

**General Information and Format for Submission of Applications for  
Industry Research & Development Fellowship Programme  
(IRDFP) 2022**

**Under**

**(TECHNOLOGY MISSION DIVISION - Energy, Water & Others)**

**Support academia-industry interactions in order to address industry-informed challenges with the primary goal to create a pathway to support academic researchers in establishing careers in industry.**

**Date of Start: 04<sup>th</sup> October 2022  
Last Date of Submission: 15th January 2023**



GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE & TECHNOLOGY  
DEPARTMENT OF SCIENCE & TECHNOLOGY  
TECHNOLOGY BHAVAN, NEW MEHRAULI ROAD  
NEW DELHI – 110 016

# **Industry Research & Development Fellowship Programme 2022 (IRDFP)**

## **INTRODUCTION:**

Department of Science and Technology (DST) funds excellent and impactful research and talent, and shapes the future of INDIA by anticipating what's next and widening engagement and collaboration.

DST sets out the vision that India will be a global innovation leader in scientific and engineering research for the advancement of India's economy and society. DST seeks to foster academia-industry interactions by building strategic partnerships with industry to perform cutting-edge research to address industry-informed challenges.

India Energy Storage Alliance (IESA) is a leading industry alliance focused on the development of advanced energy storage, green hydrogen, and e-mobility technologies in India. The alliance has been at the forefront of efforts seminal in shaping an enabling policy framework for the adoption of these emerging clean technologies in India. With the goal of making India a global R&D and manufacturing hub in emerging clean energy technologies, IESA provides its member organizations a holistic ecosystem to network and grow their business in India and world-over by providing them in-depth analysis of the market, facilitating dialogue between industry and government stakeholders, and providing the state-of-the-art skill-development training.

**Department of Science & Technology (DST) and India Energy Storage Alliance (IESA)** are pleased to launch **Industry Research & Development Fellowship Programme 2022 (IRDFP)** call for applications under the DST Industry-Academia Fellowship Programme. The fellowship will enhance the skills of the Fellow and will be of mutual benefit to both the industry and academic partners.

Researchers placed in or collaborating with industry will have the opportunity to gain a working knowledge of relevant business drivers and will gain from industry's established contacts. The up-skilling and industry exposure provided to academic researchers through the DST-IESA Industry-Academia Fellowship Programme will prepare them for a career in industry and maximise the impact of the training received by these researchers so far. For faculty researchers, it is expected that their Fellowship will help seed subsequent industry collaborations and shape the direction of their research going forward.

Industry partners hosting and collaborating with the researchers will benefit from the expertise of the Fellow bringing to their company innovative solutions to industry challenges, providing support to enhance competitive advantage and future resilience, and developing links with academia to seed future longer-term collaborations.

### **AIM:**

**IRDFP 2022** seeks to support academia-industry interactions in order to address industry-informed challenges with the primary goal to create a pathway to support academic researchers in establishing careers in industry. The programme aims at encouraging recent PhDs with appreciable track record in the field of **Clean Energy** to pursue research with the industry as a career by providing the Fellowship for a duration of 12 months. The programme also drives research collaboration, translation and commercialization of outcomes across a range of industry settings. Awards under this programme are made to academic researchers wishing to work on industry-informed research problems that are of relevance to India through the temporary placement of with an industry partner.

### **OBJECTIVES:**

The objectives of the **Industry Research & Development Fellowship Programme 2022 (IRDFP)** are to:

- Encourage recent PhDs and PhD students (within 3 years of completion of PhD) to pursue research on industry-informed research problems relevant to India in areas related to **Clean Energy** with particular focus on energy storage, electric mobility, and green hydrogen technologies.
- Foster impactful innovation by supporting research on industry-informed challenges relevant to India and exchange of knowledge and expertise between academia and industry. These challenges could be related to areas such as energy storage, zero-carbon energy, smart grids, e-mobility, renewable energy, policies in energy sector, economics affecting energy sector, social sciences for energy sector or other relevant studies impacting clean & green sector. Examples of research problems of interest include but are not limited to (not a comprehensive but only a representative list):
  - Use of advanced energy storage technologies for supporting large-scale integration of renewable energy in India's electric grid.
  - Supporting economic development in remote areas by improving clean energy access.
  - Clean energy solutions for commercial and industrial customers – e.g., rooftop photovoltaics, improving power quality, etc.

- Solutions to promote electric mobility and charging infrastructure in India.
- Scaling of manufacturing of Advanced Chemistry Cells, electric vehicles, and green hydrogen technologies.
- Enhance the breadth of training of researchers, and their employability.
- Facilitate increased participation in research, development and innovation by Small, Medium and Large enterprises across India.

### **DURATION OF THE FELLOWSHIP:**

Awards under this programme will be awarded for a duration of 12 months.

### **FINANCIAL SUPPORT:**

Fellowship amount per student Rs.50,000/- per month (consolidated)

### **ELIGIBILITY CRITERIA:**

- The applicant must be an Indian citizen.
- The applicant must be 35 years old or younger and within 3 years of completion of PhD as on the last date of submission of the application.
- The applicant must
  - 1) have a PhD degree from an approved or accredited university or institute no longer than 3 years before the deadline of submission of the application,
  - OR
  - 2) be close to completion of a PhD degree from an approved or accredited university or institute, so that he/she will have earned the PhD degree before the start date of this Fellowship.
- The applicant must have demonstrated strong research interest and record in areas related to **Clean Energy** with particular focus on energy storage, electric mobility, or green hydrogen technologies. The applicant's research interest may be in science, engineering, business management, public policy, or interdisciplinary aspects of the aforementioned technology areas.

### **APPLICATION REVIEW PROCEDURE AND CRITERIA:**

All applications will be evaluated by a DST constituted/nominated EPC (Expert Panel Committee) based on merit and compliance to the eligibility conditions. The decision of the committee will be considered as final and binding.

Proposals will be reviewed by EPC comprised of a large number of domain-specific reviewers; where each member of the panel receives a number of applications.

Proposals are assigned to each reviewer based on expertise. All reviewers engaged by DST are required to adhere to the DST guidelines.

Only applications demonstrating a strong potential for deepening intersectoral engagement, academia-industry exchange of knowledge and upskilling of researchers are recommended for Fellowship by the panel.

DST reserves the right to modify the review process at any point of time. Applicants will be notified of any relevant modification to the procedure.

### **ADDITIONAL DETAILS AND RESOURCES:**

1. During the tenure of the Fellowship, the Fellow will work on a research problem as agreed upon by the industry organization. It is preferred that the applicant finds an Industry Partner, who is an IESA member in good standing.

The list of IESA member organizations can be found at <https://indiaesa.info/community/members>.

If an applicant cannot find an industry partner, then he/she can still submit the application with a Research Statement, in which case matchmaking with an Industry Partner will take place during the selection process.

2. Although of particular interest to the industry partner, the research problem is also expected to be of broader relevance to Clean Energy ecosystem in India, particularly in energy storage, green hydrogen, and electric mobility technologies.
3. The Research Statement/Proposal submitted by the applicant must demonstrate strong interest in addressing research problems that are of importance to advance clean energy industries and market in India. The Statement should describe the research problem(s) of interest to the applicant, execution plans to address those problems during the Fellowship, and expected outcomes.
4. The awardee will abide by the conduct, rules & regulations of the host organisation and the country. DST will not be responsible for violation of any Rules & Regulations by the awardee.
5. DST grant is only for supporting monthly fellowship. No other cost is included in the fellowship programme.
6. DST and IESA will disburse grant in INR to the Indian bank account of the awardee or the academic institution, if any where the awardee will be hosted for the duration of the Fellowship.
7. The awardee shall commence his/her visit within 6 months from the date of the award letter.
8. Extension in duration of Fellowship shall not be entertained.
9. The awardee/host mentor must intimate DST through email/letter if the awardee discontinues the Fellowship before completion of the tenure.

10. Within 4 weeks of completion of the Fellowship, the awardee must submit a detailed Fellowship completion report endorsed by the host mentor in the prescribed format along with representative photos to DST.
11. The awardee must recognise and acknowledge DST & IESA - Industry Research & Development Fellowship Programme 2022 (IRDFP) in all online/print documents, communication, reports, publications, etc. on work resulting from the Fellowship.

### **IMPORTANT DATES**

Date of Start: 04<sup>th</sup> October 2022  
Date of Submission: 15th January 2023

### **HOW TO APPLY:**

The application must be submitted in the enclosed format through **ONLINE MODE ONLY** (<https://onlinedst.gov.in/Login.aspx>). **NO HARD COPY** of the application should be submitted. Please note, incomplete application will lead to disqualification.

### **STEPS TO FOLLOW WHILE SUBMITTING THE APPLICATION:**

- Step 1: Visit EPMS <https://onlinedst.gov.in/Login.aspx>
- Step 2: Either Login or complete the New PI Registration with host institute details.
- Step 3: Fill-in the details in the General Information tab.
- Step 4: On the financial tab, choose the budget head (Recurring) and mention Rs. 50,000/- in the amount.
- Step 5: Enter **N/A** on the PFMS tab.
- Step 6: Upload your complete application form details and the documents on the Submission tab (In Word and PDF format).

### **APPLICATION DOCUMENTS:**

Please ensure that following documents have been completed and uploaded along with the proposal.

- Recent Passport Size picture of the applicant
- A copy of PhD Degree Certificate (in case of applicants having a PhD degree) OR a copy of PhD Enrolment & Registration Certificate (in case the applicant is enrolled in a PhD program at the time of application and is expecting to complete PhD before the start date of the Fellowship).
- Copies of 10th, 12th, Graduation & Post-Graduation Certificate
- Copy of any other Degree or Diploma Certificate (if applicable)
- Curriculum Vitae of the applicant
- Research Statement (maximum 6 pages, not including the list of references).

References list (max. 1 page) should be provided, which includes author(s), title of article, name of publication, date of publication, and details (such as volume, pages).

- Research Proposal (maximum 6 pages, not including the list of references) References list (max. 1 page) should be provided, which includes author(s), title of article, name of publication, date of publication, and details (such as volume, pages).
- List of publications authored by the applicant in last 5 years
- Conflict of Interest Statement, if applicable (maximum 2 pages)
- At least 2 recommendation letters to be directly sent to the email address at the end of this document with subject line “DST-IESA IRDFP Recommendation Letter”

Applications received without above documents with incomplete information will not be entertained. **Soft copy in PDF format is also to be emailed to [ranjith.krishnapai@gov.in](mailto:ranjith.krishnapai@gov.in) on or before 15th January 2023 (05:00pm).**

**Contacts:** Any enquiries related to this call should be directed to:

**Dr. Ranjith Krishna Pai**

Director/Scientist 'E'

Technology Mission Division (Energy, Water & Others)

Room no 246, Second Floor,

S&T New Building Block I,

Department of Science and Technology (DST)

Ministry of Science and Technology, Govt. of India

Technology Bhavan, New Mehrauli Road

New Delhi-110016

E-mail: [ranjith.krishnapai@gov.in](mailto:ranjith.krishnapai@gov.in)

## Application Form

### DST-IESA Industry Research & Development Fellowship Programme (IRDFP)2022

Please use BLOCK LETTERS:

Please affix a recent passport size photograph with your signatures

1. Full Name: \_\_\_\_\_ Sex (M/F): \_\_\_\_\_
- 2a. Father's/ Husband's Name: .....
- 2b. Nationality: .....
3. Present Address: .....  
.....
4. Permanent Address:.....  
.....
5. a) Date of Birth.....(b) Birth Place.....(c) State of Domicile.....
6. Email\_ID.....
7. Telephone/Mobile No..... Alternate No:.....
8. Citizenship : .....
- 9.\* Do you belong to: (a) Scheduled Caste- Yes/No (b) Scheduled Tribe -Yes/No (c) OBC - Yes/ No  
\* To be filled in by Indian Nationals
- 11a. Academic and Professional qualifications (from first degree onwards):

Degree/ Diploma	Subject	Percentage of Marks or Grade	Name of Univ./Instituti on	Duration of Course	Month & year of passing




11. (b) If PhD degree not awarded, please give details on whichever applicable below:

Date of thesis submission:.....

Likely date of submission:.....

12. Title of PhD Thesis .....

.....

Institute/University

.....

13. Specializations, in terms of Broad Area of Specialization and Exact Area of Specialization:

(a) Subject	(b) Broad Area of Specialization	Exact Area of Specialization

14. Publications and Patents: **(Please attach list of publications and patents with full references and reprints or photocopies bearing serial numbers corresponding with those in the list)**

(a) No. of Papers (i) Published ..... (ii) Accepted.....

(b) No. of Books published....., (c) No. of patents: (i) Filed ..... (ii) Granted:.....

15. Prizes, Honours, Awards, Distinctions, if any:

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16. Fellowships held:

Name of fellowship	Name of the sponsoring agency	Dates		Amount	Name of the Host Institute
		From	To		

17. Give details of employment, if any (A separate sheet may be used):

.....

18. Title of proposed Research and Development Project:

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(Describe in detail, on a separate sheet, the Research or Development Project you would like to pursue, along with year-wise plan of work for at least one year. The project should be made in consultation with the mentor with whom you propose to work.

19. Testimonials from two referees who are familiar with your recent research work may be attached. Please give the names, designations, and addresses of referees:

(i).....

(ii).....

20. Declaration (By the Applicant)

I have read the terms and conditions of the IRDFP 2022 DST-IESA- Industry Research & Development Fellowship. I accept and agree to abide by these if the Fellowship is offered to me. I certify that to the best of my knowledge and belief the particulars given in the application are correct. I understand that the decision taken on my application by DST will be final. (If false and suppression of factual information in the application form comes to the notice of DST at any time during the tenure of fellowship, the “applicant would be liable to be terminated).

Place.....

Signature of the candidate.....

Date.....

21. Declaration (By the Ph.D. Supervisor)

I have satisfied myself about the credentials of the applicant and undertake to Guide/Supervise him/her for the proposed research work.

Date:.....

Signature of the Guide:.....