible bids.

The contract will be awarded according to the selection criteria given above, on the basis of the most advantageous tender.

A maximum of 5 points can be awarded for each of the four selection criteria for a total of maximum 20 points per proposal. Only bids that have reached a total score of a minimum of 12 and a minimum score of 3 for each criterion will be taken into consideration for awarding the contract. The points are given according to the following scheme: 0 points: no information; 1 point: poor; 2 points: fair; 3 points: good; 4 points: very good; 5: excellent.

The assessment will be based on each tenderer's bid, possibly supplemented with a telephone interview by the Project Steering Group.

All the information will be assessed in the light of the criteria set out in these Terms of Reference.

6 General provisions

The Implementing Body (IB) is expected to interact closely with the Operating Agent (OA) and Project Steering Group (PSG) throughout the project. The OA/PSG will provide support with co-ordination of the project as well available material relevant to the completion of the project.

The standard procedures and contract for external Contractors to the IEA RETD TCP will be utilised for this project (see Annexes). Submission of a tender implies acceptance of all the terms and conditions set out in this invitation to tender, in the specification and in the draft contract (Annex V) and, where appropriate, waiver of the tenderer's own general or specific terms and

conditions. It is binding on the tenderer to whom the contract is awarded for the duration of the contract. Only in order to comply with specific national laws and/or regulations, some modifications to the clauses in the terms and conditions of the draft contract may be negotiable. The tenderer should indicate this in the submitted proposal and include a suggestion for alternative wording. Please note that a tenderer will need to maintain this position during the drafting of a formal agreement. Varying from this position may be a reason for discontinuing negotiations and moving to another tenderer.

The proposed time schedule shall not be revised by the contractor without the approval of the PSG. The Implementing Body will take responsibility for its own schedule within the time frame proposed.

The Stichting Foundation Renewable Energy Technology Deployment (the RETD Foundation) acts as the legal entity that is responsible for the operation of the IEA Renewable Energy Technology Deployment Technology Collaboration Programme, in accordance with the Technology Collaboration Programme, the annual Programme of Work and Budget; and for the implementation of decisions of the Executive Committee of the IEA RETD TCP. The RETD Foundation will be the formal contracting party for the Implementing Body.

The bureau of the RETD Foundation is managed by Ecofys Netherlands B.V., under the responsibility of David de Jager, Operating Agent (david.de.jager@iea-retd.org, telephone +31 30 6623388).

The tender documents will be treated as confidential. Only staff of the Operating Agent and members of the Project Steering Group will have access to the documents.

Tenderers are advised to frequently monitor the IEA RETD TCP website in case of publication of 'frequently asked questions' or modifications to tender documents. They can also announce to the Operating Agent that they intend to submit a proposal, in which case they can be informed directly on any changes in information prior to the tender deadline.

7 Application process

The deadline for submission of proposals is:

Friday, 9 September 2016, at 18:00 (Central European Time).

Proposals must be submitted by e-mail to the following e-mail address:

info@iea-retd.org

with **RE-INDUSTRY** in the subject line and to the attention of Kristian Petrick, on behalf of the Operating Agent of IEA RETD TCP. A confirmation of receipt will be sent by e-mail within two working days after the deadline for submission. Please contact the Operating Agent (David de Jager) directly, if you have not received this confirmation within this term.

For any additional inquiry regarding the project or application process, please contact the Operating Agent staff at the e-mail address mentioned above (info@iea-retd.org).

Annexes³

ANNEX I IEA TECHNOLOGY COLLABORATION PROGRAMME FOR RENEWABLE ENERGY TECHNOLOGY DEPLOYMENT

Available at www.iea-retd.org under About RETD - Documents or via the direct link:
<http://iea-retd.org/wp-content/uploads/2011/09/RETD-IA-Text.pdf>

ANNEX II ORDER OF BUSINESS IN THE IEA-RETD IMPLEMENTING PLAN 2010-2016 (UPDATE FEBRUARY 2014)

Available at www.iea-retd.org under About RETD - Documents or via the direct link:
<http://iea-retd.org/documents/2014/02/iea-retd-order-of-business-february-2014.pdf>

ANNEX III TEMPLATE FOR IEA-RETD INCEPTION AND PROGRESS REPORTS

Available at www.iea-retd.org under About RETD - Documents or via the direct link:
<http://iea-retd.org/wp-content/uploads/2011/09/RETD-project-monitoring-template-2010-01.pdf>

ANNEX IV TEMPLATE FOR IEA-RETD FINANCIAL STATEMENTS

Available at www.iea-retd.org under About RETD - Documents or via the direct link:
<http://iea-retd.org/wp-content/uploads/2012/03/RETD-project-financial-statement.xls>

ANNEX V STANDARD IEA-RETD CONTRACT

<http://iea-retd.org/wp-content/uploads/2012/03/RETD-contract-EXAMPLE.pdf>

³ The official name of the IEA Renewable Energy Technology Deployment Technology Collaboration Programme is IEA Implementing Agreement for Renewable Energy Technology Deployment. The documents refer to this official name.