

## **Argonne National Laboratory Energy Technology and Security Fellowship Program Instructions for Applicants**

The Argonne Energy Technology and Security Fellowship is an exciting and unique opportunity to lead and contribute to cutting edge applied research that develops and uses artificial intelligence components for science and engineering applications in the energy and global security space. All applicants must identify an Argonne employee (sponsor) to support your nomination. The sponsor could be someone who is already familiar with your research work and accomplishments through previous collaborations or professional societies. If you have not yet identified an Argonne sponsor, visit the detailed websites of the various Research Programs and Research Divisions at <https://www.anl.gov/research-index>.

**Deadline:** The deadline to receive all the application materials is **7:00PM CST, Monday, March 20, 2023, for the Argonne Energy Technology and Security Fellowship.**

**Salary and Conditions of Term:** Fellowships are renewed on annual basis up through a third year. The first two years of the fellowship are funded 100% by Argonne's Laboratory Directed Research and Development (LDRD) program. The third year is funded 50% by LDRD and 50% by other programs identified by the fellow and host sponsor. This model allows fellows to advance independent research as outlined in their fellowship proposal, while making significant contributions to other Laboratory initiatives.

The Argonne Energy Technology and Security Fellowship carries a competitive salary and benefits package. Following acceptance of offer, sponsors will ensure that fellowship proposals meet the required Department of Energy approvals. Appointments may commence on or after October 1, 2023.

**Fellows will be located at Argonne National Laboratory, in the home division of the sponsor.**

**Candidate Eligibility:** Candidates must be within three years of having received the PhD at the time of application or be in the process of completing their degree requirements. All PhD requirements must be met at the commencement of the appointment. It is recommended that candidates discuss eligibility requirements with their sponsor.

**Qualifications We Require:**

- Ph.D. conferred within three years at the time of application or completion of Ph.D. requirements by commencement of appointment
- Evidence of academic achievement with potential for technical and research leadership
- Research in areas that align with Argonne's mission

**Qualifications We Desire:**

- Interest in leadership and service as evidenced through community outreach, activities to advance diversity, equity and inclusion, professional society engagement, etc.
- Creativity and motivation
- Excellent communication skills
- Alignment with Argonne's Core Values: Impact, Safety, Respect, Integrity, and Teamwork.

## Sections in This Document

- How to apply
  - Application materials
  - Guidance for transcripts
  - Guidance for recommendation letters
  - Other supporting materials
- Proposal template guidance
- Review process and timeline
- Advice for preparing your CV
- Frequently asked questions
- Proposal template preview

## How to Apply

Candidates must apply to [Requisition #414475](#) on the Argonne Careers page and upload the following documents. **The research proposal and graduate transcripts should be uploaded under the Supporting Documents section in the application portal.**

1. **Research Proposal:** Proposals should be submitted using the Research Proposal Template. Candidates are encouraged to name the proposal document with an identifiable name such as **YourLastName\_ResearchProposal**. For detailed instructions, refer to the Research Proposal Template Guidance at the end of this section. Both the guidance and template are accessible on the [Argonne Energy Technology and Security Fellowship website](#). A sample template is provided at the end of this document for reference.
2. **Curriculum Vitae (CV),** including list of publications, significant presentations, patents and other relevant activities that demonstrate research productivity, independence, leadership experience and other pertinent skills. See appendix for tips on preparing your CV. Candidates are encouraged to name the proposal document with an identifiable name such as **YourLastName\_CV**.
3. **Graduate School Transcripts**
  - Candidates are encouraged to name this document with an identifiable name such as **YourLastName\_Transcripts**.
  - Transcripts must include the name of the school, the student's name, the school's watermark, official seal or symbol and the Registrar's signature. If degree has been completed, transcripts must reflect degree date.
  - If the school does not provide transcripts, a copy of a diploma or letter from the Graduate School Office stating that you are enrolled or have completed all the requirements for the Ph.D. is acceptable. This letter must be on official school letterhead and signed by a representative from the Graduate School Office.
  - If the transcripts are not in English, please provide one of the following in addition to the transcripts:
    - Translation of the information contained in the transcript
    - Brief summary of the information contained in the transcripts
  - The following documents will not be accepted as Graduate School Transcripts: Unofficial grade reports downloaded from the university intranet, Documents missing the student's name or school's name, Documents missing the degree date.

## Required Supporting Materials

**NOTE: Supporting materials should be sent to [aetfellowships@anl.gov](mailto:aetfellowships@anl.gov)**

1. Nomination form from Argonne sponsor (with copy to Division Director) that addresses the strengths of the candidate, the merits of the research proposal and how the candidate's work is expected to contribute to or grow Argonne's research programs.
  2. **Three letters of recommendation from other than Argonne staff. Consult [aetfellowships@anl.gov](mailto:aetfellowships@anl.gov) if a potential reference is on staff at Argonne.**

It is strongly recommended that candidates request letters from individuals who are familiar with the candidate's work and can comment confidently on:

    - Candidate's ability to perform independently and on a team
    - Leadership qualities and ability to communicate effectively
    - Candidate's demonstrated independence of thought, ingenuity and maturity
    - Major accomplishments and contributions to the candidate's field
    - How the candidate ranks compared to others at a similar career stage in the field
  3. Letters are preferred to be in PDF format from the individual(s) with a signature on official letterhead. In the subject line please include the name of the candidate.
  4. Submitting more than three letters does not confer competitive advantage. Only three letters will be included with the application package for committee review.
- 3. Note on cover letters: The application system may ask you for a cover letter. While this may be desirable, it is not required for your application. The information that would be included in a cover letter is instead addressed in the Investigator Background section of the Research Proposal.**

**Status of your application:** It is advised that applicants contact sponsors and references well in advance of the application deadline to ensure that all materials are received on time. Late materials may not be accepted once the review process has begun. To inquire about the status of your application, please send an email to [aetfellowships@anl.gov](mailto:aetfellowships@anl.gov) with copy to your sponsor.

## **Argonne Energy Technology and Security Fellowship Proposal Template Guidance**

Read these instructions before completing the proposal template. They explain, in detail, what is expected of each section. Fellowships are funded through the Laboratory Directed Research and Development program. Proposals will be reviewed by the AET and NTNS Directorate-wide Fellowship Review Committee. Upon selection, proposals will be submitted for DOE approval. Providing the requested information will prevent delays in the approval process.

The last page provides space for the candidate to describe their research background, achievements and leadership experience and career goals.

### **1. Cover Page—Page One (One Page Limit)**

**Project Title:** The title should be descriptive and appeal to a wide audience. Do not use acronyms, chemical symbols or abbreviations in your title as the DOE reporting system will reject those titles.

**Name:** Enter your name

**Sponsor:** Enter the name and Argonne division of your sponsor.

**Proposal Summary/Abstract (limit to around 100-200 words):**

**Elevator speech summary or abstract of the proposed research, written for a broad audience that will include experts outside your field.** The summary should address the following questions:

- What is the proposed research?
- Why is it important?
- Why does this research merit a fellowship at Argonne?

### **2. Research Plan—Page 2-3 (Two page limit)**

This proposal will be reviewed by a AET Directorate-wide review committee whose members have diverse scientific and engineering backgrounds. Please write with a broad, multi-disciplinary audience in mind. The following sections should be included:

- **Research Goal:** Describe the ultimate research goal for this project.
- **Research Opportunity:** Clearly articulate the main idea of your proposed research, including
  - The exploratory research opportunity which the project addresses.
  - The innovative or breakthrough potential of the proposed project.
  - The novelty of the research – explain how this research will be different from work done currently at Argonne and how it is different than research being pursued in the greater scientific community.
- **Research Description:** Detailed research plan discussing how you plan to approach your research goal.

### **3. References and Figures—Page 4 (One page limit)**

This page may be used for technical references and figures.

#### 4. Project Plan and Return on Innovation—Page 5 (one page limit)

- Resources: Describe the resources required to accomplish your proposed research including, but not limited to:
  - Equipment or facilities at Argonne
  - Technical or engineering support and use of user facilities.
- Research Milestones
  - Provide a tentative timeline for your three-year project and anticipated deliverables.
- Return on Innovation:
  - Alignment with Mission: Clear statement of the project alignment with both the DOE mission and Argonne’s strategic areas in energy and global security. Work with your sponsor on assessing whether your proposal aligns with DOE and Argonne missions.
  - Expected Outcome: LDRD is the seed fund for Argonne’s future. Please describe the expected return if you meet your R&D goal. **How will this research position the PIs and Argonne as a leader?**
  - Roadmap: Describe in detail the roadmap for accomplishing the expected return.
    - For future funding opportunities, describe the funding source.
    - Anticipated deliverables, for example, future funding, partnerships, publications, intellectual property, capabilities that can be leveraged and reputation that leads to programmatic growth.

#### 5. Investigator Background—Page 6 (One page limit):

- Provide a short summary of any current or past research relevant to the proposed research in this project.
- Expand on leadership roles, collaborations and other significant experiences.
- Describe experiences illustrating broader professional interests such as STEM outreach, advancing diversity, equity and inclusion and engagement with professional societies
- Expand upon interests in pursuing research at Argonne and career goals.
- This section will replace the traditional application cover letter, so take that into consideration.

#### Review Process and Tentative Timeline

- Committee reviews applications and provides initial ranking (March-April)
- Top 8-12 candidates interviewed via Teams (May-June)
- Sponsors of top candidates interviewed by committee (May-June)
- Committee advises AET Associate Laboratory Director on final rankings (June-July)
- Finalists notified by late July

## Tips for Preparing Your CV

This section is not a format guide. You should format your CV according to your own personal style. In general, a CV typically contains the following information.

- **Contact Information:**
  - Name, current mailing address, preferred telephone number and email address.
  - A current trend is to provide a link to your LinkedIn profile.
  - Do NOT include specific information such as date of birth or social security number.
- **Background and Experience:**
  - Education
  - Research or other Work Experience
  - Record of research output: Publications, conference abstracts/proceedings, presentations, patents, code and use, media mentions, etc.
  - Awards/Accomplishments—provide context for specific awards, when possible
  - Leadership Experience and Volunteer Activities
  - Summary of skills and strengths the candidate wishes to highlight
- **Include numbers when possible to provide context:**
  - Granted Best Graduate Student Award—awarded to one person every 10 years from an applicant pool of 10,000 applicants
  - Contributed to NSF-funded proposal (\$4M over 4 years)
  - Patent/IP disclosure #D00506T led to \$X of investment funding
  - University Best Dissertation Award—awarded annually to one student across the entire university (1:1000 award rate)
  - Mentored 5 undergraduates and 3 graduate students over 3 years
  - Code used by X# researchers; highlighted at conferences

## **Frequently Asked Questions**

**1. Is U.S. citizenship required?**

No.

**2. Is there an age restriction?**

No. However, fellowship recipients must recently (within 3 years) have received a PhD or be in the final stages of their graduate program.

**3. Is there an application form?**

Candidates must upload the required documents as outlined above through the application portal. If selected, candidates will be asked to complete an employment application to complete the administrative requirements for the appointment.

**4. What is the mailing address for the application materials?**

There is no mailing address. All supporting letters should be sent to [aetfellowships@anl.gov](mailto:aetfellowships@anl.gov). In the subject line please include the name of the candidate. The candidate's application documents should be submitted electronically through the application portal.

**5. Where will the Fellow work?**

The individual will work at the Argonne National Laboratory site in Lemont, IL in the sponsor's Research Division.

**6. Who should the nominator be?**

The nominator must be an Argonne employee (sponsor). It is advisable that the sponsor be someone who is familiar with your work or whose research background will be beneficial in mentoring you through your appointment.

**7. What is the difference between the sponsor's nomination form and reference letters?**

The sponsor's nomination must come from a member of Argonne's staff and will address the candidate's record of achievement and unique qualities **in addition to** items that speak to the alignment of the proposed research with Argonne's strategic missions and plans for supporting fellows toward career success. References are written by individuals who are familiar with the candidate's record and strengths as a researcher and future leader. Referees may be a member(s) of the dissertation committee, colleagues, other supervisors, or other professors, who can attest to your ability and potential.

**8. Can I scan the official transcripts and submit a PDF file along with the other materials?**

Yes. In fact, you will need to upload your transcripts directly to your application account. However, if selected, you will need to bring the original documents when you report for employment.

**9. Can the nomination form and reference letters be included with my other materials?**

The nominator and referees should send their letters directly via e-mail to [aetfellowships@anl.gov](mailto:aetfellowships@anl.gov).

**10. Are there specific research areas at Argonne that I should approach?**

We cannot advise you regarding your research interest. You are strongly encouraged to contact Argonne researchers so that you can determine whether your research interest is applicable to Argonne and energy and global security areas. Candidates should familiarize themselves with the Report on the DOE Town Halls on AI for Science and consult with their sponsors to determine the strategic alignment with the proposed application. Please review the resources on the fellowship page to assess if your research proposal aligns with Argonne missions, strategic directions or core capabilities.

**11. When will I receive an acknowledgement regarding my application?**

Updates will be sent to all candidates when the application package is complete and when the review commences. Communications will be sent from [aetfellowships@anl.gov](mailto:aetfellowships@anl.gov). Please add this address to your contacts to avoid missed communications.

**12. When will the recipient's names be announced?**

If selected, the individual will be contacted by e-mail approximately in early August after the application deadline. Those not selected will also be notified by e-mail at a later time.

**13. When will the recipient begin his/her appointment?**

Argonne Energy Technology and Security Fellowship appointments may begin on or after October 1st after selection. The candidate cannot commence the fellowship appointment until he or she has obtained the PhD.

## **Proposal Template Sections—for Reference Only**

Refer to Fellowship Proposal Template Guidance for detailed instructions on completing each section.

### Page 1—Cover Page

<b>Project Title:</b>	Enter title here
<b>Name:</b>	Enter your name here
<b>Argonne Sponsor:</b>	Enter your sponsor’s name and division here

**Proposal Summary:** Enter text here

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### Pages 2-3—Research Plan

**Research Goal:** Enter text here

**Research Opportunity:** Enter text here

**Research Description:** Enter text here

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### Page 4—References and Figures

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### Page 5—Project Plan and Return on Innovation

#### Project Plan

**Resources Needed:** Enter text here

**Research Milestones:** Enter text here

#### Return on Innovation

**Alignment with Mission:** Enter text here

**Expected Outcome:** Enter text here

**Roadmap:** Enter text here

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### Page 6—Additional Information

**Investigator Background:** Enter text here