

IEA-RETD

Renewable Energy
Technology Deployment

Open call for tender

September 9th 2016

Terms of Reference

**Commercial Readiness Index (CRI) assessment - using the
method as a tool in renewable energy policy design
(RE-CRI)**

**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
RET	Renewable Energy Technology
RETD	IEA Renewable Energy Technology Deployment Technology Collaboration Programme
ToR	Terms of Reference

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

The IEA RETD TCP was officially launched in September 2005 with five founding members. Current members of the IEA RETD TCP are Canada, Denmark, France, Germany, Ireland, Japan, Norway, and United Kingdom. The IEA RETD 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 maximise (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.
- 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 commercialisation 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 levelling 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 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

To be compatible with the 2-degree objective, up to 48 trillion dollars in investment will be needed over the period to 2035 (IEA, WEO), especially in low carbon technologies and networks. At the same time clean energy investment is stagnating. Many technologies do not reach the market despite considerable R&D and demonstration investments. Moreover, **to enable technologies to pass along the innovation chain it is essential to find appropriate measures and enabling policies for each of the renewable energy technologies.**

Against this background, IEA RETD TCP intends to support further research in this field. With the RE-CRI project IEA RETD TCP aims to analyse in-depth the role of **pull policies in OECD countries and beyond** with the objective of classifying emerging renewable energy technologies along the innovation chain, **making use of the novel approach of the Commercial Readiness Index (CRI)¹** as a complement to the Technology Readiness Level which is currently the most widely used scale. The research will result in **concrete recommendations of most appropriate measures for each (selected) emerging renewable technologies to increase their chances of reaching the market.**

The project aims to **focus on CRI as a method for implementation of pull policies.** A pull strategy is where interest for a specific product or service is created within a target audience that then demands the product. The demand can arise spontaneously or be created through policies/government interventions, such as regulatory measures, economic incentives, information campaigns or procurement policies.

It is envisaged that the RE-CRI study builds upon previous IEA RETD TCP work in this area, in particular the RE-Innovation Chain project and its four journeys framework (see www.iea-retd.org).

1.2 Objective of the project

The overall objective of the RE-CRI project is to carry out a case study analysis in order to:

classify the selected renewable energy technologies using the CRI and describe appropriate approaches for policy design, development and implementation that can be used to stimulate emerging renewable energy technologies to reach the mass-commercialisation stage (later referred to as pull policies).

¹ Australian Renewable Energy Agency 2014: <http://arena.gov.au/files/2014/02/Commercial-Readiness-Index.pdf>.

1.3 Suggested approach

It is suggested that the approach taken in this research will include the following steps:

1. A **description** of the CRI rating as a complement to TRL rating.
2. The establishment of a **methodology** for rating technologies according to CRI score, including splitting the index into sub-indexes e.g. “financial maturity”, “technological maturity” and “level of established value chain and organisation”.
3. An **evaluation** to gain insight in which policies are efficient at which CRI level (for the individual sub-indexes) in lifting a technology from one CRI level to the next.
4. A **case study analysis** for two technologies in four different countries in order to (1) evaluate the CRI scores (within and across countries), and (2) recommend appropriate policies to lift technologies to a next level of the sub-index.

1.4 Focus of the project

The focus of the research will be on analysing the role of **pull policies** in OECD countries and beyond.

1.5 Expected output

With this project IEA RETD TCP aims to provide policy makers with a better understanding of appropriate pull policies to help emerging renewable energy technologies reach the stage of commercial readiness and to identify possible policy options to help emerging renewable energy technologies to reach the next phase in their pursuit of commercial readiness. The recommendations of the study aim to contribute to a toolbox design and implementation for moving up emerging technologies.

1.6 Key questions to be addressed

The key questions to be addressed in the research are:

- **Method:** in what way can the CRI method serve as a tool for policy makers to assess technologies’ barriers and maturity, in order to choose the right policies that will be effecting at taking the technology towards commercialisation? How applicable is the method? How can sub-indexes be established? What are pros and cons?
- **Policies:** what type of policies – based on the specific case studies – are effective in achieving the objective of pulling renewable energy technologies towards commercialisation? What is the effect of different pull policies, and why? At what CRI levels are which policies appropriate? Which individual barriers for each CRI sub-index can be mitigated by what type of policies?

1.7 Target group

The target group of the RE-CRI study includes decision- and policy makers.

1.8 Deliverables

The project deliverables include:

- A report.
- A two-page policy brief / executive summary.
- A manual / guideline on CRI methodology and assessment.
- A power point presentation summarising the report.

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

All deliverables are to be presented at IEA RETD TCP and national events, and 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 carry out a **methodological assessment** (Task 1).
- The second phase, in which a selected number of **case studies** will be executed (Tasks 2 and 3).

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 then decide on the 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 in this phase as a maximum, will be paid by IEA RETD TCP.

2.1 First phase – Methodological part

Task 1: Applying the concept of CRI – desk study

In the first phase the IB will focus on the first three steps of the approach (see section 1.3). The analysis will include, among others, cost development, maturity and potential for commercial competitiveness. This phase will result in a better understanding of the applicability of the CRI method and, above all, will provide insight in the **technological and commercial readiness of different technologies** (incl. a cross-country comparison). Furthermore, in this first phase, the IB will assess the impact of different policies and measures on commercial readiness.

It is estimated that phase one will cover about 30% of the budget.

Deliverables Task 1:

- *A report describing the findings of the desk study. Particular attention will be given to the answers to the method-related research questions of section 1.6. A section with preliminary recommendations will be included. This report will be written in such a way that it can be easily integrated in the final project deliverables.*

2.2 Second phase – Practical part

Task 2: Running the CRI method by case studies

In the second phase of the project the IB will run the CRI analysis on **2 technologies** (e.g. off-shore wind, solar PV or geothermal for electricity generation) in maximum 4 different countries (e.g. Norway, Canada, France, Denmark or the UK). The assessment will be based on primary and secondary data. In this second phase, an assessment of these two technologies according to the CRI method will be conducted. Cross-country and cross-technology analyses will be included in the analysis. The purpose of this phase is to map in further detail how national regulations and industrial supply changes will influence the CRI scoring. **The purpose of this case-study analysis is to give, in much more detail as compared to the first task, insight into the readiness of the technologies across countries and the impact of different incentives.** The focus of the case study analysis lies in **pull policies**.

It is estimated that this task will cover about 40% of the budget.

Deliverables Task 2:

- *A report describing the findings of the case studies. Particular attention will be given to the answers to the case-related research questions of section 1.6. A section with preliminary recommendations will be included. This report will be written in such a way that it can be easily integrated in the final project deliverables.*

Task 3: Final report including in-depth policy recommendations

In Task 3, the IB will perform an integrated assessment of the Task 1 and 2 findings. Based on this assessment a final report will be prepared. This report includes a separate section with recommendations for decision- and policy makers.

In this final task the tenderer is also asked to prepare a two-page policy brief, a manual / guideline on CRI assessment and a power point presentation, summarising the report.

It is estimated that this task will cover about 30% of the budget.

Deliverables Task 3:

- *A final report.*
- *A two-page policy brief / executive summary.*
- *A manual / guideline on CRI methodology and assessment.*
- *A power point presentation summarising the report.*

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 is 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 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 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:

September 30 th 2016	Closure of bidding procedure
October 14 th 2016	Selection of winning tenderer
October 17 th 2016	Start of the project Kick-off call
November 4 th 2016	Draft deliverables Task 1
December 2 nd 2016	Final deliverables Task 1 Progress report
	Decision by the PSG on continuation of the project
December 23 rd 2016	Draft deliverables Task 2
January 27 th 2017	Final deliverables Task 2 Second progress report
February 20 th 2017	Draft deliverables Task 3
March 24 th 2017	Final deliverables Task 3
April 14 th 2017	Completion of the project Submission of all deliverables 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 excluding 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 a 80 person-days maximum.

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 Leader, 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 RETD member countries as requested. 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, organisation 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 programmes 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 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 maximum total of 20 points per proposal. Only bids that have reached a minimum total score 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 Implementing Agreement, 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:

30 September 2016 at 12:00 noon (Central European Time).

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

info@iea-retd.org

With **RE-CRI** in the subject line and to the attention of **Mrs. Sascha van Rooijen**, 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).

Annexes

ANNEX I IEA IMPLEMENTING AGREEMENT 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>