



**GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
INDIAN RARE EARTHS LIMITED**

Project Proposal Application Form

IREL-PPA

The form 'IREL-PPA' for seeking financial support for research projects is divided into three sections. Information on how to fill the form is provided as 'Instructions'. Please read each section and the instructions before filling the Form.

SECTION-A: Project Details

Part I : Project overview

Part II : Project objectives, Research plan and Deliverables

Part III: Budget details and justifications

Part IV: Other running and previous projects

SECTION-B: Curriculum Vitae of investigators and coordinators.

SECTION-C: Certificates by the authorities

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: Head Indian Rare Earths Research Centre, Post Box No. 38, Beach Road, Kollam – 691 001 Kerala

The applicant is urged 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: head-irerc@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 IRERC 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:

- I. Processing of minerals in high temperature plasma furnaces.
- II. Synthesis of novel reagents for solvent extraction.
- III. Development of environmentally benign processes for value addition to beach sand minerals.
- IV. Development of process for the production of high purity rare earths

- V. Energy saving measures in mineral processing.
- VI. Development of non-nuclear applications for thorium and light rare earths in Indian Industries.
- VII. Development of uses of rare earths in smart materials.
- VIII. Recovery of heavy rare earths from phosphoric acid.
- IX. Non conventional value addition of sillimanite and garnet.
- X. Recovery of nuclear materials from various secondary sources.
- XI. Indigenization and import substitution of process equipments 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 a 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 (Section-A, Part III, Sr. No. 320): The categories of staff who can be employed on a IREL R&D project and their respective qualifications/experience and salary is as under:

Category	Qualification/experience	Salary per month*
JRF	M.Sc/BE/B.Tech/BVSc/B.Pharm & on re-designation as SRF by a committee	Rs.16,000/- for 1st & 2nd year Rs.18,000/- from 3rd year
SRF	MTech/ME/MVSc/MPharm/MBBS/BDS or M.Sc/BE/B.Tech/BVSc/B.Pharm with 2 years experience	Rs.18,000/- for 1st & 2nd year Rs.20,000/- from 3rd year
RA-I**	Ph.D in Science/ MD or MTech/ME/MVSc/MPharm/MBBS/BDS with 2 years experience	Rs.22,000/-
RA-II**	Ph.D in Science/ MD or MTech/ME/MVSc/MPharm/MBBS/BDS with 2 years experience and possessing exceptional academic record	Rs.23,000/-
RA-III**	Ph.D in Engineering or same as for RA-II but selected under specific DAE scheme	Rs.24,000/-

* In addition to the Salary, the staff appointed is also entitled to House Rent Allowance (HRA) and Medical Allowance (MA) as per PI's institute/university rules. HRA can be claimed only after appointment of the staff.

** The slab at which the Salary for RA is to be fixed may be decided by the appointing authority taking into consideration the qualification and experience of the candidate.

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.

18. Technical Assistance (Section-A, Part III, Sr. No. 330): Under this 'Head of Account', the PI can provide overtime/honorarium to existing technical/scientific staff of the institute, engage laboratory attendants/or other help on casual basis subject to the rules of the host institution and get equipment/experimental set-up fabricated by outside agencies. Funds can also be provided under this head for hiring services from outside that are not available in the institute or, if available, has to be paid for. Equipment hire charges, computer hire charges, etc. should be included under this head.

19. Travel (Section-A, Part III, Sr. No. 350): The entitlement of mode (Rail/Air) and class of travel will be governed by the rules of the respective institutions to which the PI, CI and PC/DC belong. One visit per year of PC/DC to PI's institution and vice versa during the duration of the project may be taken as a guideline. PI may use the funds for travelling to attend a conference within India during the second half of the project. Wherever the project involves fieldwork, the PI may request travel funds accordingly.

20. Contingency (Section-A, Part III, Sr. No. 360): The amount that can be sanctioned under this 'Head' will vary depending on the type of project (e.g. experimental project, theoretical project, data collection and survey project, engineering project etc.). 5-10% of the total of equipment and consumable cost may be considered as a guideline. Under the Head 'contingency', the funds can be utilized to meet the expenditure towards advertisement and selection related expenses for the post of JRF/SRF/RA. PI may also utilise this fund towards payment of tuition fee and other expenditure of the staff employed for registering for Ph.D. programme of the university. This can also be used for purchase of urgently required laboratory item or for buying books, but books so purchased should be deposited in the library of the Institute and issued as per the rules of the library.

21. 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).

22. **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.

23. **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 equipments/facilities, if there are any.

24. **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.

25. **Publications** (Section-B, Sr. No. 500, 510 and 520): List only important publications relevant to the area of the proposed research project.

26. **Processing of Applications:** Applications are refereed 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.

27. **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.

28. 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), Indian Rare Earth Limited (IRE).

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

IREL-PPA

(Please Submit only Two hard copies & mail the soft copy to head-irerc@irel.co.in)

SECTION-A

PART I – PROJECT OVERVIEW (Please see Instruction - Sr. No. 8)

100. Advisory Committee Code Number (Please see Instruction - Sr. No. 9): 1 to 11

101. Title:

102. Key Words & Name of 2 Referees (Please see Instruction - Sr. No. 10):

103. Project Summary (Please see Instruction - Sr. No. 11):

Write Project Summary here : Approx 100 Words

Personal Details:

		Name	Address	e-mail	Phone	Fax
104	PI					
105	CI					
106	PC					

107. Total Budget

108. Detailed Project Proposal Report Enclosed: Yes/No

(Please see Instruction - Sr. No. 12. This information will help us to comprehensively review the proposal).

PART II - PROJECT OBJECTIVES, RESEARCH PLAN and DELIVERABLES

200. List of Objectives (Please see Instruction - Sr. No. 13):

210. Describe the yearly Research Plan and identify the Deliverables (Please see Instruction - Sr. No. 14):

A. At PI/ CI's Institution

Ist Year:

IIInd Year:

IIIrd Year:

B. At PC's Institution.

Ist Year:

IIInd Year:

IIIrd Year:

211. Infrastructure facilities related to the project activity available at the PI/CI's Institute:

212. Facilities available at the PC's institution that would be useful to this project:

PART III - BUDGET ESTIMATES

300. Details of budget requirements (Please see Instruction - Sr. No. 15 to 21)

Particulars	I Year	II Year	III Year	Total
↓ Amount in R →				
310. Equipment				
320. Staff Salary				
JRF:				
SRF:				

RA:				
330. Technical Assistance				
340. Consumables				
350. Travel				
PI:				
PC/DC:				
360. Contingencies				
370. Overheads				
380. Grand Total				

BUDGET DETAILS

310. Details of the budget for equipment to be procured by the PI:

Sl.No.	Item	Ist year	IInd year	IIIrd year	Total
Local:					
Imported:					
Mention currency conversion rate used for estimation					
Total					

340. Details of budget for consumables to be procured by the PI (Amount in Rupees):

Sl. No.	Item	Ist year	IIInd year	IIIrd year	Total
	Total				

350. Details of travel:

	Ist year	IIInd year	IIIrd year	Total
Amount in Rupees ⇨				
351. Proposed number of visits of PC/DC to PI's Institute				
351A. Duration of stay (no. of days) during each visit				
351B. Total funds required				
352. Proposed number of visits of PI to PC/DC's institute				
352A. Duration of stay (No. of days) during each visit				
352B. Total funds required				
353. Funds required by PI for travel to attend conferences within India.				
354. Funds for Other visits (please give details)				

BUDGET JUSTIFICATIONS

310. Equipment:

320. Staff:

330. Technical assistance:

340. Consumables:

350. Travel:

360. Contingencies:

PART IV - OTHER PROJECTS

410. List all previous projects that are supported by IREL or any other funding agency in which PI is actively participating (either as PI or as CI):

Sl. No. Title of the project Total cost Agency Present status

411. List all projects submitted during the current financial year by PI to IREL or any other agency for funding. Give details on the present status of the application:

Sl. No. Title of the project Total cost Agency Present status

412. Brief description of the project(s) submitted/sanctioned by/to PI by other agencies. (Please see Instruction - Sr. No.22):

413. List all previous projects that are supported by IREL or any other funding agency in which CI is actively participating (either as PI or as CI):

Sl. No.	Title of the project	Total cost	Agency	Present status
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414. List all projects submitted during the current financial year by CI to IREL or any other agency for funding. Give details on the present status of the application:

Sl. No.	Title of the project	Total cost	Agency	Present status
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415. Brief description of the project(s) submitted/sanctioned by/to CI by other agencies. (Please see Instruction - Sr.No.22):

PART IV - FACILITIES

416. List of facilities that will be extended to the investigators by the implementing institution for the project

A. Infrastructure facilities

Sr. No.	Item Name	Yes/No /NR*	Sr. No.	Item Name	Yes/No /NR*
1.	Workshop		7.	Telecommunication	
2.	Water & Electricity		8.	Transportation	
3.	Standby power supply		9.	Administrative I support	
4.	Laboratory space & furniture		10.	Library facilities	
5.	AC room for equipment		11.	Computational facilities	
6.	Refrigerator		12.	Animal/Glass house	
NR*: Not Required					

B. Equipment and accessories available within the Investigator's group/Dept. which can be utilized for the project.

Sr. No.	Name of the Equipment	Model & Make	Year of Purchase

SECTION-B

(Please see Instruction - Sr. No.23 & 24)

500. Curriculum vitae (CV) of Principal Investigator (PI),

510. Curriculum vitae (CV) of Co-Investigator (CI), if applicable

520. Curriculum vitae (CV) of Principal Collaborator (PC):

The following format should be used to provide Curriculum vitae of the individuals mentioned above

Name & Designation:

Date & Place of Birth:

Nationality:

Present post:

Institution with address:

Telephone No. (with STD code):

Fax No.:

E-mail:

Qualifications:

Experience:

Awards & Fellowships:

Signature with date

Attach a list of publications during the last 10 years which is relevant to the project

(Reprints may please be mail only on demand)

SECTION-C

CERTIFICATE-1 (Submit single hard copy only)

Certificate from the Head of the Institution of the Principal Investigator (PI) and Co-Investigator (CI) from Non-IREL Institution

(Please see Instruction - Sr. No.4-6)

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Project Title:

(1) Certified that this Institution agrees to the participation of

Prof./Dr./Shri _____ (PI) Prof./Dr./Shri _____ (CI)

Address _____

for the above project which is being submitted for financial support to the Indian Rare Earths Limited (IREL)

(2) Certified that the infrastructural facilities related to the project activity available in this institution and in Part II of the proposal (including equipment, manpower and other facilities) will be extended for the project.

(3) Certified that the management takes the responsibilities for the timely submission of audited (by external Chartered Accountant or Statutory Government Auditor) statement of account (SA), utilisation certificate (UC), details of staff recruited and equipment purchased for each year as well as the audited (by external Chartered Accountant or Statutory Government Auditor) consolidated SA and UC for the final year.

(4) Particulars of University Bank A/c are as follows (Please see Instruction - Sr. No.7):

- a) Name of Account Holder:
- b) Account No.:
- c) Bank Name and Branch Address:

- d) Branch code:
- e) IFS Code: (16 digits)

Date:

Place:

Name & signature of the
Head of the institution
or his authorised nominee

Seal:

Note: For Multi-Centre projects, similar certificate is needed from all the participating institutions.



CERTIFICATE-2 (Submit single hard copy only)

Certificate from the Head of the Institution of Principal Collaborator (PC) from DAE Institution

(Please see Instruction - Sr. No.7)

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Project Title:

(1) Certified that this Institution agrees to the participation of Prof./Dr./Shri _____ Department/Address _____ as Principal Collaborator (PC) for the above project that is being submitted for financial support to Indian Rare Earths Limited (IREL) by Prof./Dr./Shri _____ Department/Address _____ as Principal Investigator (PI) .

The PC shall coordinate for timely submission of yearly progress reports and financial documents towards meaningful conclusion of the project as scheduled.

(2) Certified that the infrastructural facilities related to the project activity available in this institution and in Part II of the proposal (including equipment, manpower and other facilities) will be extended for the project.

(3) This institution assures to undertake the financial and other management responsibilities of the part of the project work that will be conducted in this institution.

Date:

Name & signature of the
Head of the DAE institution/
Head of the Group

Place:

Seal: