



**IREL (India) Limited**  
**Government of India Undertaking**  
**Department of Atomic Energy**

**PROJECT PROPOSAL INSTRUCTIONS**

1. Applicant must read the instructions given below before filling the form. Do not change the format of the application form & submit it in MS Word format only.
2. Applications are accepted throughout the year. The time required for the Processing & sanction of the project is typically 4-6 months, depending upon the grant sought.
3. Application, consisting of 3 sections A, B and C, should be prepared as per the prescribed format (IREL-PPA) using Times New Roman format, Font Size: 10 and Line spacing: 1.5. Two (2) hard copies of the application form complete, in all respects as per the prescribed format and stapled at the top left corner, should be submitted to Member Secretary, IRELTDC, Technical Services Department, IREL(India) Limited, OSCOM, Chatrapur 761045.

The applicant is urged to use both sides of the paper for printing (except for Section C). In addition to the hard copy, the soft copy of Section-A & Section-B should also be forwarded to: [brmishra@irel.co.in](mailto:brmishra@irel.co.in) (file size should be restricted to 1.5 MB). The acknowledgement of the application form would be sent via e-mail, only after the hard and soft both the versions of application forms are received at this office.

4. For smooth implementation of the sanctioned project, IREL insists that a project, in addition to a PI, should have a CI from the same Department/Institution. The CI is expected to ensure that the project work is carried out even when the PI is on leave/deputation. In case of long leave/deputation, PI is expected to inform Member Secretary sufficiently in advance so that correspondence can be addressed to the CI directly.
5. IREL can consider projects based on multi-centre studies. For such project proposals, the CIs can be drawn from institutions other than that of the PI. In such cases, funds required by the CIs may be shown separately using the same format. If the project is approved, IREL will sanction funds to PI and CIs separately and send the grants to their respective institutions.
6. Certificate-1 (Section-C) should be from the Head of the Institution of the Principal Investigator (PI), and where applicable that of the Co-Investigator (CI).
7. Projects that have direct relevance to IREL products/DAE programmes and are carried out in collaboration with a DAE unit will get preference. Such projects will have a Principal Collaborator (PC) from a DAE unit and are expected to have been evolved after discussion

between the DAE unit(s) and the PI. The PI and PC will work on complimentary aspects of the problem. For such projects, two copies of Certificate-2 (Section-C) from Unit Head/Group Director of the PC must be obtained before submission of the project proposal.

While the projects under collaborative mode are preferred, IREL also supports independent projects aiming at 'excellence'. For such a project submitted by an investigator, IREL will nominate a scientist as a Coordinator (DC).

8. **Project Overview** (Section-A, Part I): It should reflect the complete information of the project in a concise format, which is normally used by senior management for an overview of the proposal. It is suggested that it may be filled after completing all other sections of the form.
9. **Advisory Committees** (Section-A, Part I, Sr. No. 100): Depending upon the nature of the project, PI may indicate the name of the Advisory Committee to which the proposal should be referred. The priority theme areas for research are given below:
  - a) Processing of minerals in high temperature plasma furnaces.
  - b) Synthesis of novel reagents for solvent extraction.
  - c) Development of environmentally benign processes for value addition to beach sand minerals.
  - d) Development of process for the production of high purity rare earths
  - e) Energy saving measures in mineral processing.
  - f) Development of non-nuclear applications for thorium and light rare earths in Indian Industries.
  - g) Development of uses of rare earths in smart materials.
  - h) Recovery of heavy rare earths from phosphoric acid.
  - i) Nonconventional value addition of sillimanite and garnet.
  - j) Recovery of nuclear materials from various secondary sources.
  - k) Indigenization and import substitution of process equipment's and chemicals
10. **Key words** (Section-A, Part I, Sr. No. 102): Maximum 8 key words for indexing the project may be suggested. The first two key words should refer to the major area of research. You may also provide on a separate sheet name & address of two referees who are experts from the research field of your proposed project.
11. **Project Summary** (Section-A, Part I, Sr. No. 103): Summary (about 100 words) should bring out the importance of the project from the point of view of IREL products/DAE programmes, related work being carried out both within the country and abroad, mode of execution of the project, expected outcome of the project like development of a technology, improved product/process, generation of a data base etc.

12. **Detailed Technical Information** (Section-A, Sr. No.108): Provide 'in-depth' details in this section on as much number of sheets as deemed appropriate. It is recommended to use 2 column layout, single spacing, font size 8 for text and printing on either side of the paper. Please limit the size of the soft copy to 1.5 MB. This information will help us to comprehensively review the project proposal.
13. **Project Objectives** (Section-A, Part II, Sr. No. 200): Enumerate objectives of the proposal. In-depth details should be provided in Section-B.
14. **Research Plan and Deliverables** (Section-A, Part II, Sr. No. 210): Describe the work planned during each year of the project and also identify the deliverables at the end of each year. This will facilitate monitoring of the project and to take corrective actions, if any, required from time to time. Normally, the projects are sanctioned for duration of 3 years. The commencement of the project is considered as the date of the joining of the staff sanctioned or 2 months after the date of issue of sanction letter whichever is earlier.
15. **Budget Estimates** (Section-A, Part III, Sr. No. 300): If the project is approved, IREL will provide funds to implement the project only to non-IREL institution of PI (e.g. University/IIT/IISc/Other DAE units etc.). Funds required for carrying out work in the IREL units will be borne by the respective IREL units which will be charged under the R&D account of the respective IREL unit. However, funds required for travel and stay of the PC/DC at the PI's institution should be included in the project budget and the PC/DC's travel expenses will be debited to this account. Consolidated amounts need be furnished under Budget Estimates. Budget Details and Budget Justification are to be furnished separately in the relevant columns provided for. After the financial sanction is issued, transfer of funds from one 'Head of Account' to another is normally not permitted. Funds are released for one financial year (1st April to 31st March) at a time.
16. **Equipment** (Section-A, Part III, Sr. No. 310): Specifications for the equipment to be procured, names of the suppliers and documents in support of the estimated cost, quotations/ proforma-invoice (not more than 1 month old) in respect of the major equipment should be provided. This will facilitate decision making at our end.

17. Staff salary:

Sr.No	Name of Fellowship	Qualification	Revised rates of Fellowship
1	Junior Research Fellows /Ph.D. Scholarship Holders Of NBHM	M.Sc./BE/B.Tech/B.Vsc/ B.Pharm.	Rs 25000/- P.m. for 1 <sup>st</sup> two years Rs.28000/- p.m for Subsequent years Plus contingency grant of Rs 32000/- per annum.
2	Senior Research Fellows/ Ph.D Scholarship Holders Of NBHM	M.Tech./M.E./MVSc/ M.Pharm/MBBS/BDS/ M.Sc/B. Tech, with two Years experience	Rs 28000/-p.m Plus contingency grant of Rs. 32000/- per annum.
3	Post Doctoral Fellows/Research Associates	Ph.D/M.D./ M.Tech/ME/M.VSc/ M.Pharma/MBBS/BDS with Two years experience	Rs. 36000/-**RA-1** Rs.38000/-**RA-2** Rs.40000/-**RA-3** Plus contingency grant of Rs 32000/- Per annum.
4		Scholars who have Submitted Ph.D thesis and are yet to receive their Ph.D. degree (Provisional or otherwise)	Rs.32000/- p.m Plus contingency grant of Rs.32000/- per annum.

17.1. If a student having higher qualification such as M.Tech/MBBS, etc. competes with students having lower qualification such as B.Tech/MSc., etc. he will be paid the fellowship at the rate applicable to the latter.

- The candidates joining RA with a provisional Ph.D Certificate will be paid fellowship of Rs. 32,000/-p.m. called Bridging Fellowship, till they get final degree. The Post Doctoral fellows/RAs may be fixed at one of the 3 pay levels depending on qualification and experience. The level at which a fellow will be placed will be decided by the interview committee at the level of the Unit, based on the following:
  - i) Quality of Ph.D. thesis;
  - ii) Post-PhD research experience as evidenced from the quality of the publications and/or products designed and developed and
  - iii) Performance in the selection interview.

*Note: on completion of two years and on assessment by the Doctoral Committee of the Student*

*about the progress of work done by the Student, Junior Research Fellows shall be re-designated as Senior Research Fellow. Where such a committee does not exist, Head of Institution may appoint a 3(three) member 'Expert Committee' for evaluation.*

#### **17.2. Contingency Grant:**

The Contingency Grant will be given to meet the expenditure towards (a) purchase of books, (b) Stationery, (c) purchase of computer software and hardware, (d) journals, (e) mailing expenses and (f) travel for attending seminars and conferences.

The reimbursement of actual cost of work related travel other than indicated above, tuition fee, registration fee, thesis evaluation fee and any other similar fee, wherever applicable, paid by the students/research scholars to the Universities will not be part of the 'Contingency Grant' and would be borne by the concerned Unit/Institution from their non-plan budget.

The Contingency grant will be paid on reimbursement basis against the actual bills.

#### **17.3. Service Conditions;**

17.3.1 JRF/SRF/RAs/PDF are not entitled for Dearness Allowance.

##### **17.3.2 House Rent Allowance (HRA)**

All research fellows may be provided hostel accommodation wherever available and those residing in accommodation by the institute will not be eligible for drawing HRA. Wherever provision of hostel accommodation is not possible, HRA may be allowed to all the above categories viz., JRF/SRF/RA/PDF as per Central Government norms in the City/location where they are working. The fellowship amount may be taken as basic for calculating the HRA.

##### **17.3.3 Medical benefits:**

The Research Fellows and the Research Associates (JRF/SRF/RA/PDF) WILL BE ENTITLED FOR Medical Allowances as per the rules of the institution in which they are working.

##### **17.3.4 Leave:**

30 days paid leave per year in addition to casual leave as per rules of the Institutions. Maternity/Paternity Leave shall be admissible as per Government of India instructions. Participation in any scientific event in India or abroad will be treated as on duty. While pursuing course work during the first year of Ph.D. programmes or for any extended duration, leave will be limited to regular vacations as per the programme of the Institute/R & D Centre.

17.3.5 **Bonus/LTC/Retirement benefits:** Not entitled

#### **17.4. Tenure of Fellowship:**

17.4.1 Total period of fellowship in respect of JRF/SRF will be normally 4(four) years, which includes period spent on course work, It may be extended by 1 (one) year after evaluation of the progress made by the scholar by 'Doctoral Committee'. Where such a committee does not exist, Head of the Institution may appoint a 3 (three) member 'Expert committee' for evaluation. The tenure is not extendable beyond 5 (five) years.

17.4.2 The tenure of PDF/Research Associates may be decided by the Institutions/R&D Centers as per overall sanctions available to them for this purpose but should not exceed 3(three) years.

#### **17.5. Publication/Patent:**

17.5.1 The results of JRF/SRF/RA's research work may be published in standard referred journals at the discretion of the Fellow or his Guide. It should be ensured by the Fellow that the assistance provided by the funding agency Department of Atomic Energy, is acknowledged in all such publications.

17.5.2 For filling of patents, BRNS/NBHM guidelines will be applicable

17.6. The stipend of all the above Fellowships including JRF/SRF/PDF/RAs is exempt from payment of income Tax under Section 10(16) of the Income Tax Act 1961.

#### **17.7. Obligations of JRF/SRF/RA/PDF**

17.7.1 He/ She shall be governed by the disciplinary regulations of the host institute where he/she is working;

17.7.2 He/She must send a detailed consolidated report to the research work done during the entire period of fellowship on completion of the tenure/resignation of the Fellowship, at the earliest.

18. If the project proposal is approved, Guidelines/Terms and Conditions for recruitment of Staff and the payment terms are issued along with the Sanction letter. Wherever an Institute/University has its own norms for recruitment of staff, it may follow them. In such a case please enclose a copy of the norms as issued by the competent authority in the Institute/University along with the project proposal.

19. **Overheads** (Section-A, Part III, Sr. No. 370): IREL allows 15% of the cost of the project less contingency as 'Overheads'. The limit for this is Rs. 6 lakhs for educational institutions and Rs. 2 lakhs for all other institutions. This is meant to cover the cost of infrastructure, utilities such as water, electricity, communication and administrative services provided by the university/ institute. Each university/ institute can use its discretion to form regulations to use the funds under this head. Some universities/ institutes follow the practice of depositing all

overheads in a common corpus and the interest there from is used for the maintenance of infrastructure/ equipment needed for research projects. 50% of the overheads (i.e. 7.5% of the total yearly grant less contingency) shall be released annually with the grant. The remaining 50% of the overheads shall be paid on completion of the project and submission of the final progress report along with the audited statement of accounts (FORM-IV) and utilization certificate (FORM-III).

20. **Projects from other agencies** (Section-A, Part IV, Sr. No. 412 & 415): Please describe each project sanctioned to PI and CI by other agencies in not more than 150 words. The description should clearly bring out any overlap of the areas and objectives & methodology of these projects with the submitted proposal.
21. **Facilities** (Section-A, Part V, Sr. No. 416): Provide details about the infrastructure available in the institution and the equipments already available in the group. You may choose to mention difficulties in using the equipment's/facilities, if there are any.
22. **Experience** (Section-B, Sr. No. 500, 510 and 520): List the positions held during the last 10 years and the duration for which held. Please highlight the experience that will be useful and relevant to the proposed project. Persons with less than 10 years or no experience are also eligible to apply.
23. **Publications** (Section-B, Sr. No. 500, 510 and 520): List only important publications relevant to the area of the proposed research project.
24. **Processing of Applications:** Applications are referred by specialists in the field or Research Council of IREL. Based on the comments from the referees, the short listed applicants may be invited to a Technical Programme Discussion Meeting (TPDM) for an oral presentation at Mumbai or at any other convenient place before a panel comprising of the members of the Research Council and the Specialist. Based on the recommendations of the TPDM and the available budget, the proposal may be recommended for sanction/revision/rejection. This process may take around 3 to 6 months. In certain cases, project proposals may be accepted without presentation in a TPDM.
25. **Release of Funds:** Funds for the first year are released along with the issue of initial sanction. Second year funds shall be released on receipt of a claim from the PI along with technical progress report, SA and UC etc as on 31st March in respect of the funds received in the first year. The grant however would be released after deducting the unutilized amount. For the third/ subsequent years PIs are required to submit progress report and renewal application (IREL-PRA) in the prescribed format. PIs may be called for an oral presentation at a TPDM for monitoring progress of the project. If the progress is found satisfactory, a sanction letter

renewing the project for the third/ subsequent years is issued requesting PIs to submit (i) Claim (Form-II), (ii) Utilization Certificate (Form-III) and (iii) Statement of Accounts (Form-IV) as on 31st March, in respect of the funds received in the second/ previous year.

26. IREL would be transferring the project funds electronically to the Bank Account of the University/Institution. Please furnish the details of the account as indicated in Certificate-1 in order to avoid delays in the receipt of funds, otherwise the amount would be sent by Demand Draft/Cheque to the Head of the Institution.

The sanction of the project is liable for cancellation, in case of suppression of information/fact and/or furnishing false information in the application form

**(Sr. Nos. mentioned above refer to the numbers in the Application Form)**



## **NOMENCLATURE**

**Principal Investigator (PI):** A scientist who submits a research proposal to IREL for a programme to be carried out. (Persons with less than 10 years or no experience are also eligible to apply.)

**Co-Investigator (CI):** An associate of the PI taking an active part in the project working either in the institution of PI or any other non-IREL institution.

**Principal Collaborator (PC):** A scientist of the Department of Atomic Energy (DAE) working in any of its constituent units/ PSUs.

**Departmental Coordinator (DC):** A scientist nominated by IREL.

**Constituent units of DAE:** Bhabha Atomic Research Centre (BARC), Indira Gandhi Centre for Atomic Research (IGCAR), Variable Energy Cyclotron Centre (VECC), Raja Ramanna Centre for Advanced Technology (RRCAT), Atomic Minerals Directorate for Exploration and Research (AMD), Board of Radiation and Isotope Technology (BRIT), Nuclear Fuel Complex (NFC), Heavy Water Board (HWB).

**Public Sector Undertakings:** Nuclear Power Corporation of India Limited (NPCIL), Electronics Corporation of India Limited (ECIL), Uranium Corporation of India Limited (UCIL), IREL (India) Limited.

**Non-DAE institutions:** All government educational & research institutions e.g. Indian Institutes of Technology/ Indian Institute of Science/ Universities/ National Laboratories/ CSIR laboratories etc.