



**EUROfusion**

*AWP2016-EEG-Annex 2*

**2016 Annual Work Plan  
EUROfusion Engineering Grants**

**Annex 2**

**Guide for applicants**

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## 1. Introduction

The EUROfusion Engineering Grants (EEG) form a program to attract excellent engineers and scientists with high engineering orientation to the EUROfusion Work Programme. The grants are awarded for a limited time and are set-up to allow independent activities, however, with a strong relation to EUROfusion Workpackages within the Roadmap to Fusion Electricity or to areas where Fusion for Energy (F4E) considers that engineering skills are needed in the future. The candidates are encouraged to develop a clearly engineering oriented work plan with support from the work package leaders (Project Leaders and Task Force Leaders) and experts.

The action is set-up through calls for participation to the EUROfusion Consortium Members. The evaluation of submitted proposals is performed through a set of procedures in order to ensure transparency and excellence in the selected candidates and projects. This guide details the procedures to be followed for these actions.

## 2. Eligibility to the programme

The following eligibility criteria apply:

- 1) This action supports the career development and training of engineers, typically during the first years of their careers in research. More precisely, this action is strongly focussed towards engineers of all nationalities, namely:
  - a) Engineers in possession of a master degree in Engineering (or any equivalent university degree in Engineering) with a professional experience of less than 6 years after the master degree w.r.t. the deadline for proposal submission of the present call;
  - b) Engineers in possession of a doctoral degree (PhD) who have completed the PhD and defended their thesis in the two years preceding the deadline for proposal submission of the present call.

The abovementioned limits of six and two years, respectively, can be extended by no more than two years of professional experience (industry) outside academia or research centres.

For a limited number of positions in Annex 1, related to areas of engineering with a high cross-over with physics, scientists with an MSc or PhD in Physics can also apply. When this is the case it is explicitly included in the topic descriptions in Annex 1. For all positions were it is not explicitly indicated, only candidates with an engineering background can apply.

The candidate shall be recruited and employed by a EUROfusion member or one of its Third Parties stated in the Grant Agreement. The Consortium member/Third Party

shall provide a declaration of intent to recruit the engineer under an employment contract or equivalent contract compatible with the national legislation. She/he must be recruited by 30 June 2016.

Candidates who have been already employed by a Consortium member or its Third Party for less than 2 years are also eligible to participate in the programme, provided they meet the requirements as specified in points a) and b) above.

A limited number of positions in Annex 1 are specific grants that aim to train engineers at either CCFE or KIT in fields that have been earmarked by Fusion for Energy (F4E) as areas where skills are needed in the near future. Candidates that apply to these specific positions should come from another Research Unit. Section 6 gives information on how these specific positions differ from the ones that are embedded in the regular EUROfusion Work Programme.

- 2) A joint proposal shall be submitted by the candidate and her/his mentor in the respective Research Unit (Consortium Member or its Third Party). The proposal shall refer to one of the advertised positions and the proposed work programme shall be relevant to the topics and activities described in the Annex 1 to the Call for Participation. Candidates may apply to more than one position: in this case the submission of a proposal for each single position the candidate is applying for is required.
- 3) The implementation of this action shall be through the *EUROfusion Consortium* for the implementation of the Fusion Roadmap. The application must be supported and sent by the relevant GA member(s).

### **3. Evaluation criteria and procedures**

The evaluation of proposals is carried out by the EUROfusion Programme Manager with the assistance of a panel of independent experts.

#### **3.1. Experts selection**

The EUROfusion Programme Manager shall nominate expert evaluators with expertise in the fields of the job description.

Experts perform evaluations on a personal basis, not as representatives of their employer, their country or any other entity. They are expected to be independent, impartial and objective, and to behave throughout in a professional manner. They sign an appointment letter, including a confidentiality and conflict of interest declaration. Confidentiality rules must be adhered to at all times, before, during and after the evaluation.

Conflicts of interest: Under the terms of the appointment letter, experts must declare beforehand any known conflicts of interest, and must immediately inform the EUROfusion Programme Manager ([tony.donne@euro-fusion.org](mailto:tony.donne@euro-fusion.org)) if one becomes apparent during the course of the evaluation. EUROfusion shall take whatever action is necessary to remove any conflict.

Confidentiality: The appointment letter also requires experts to maintain strict confidentiality with respect to the whole evaluation process. Under no circumstance may an expert attempt to contact an applicant on her/his own account, either during the evaluation or afterwards.

At the beginning of the evaluation, the experts shall be briefed by EUROfusion on the evaluation procedure, the experts' responsibilities, the issues involved in the particular area/objective and any other relevant item.

### **3.2. Eligibility of the proposal**

On receipt by EUROfusion, proposals shall be assessed against the relevant eligibility criteria specified in Section 2. Proposals which do not fulfil these criteria shall not be included in the evaluation, and candidates shall be promptly informed about this.

A proposal shall only be selected for evaluation if it meets all of the following conditions:

- It is received by EUROfusion before the deadline given in the call;
- It is compliant with the eligibility criteria defined under section 2;
- It is specifying the position the candidate is applying for;
- It is complete and includes all the documentation required in section 4.

If the candidate is in any doubt over their eligibility, they are strongly advised to contact the EUROfusion PMU Administration ([emilia.genangeli@euro-fusion.org](mailto:emilia.genangeli@euro-fusion.org)) for clarification.

### **3.3. The evaluation procedure**

The evaluation procedure shall be carried out in four stages:

- evaluation of the proposal content by the experts based on the written material;
- consensus meeting to establish a short list of candidates that shall be invited for an interview;
- interviews of all short-listed candidates;

- consensus meeting to define the final ranking of the proposals.

### **3.3.1. Scoring**

Each candidate shall be evaluated against the pre-determined evaluation criteria given in Appendices 1 and 2 and be scored according to the thresholds and weightings also given in Appendices 1 and 2.

Each criterion shall be scored out of 5. Half and quarter marks can be given. The scores indicate the following with respect to the criterion under examination:

- 1 - *Poor.*
- 2 - *Fair.*
- 3 - *Good.*
- 4 - *Very Good.*
- 5 - *Excellent.*

### **3.3.2. Short Listing.**

The evaluation of the candidates by the experts in view of the establishment of a short list shall be carried out in four steps:

In the first step the experts are acting individually; they shall not discuss the proposals with each other, nor with any third party. The experts record their individual opinion in an Individual Assessment Report (IAR), giving scores and also comments against the evaluation criteria. All experts shall receive the full information of all candidates, but each proposal shall be fully assessed by two experts.

In the second step, all experts shall hold a consensus meeting under the chairmanship of the EUROfusion Programme Manager or her/his representative to discuss the complete set of proposals. The experts having assessed the same proposal shall discuss to reach a consensus on the scoring. All criteria where a significant difference appears (more than 1 point) shall be addressed. When, after the discussion, differences in scoring subsist, the average marks shall be used for this (these) criterion (criteria). The outcome of this meeting is a summary table showing the preliminary scores of all candidates agreed between the relevant experts. In case it is impossible to reach an agreement between the two expert evaluators, EUROfusion shall designate an additional expert evaluator to act as arbitrator.

After the consensus meeting EUROfusion shall take the necessary steps to assure the quality of the IARs, with particular attention given to clarity, consistency, and appropriate level of detail. If changes are necessary, the reports shall be referred back to the experts

concerned. It is important that the written comments match the scores given by the experts, as they are used as feedback to the candidate.

Based on the definitive marks which are agreed between the experts at the end of this consensus meeting, a short list shall be established by the EUROfusion Programme Manager. The short list shall include not more than twice the number of foreseen grants.

### **3.3.3. Interviews with the short listed candidates**

The evaluation shall then progress towards the third step: individual interviews of the short listed candidates.

The interview board shall be constituted of all the experts involved in the evaluation process and of the EUROfusion Programme Manager (or her/his representative). The board is chaired by the EUROfusion Programme Manager (or her/his representative). The secretary of the board is provided by EUROfusion.

The Project Leader/Task Force Leader responsible for the particular project can connect remotely to witness the interviews and may ask questions and shall give an assessment about the integration of the grant to the respective work package. The Project Leader/Task Force Leader is provided with the application of the candidate no later than two weeks before the interview. However, she/he shall not be involved in the attribution of scores for the final ranking. The members of the interview board shall handle this with care, especially in cases where there might be a conflict-of-interest (e.g. Project/Task Force Leader and Candidate from the same institute).

At the interview it can happen that new facts emerge about the details of the Work Programme and Training Programme. Since the interview is the first opportunity for the whole Panel to review the Work Programme and Training Programme in detail, it is possible that afterwards the Panel can revise the mark given to the Work Programme and Training Programme during the first step.

EUROfusion shall ensure fair and equal treatment of the candidates in the interview and in the following Consensus meeting. Presentation in English shall be requested.

The interview process and criteria are detailed under Appendix 2.

### **3.3.4. Consensus meeting, final scores and ranking**

As the fourth and final step, the board shall hold a final meeting after all interviews in order to:

- (1) Agree on the final score attributed to each short listed candidate (the final score is constituted of the sum of the two marks attributed at the end of the first stage)

assessment (consensus meeting) and during the interview, with a weight of respectively 40% and 60%;

(2) Produce a final ranking of candidates and a proposal for the attribution of grants.

In case multiple candidates have been selected based on the same job description, preference shall be given to the candidate with the highest score. Candidates having a lower score might still be selected in case their Work Programme is complementary to that of the candidates with a higher score.

In the case of proposals with the same final score, preference shall be given to young engineers with no more than two years of professional experience.

#### **4. Proposal content**

The proposal shall contain the following information:

1. A letter from the relevant GA member(s) addressing the application to EUROfusion with a declaration of intent to recruit the engineer under an employment contract or equivalent contract complying with the national legislation. In case of candidates already employed by a Consortium member or its Third Party the letter shall indicate the start date of the employment.
2. A motivation letter and a CV of the candidate with all relevant information. The CV should include details on courses undertaken at undergraduate and/or masters level.
3. A copy of the Master thesis or PhD thesis. If not available in English, a summary of the thesis in English is to be provided.
4. A list of several referees (with their e-mail addresses).
5. A list of scientific publications of the candidate (if available). In case the candidate has a PhD degree and her/his PhD thesis is not in English, those scientific publications that are written in English should be included.
6. Short CV of the Mentor and main relevant publications (maximum length: 3 pages)
7. The Work Programme jointly proposed by the candidate and her/his mentor including:
  - a. A description of the activities and its objectives (maximum length: 2 pages). The proposed work programme shall detail the work to be carried out by the candidate for the entire duration of the grant and describe how it shall be implemented. It shall be relevant to the topics indicated in the advertisement of the position.
  - b. A comprehensive description of the work programme and career development plan, indicating any foreseen training actions, the organization of the tutoring by the host organisation, the possible contribution of other organisations to the work programme, the experience of the host organisation in the topics indicated in the call (maximum length: 2 pages).
  - c. A description of the actions involving specific expenditure, long term missions in other laboratories, key meetings and conference attendance and



showing how these contribute to the achievement of the scientific goals of the work programme (maximum length: 1 page).

- d. A list of milestones and deliverables to be achieved.
8. A written statement from the Project Leader / Task Force Leader on the alignment of the Work Programme and the related Job Description.
9. A supporting statement from any Research Units involved in hosting the candidate.
10. A financial summary for resources required by the EUROfusion Member or its Third Party for the implementation of the proposal, including the following information per year and engineer:
  - a. Salary cost (including fees, superannuation and social charges).
  - b. A global forecast of expenses related to the successful execution of the work programme (e.g. purchase of hardware, consumables, tutoring, participation in conferences and training courses, fees for scientific journals, memberships in scientific associations etc.).
  - c. Mission costs with a summary of the foreseen stays in other laboratories indicating the purpose and duration of the stays taking into account the EC Decision on Unit Costs.

## 5. Recommendations for applicants

During the evaluation of the candidates for the EUROfusion Engineering Grants 2015, observations have been made by the selection panel and the Programme Management Unit which have led to number of recommendations that we would like to give to candidates to optimize their proposal and presentation:

- The candidate and mentor should have a close interaction during the preparation of the Work Programme. The mentor doesn't have to come from the same institute as the candidate. A good briefing of the candidate by the mentor is strongly advised, especially if the candidate is from outside the Fusion field. The Work Programme and the Training Programme should be 'signed off' by the mentor and the candidate jointly.
- An interaction between the mentor and the Project Leader/Task Force Leader (PL/TFL) is compulsory (see Section 4 point 8) before the final application is submitted. The draft Work Programme and Training Programme should be passed to the PL/TFL by the mentor and comments invited, with the PL/TFL being asked to confirm that the WP is compatible with the relevant Job Description, and to send comments for improvement/ incorporation if necessary.
- The candidate is strongly advised to have a rehearsal of her/his presentation at her/his institute or at the institute supporting her/his proposal. If required this can be done via videoconference to avoid unnecessary travelling. Some of the (future) colleagues can act as 'shadow expert panel' to train the candidate for possible questions she/he might expect in the actual interview.
- Candidates that are involving different institutes in their Work Programmes should contact responsible people at these institutes to ascertain that their proposal is

supported on a managerial level, to avoid later surprises (e.g. their Work Programme or Training Programme not being supported). The mentor should have an active role in making sure that the proposal has the full support from all Parties involved. See also Section 4, point 9.

- The work plan should reflect a substantial period of interaction with relevant activities of the work package and should reflect that possible long term periods outside the employing institution are compliant with the travel money of the grant.

## **6. Specific training positions**

As has been remarked elsewhere, F4E has indicated areas where skilled engineers need to be trained for the future. Therefore, a call was made to all Research Units, but especially those having large research infrastructures, whether they can provide applicable training positions for engineers from other Research Units in the areas that were earmarked by F4E. In response to this call CCFE, Culham and KIT, Karlsruhe have offered six positions ( positions 24 to 29 in Annex 1). As mentioned in Sec. 2 candidates for these positions should come from other Research Units than the ones offering the training.

In principle the procedure and guideline for these posts is quite similar to those of the posts advertised via the EUROfusion Work Packages, with the caveat that the contact person for these positions fulfils the role of Project Leader / Task Force Leader for the other posts. When a candidate is granted one of these specific positions she/he will be employed by either CCFE or KIT. The candidate can have a mentor from his home lab. In principle this is even strongly recommended because this gives smaller Research Units a link with the work done at the large Research Infrastructures and could also keep the candidate connected with the Research Unit in his home country.

**7. Provisional timeline for the EUROfusion Engineering Grant evaluation**

Launch of the call	19 May 2015
Deadline for proposals	28 Aug. 2015
Check proposals for eligibility, etc.	4 Sep. 2015
Proposals transmitted to referees	10 Sep. 2015
Referees return the Individual Assessment Reports	12 Oct. 2015
1 <sup>st</sup> consensus meeting with referees (VC). In this meeting the candidates are shortlisted for the interviews.	19–23 Oct. 2015
Interviews	9–13 Nov. 2015
Final Assessment Reports by the referees	23–27 Nov. 2015
General Assembly endorsement	17–18 Dec. 2015

**Appendix 1: Evaluation criteria, thresholds and weightings for the short-listing**

<b>EUROfusion Engineering Grants</b>		
Criterion:	Threshold	Weighting
<b>Background/competence of the candidate in relation to her/his 'professional age'</b> <ul style="list-style-type: none"> <li>- Motivation</li> <li>- Educational Background</li> <li>- Scientific publications/thesis</li> <li>- International background and knowledge of several languages</li> <li>- Professional achievements</li> <li>- Potential of the candidate for the future of the fusion research programme</li> </ul>	3/5	35%
<b>Quality of the work programme</b> <ul style="list-style-type: none"> <li>- Relevance to the topic addressed by the call</li> <li>- Scientific quality of the work programme</li> <li>- Quality of the objectives</li> <li>- Appropriateness of research methodology</li> <li>- Knowledge of the state-of-the-art</li> </ul>	3/5	35%
<b>Quality of the training programme</b> <ul style="list-style-type: none"> <li>- Consistency with the work programme</li> <li>- Quality of the career development plan</li> <li>- Contribution of the proposed training programme to improvement of the career prospects of the candidate</li> <li>- Quality and relevant experience of the hosting organization (expertise / human resources / facilities / infrastructures) and, where appropriate, of the other organization participating to the programme.</li> </ul>	3/5	30%

Proposals that fail to reach the threshold as indicated for each individual criterion shall be excluded from the final ranking.

**Appendix 2: Evaluation criteria for the interview.**

Individual interviews shall last about 25 minutes and shall consist of:

- Presentation by the candidate in English (about 10 minutes)
- Questions by the interview board (about 15 minutes).

The evaluation criteria for the interview will be based on the following criteria:

Criterion	Threshold	Weighting
Quality of the presentation	3/5	50%
Scientific/technical background	3/5	50%

At the end of the interview the expert panel shall proceed with a debriefing and attribute an interview mark to each candidate.

The final score is constituted of the sum of the two marks attributed at the end of the first stage assessment and during the interview, with a weight of respectively 40% and 60%. This with the note that the expert panel may decide to amend the marks they gave for the first stage assessment after the interview (see Section 3.3.3).

The grants will be awarded to candidates with the highest-ranking. It is foreseen to award approximately 20 grants against the 29 positions advertised in the present call.