FY2027 Institute of Advanced Energy, Kyoto University
"Zero-Emission Energy Research Base"
About the Public Offerings of Joint Usage/Joint Research

Purpose

Our research base provides relevant researchers nationwide with advanced and interdisciplinary knowledge/information and access to research facilities/installations possessed by the Kyoto University Institute of Advanced Energy in an effort to promote energy research on Zero-Emission Energy[1] with the goal of solving global environmental problems. In this spirit, we have the following public offerings for joint usage/joint research in FY2027.

Body

1. Description of Public Offerings:

We publicly invite applications for the following four research areas directed towards Zero-Emission Energy: **(A) Planned joint research, (B) Proposal-based joint usage/joint research, (C) Joint usage of facilities, and (D) Research meetings. For (A) – (C), applicants may apply for one category as either a research representative or a user representative. Additionally, applicants may also apply as a meeting representative for (D).**
NOTE: Applicants may apply to (D) in addition to one of (A) – (C).

(A) Planned Joint Research

The applicant proposes research based on the themes set by the Joint Usage Steering Committee of the Institute (hereinafter abbreviated as "Steering Committee") to promote integrated research among existing fields. Research in this category is conducted in collaboration with researchers of the Institute.

(B) Proposal-based Joint Usage/Joint Research

The applicant proposes a unique research theme, which is conducted jointly with researchers of the Institute.

(C) Joint Usage of Facilities

The applicant proposes a research plan that utilizes the facilities of the Institute.

(D) Research Meetings

The applicant proposes a research meeting on Zero-Emission Energy research hosted jointly with the Institute.

2. Application Qualifications:

Applicants must be researchers of a research institution (e.g., university or a national/public research institute) or persons approved by the Director of the Institute of Advanced Energy. As a general rule, the applicants are required to have already taken the course of research ethics education offered by either your affiliated institution or public agencies. (Depending on the situation, you may be required to submit the certificate of course completion.)

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[1] Energy system that reduces or eliminates carbon dioxide emissions and harmful substances.

3. Application Submissions:

Applications must be submitted through Google Forms during the application period. (After your Key Person has checked the application)

Google Form URL: https://forms.gle/Xe276R2azqTjLYEBA

Contact Information:

E-mail: ze-shinsei@mail2.adm.kyoto-u.ac.jp Tel: +81-774-38-3413

4. Application Period:

For (A) – (D), applications are accepted until noon on Friday, January 8, 2027 (JST)

5. Application Results:

The Steering Committee determines and accepts the applications. For themes that span multiple fiscal years, a new application must be submitted each year in accordance to the public offering procedure.

6. Notification of Results:

Successful applicants are notified in late March 2027.

7. Research Expenses:

The Institute provides support within its budget.

8. Travel Expenses:

The Institute provides support within its budget and in accordance to Kyoto University's Travel Expense Regulations.

9. Insurance:

Graduate and undergraduate students, post-doctoral fellows, and industry researchers at the Institute for joint usage/joint research must apply for the Personal Accident Insurance for Students Pursuing Education and Research (including Incidental Liability Insurance) of the Japan Educational Exchanges and Services or its equivalent. Students (including research students), professors emeritus not belonging to a specific entity, and researchers from abroad whose applied research theme has been adopted, must apply for the "Personal Accident Insurance for Students Pursuing Education and Research" or its equivalent. If not insured, acceptance will be conditional, and the application will be formally accepted after enrollment in the insurance.

10. Facility Usage:

When using the Institute's facilities, all rules of the Institute and the instructions of the personnel in change must be followed.

11. Radioactive Isotopes and Radiation Generators:

A person, whose research requires the use of radioactive isotopes or radiation generators, must acquire the qualifications of the Persons Handling Radioactive Isotopes and the Persons Handling X-ray Equipment from your home entity prior to coming to the Institute. Additionally, you must register compliance with the Institute. Please direct all questions to our faculty or staff.

12. Health and Safety:

All University rules for health and safety must be followed. For details, please contact the Joint Usage/Joint Research Promotion Office.

13. Handling of Intellectual Property Rights:

Intellectual property rights are managed as per Kyoto University's Invention Regulations.

14. Accommodations:

Accommodations for researchers are not available. Please use neighboring hotels or the like.

15. Joint use Equipment:

Information on joint usage facilities and equipment is available on our website.
Website: https://zero-emission.iae.kyoto-u.ac.jp/en-summary/application/

16. Applications Submitted after the Application Deadline:

The Institute reserves the right to accept applications after the application deadline (except for Planned Joint Research). Please contact the Joint Usage/Joint Research Promotion Office. Such applications are reviewed once a year (deadline: end of May). The review may take time, and it is possible that research and/or travel expenses will not be allocated. To secure funding, please apply during the normal application period. If applying outside the normal period, a justification of why the application cannot be submitted during the normal application period must be written in the "Reason for application outside the normal period " column.

17. Miscellaneous:

Of the items purchased with the joint research funds, equipment other than consumables and small assets are stored at the Institute and the key person in the facility is responsible for management. In addition, equipment and small assets will be registered as assets at Kyoto University and will be returned to Kyoto University after the joint research is complete. If there is any change in your affiliation or other relevant information, we will confirm with you whether the research plan described in your application remains unchanged. For other inquiries, please contact the Joint Usage/Joint Research Promotion Office.

(A) Planned Joint Research Public Offerings

1. Planned Joint Research:

The Steering Committee selects themes for research to be conducted jointly with the researchers of the Institute. For this fiscal year, the following three themes are selected. Prior to submitting an application, please consult with a faculty member of the Institute.

Theme 1 Research on Soft Energy

a) Research on solar energy conversion systems, which are Zero-Emission Energy systems, with the aim of developing high-performance organic/inorganic/biological materials related to power generation, storage, and energy conservation, or innovative technologies.

b) Research with the aim of developing precise analytical techniques, creating materials to generate energy, or investigating the environment and energy using biotechnology.

Theme 2 Research on Plasma and Quantum Energy

a) Research with the aim of understanding the interactions between advanced energy materials and plasmas, creating metal/ceramic materials with the potential to realize new nuclear systems possessing a high passive safety, including nuclear fusion, or developing energy sources as social infrastructure.

b) Research with the aim of creating innovations related to applications of plasma/microwave technologies or using thermal/particle energy for diverse applications of nuclear energy.

c) Research with the aim of developing precise analytical techniques, creating materials to generate energy, or investigating the environment and energy using ultrashort pulse lasers, mid-infrared lasers.

Theme 3 Exploring New Frontiers in Zero-Emission Energy Science

Based on a global perspective, research on Carbon Negative, Green Transformation, or Digital Transformation related to energy science, and not on the development of individual elemental technologies that should be included in Theme 1 and Theme 2, but on the development of new science or systems of Zero-Emission Energy based on the integration of multiple elemental technologies and disciplines.

2. Research Period:

Less than one year.

3. Research Representatives:

Outside researchers as well as one or more in-house researchers, including in-house caretakers, should participate in the research organization. **A person can apply as a research representative or a user representative for (A) Planned Joint Research, (B) Proposal-based Joint Usage/Joint Research, or (C) Joint Usage of Facilities. Each applicant may submit one proposal.**

4. Briefing:

An applicant may be required to explain the research content, required expenses, and other pertinent information to the Joint Usage/Joint Research Planning Committee. The application must clearly explain how the joint research proposal relates to Zero-Emission Energy. The maximum allowable funding, which includes purchase and travel expenses, per application is six hundred thousand (600,000) JPY for Theme 1 and 2, and seven hundred thousand (700,000) JPY for Theme 3, respectively.

5. Research Report:

The research representative must submit a Joint Research Implementation Result Report [research results obtained (A4: 2 sheets), a list of published papers, and a list of oral presentations] to the Director of the Institute by **Friday, February 4, 2028**. Additionally, the research representative must report the research outcomes at the Research Outcome Meeting, which is scheduled for the second half of FY2027.

6. About Acknowledgments:

When reporting outcomes, one of the following sentences must be added: “This work is (was) supported by the Joint Usage/Research Program on Zero-Emission Energy Research, Institute of Advanced Energy, Kyoto University (Reference No.).” or “This work is (was) supported by the ZE Research Program, IAE (Reference No.).”

(B) Proposal-based Joint Usage/Joint Research Public Offerings

1. Proposal- based Joint Usage/Joint Research:

A research project proposed by the applicant and conducted jointly with researchers of the Institute. Prior to submitting an application, please consult with a faculty member of the Institute.

2. Research Period:

Less than one year.

3. Research Representatives:

Outside researchers as well as one or more in-house researchers, including in-house caretakers, should participate in the research organization. **A person can apply as a research representative or a user representative for (A) Planned Joint Research, (B) Proposal-based Joint Usage/Joint Research, or (C) Joint Usage of Facilities. Each applicant may submit one proposal.**

4. Briefing:

An applicant may be required to explain the research content, required expenses, and other pertinent information to the Joint Usage/Joint Research Planning Committee. The application must clearly explain how the joint research proposal relates to Zero-emission Energy. The maximum allowable funding, which includes purchase and travel expenses, per application is four hundred thousand (400,000) JPY.

5. Research Report:

The research representative must submit a Joint Research Implementation Result Report [research results obtained (A4: 2 sheets), a list of published papers, and a list of oral presentations] to the Director of the Institute by **Friday, February 4, 2028**. Additionally, the research representative must report the research outcomes at the Research Outcome Meeting, which is scheduled for the second half of FY2027.

6. About Acknowledgments:

When reporting outcomes, one of the following sentences must be added: “This work is (was) supported by the Joint Usage/Research Program on Zero-Emission Energy Research, Institute of Advanced Energy, Kyoto University (Reference No.).” or “This work is (was) supported by the ZE Research Program, IAE (Reference No.).”

(C) Joint usage of facilities public offerings

1. Joint Usage:

A research plan to utilize the facilities and/or equipment of the Institute in order to promote research oriented toward Zero-Emission Energy. Prior to submitting an application, please consult with a faculty member of the Institute.

2. Use Period:

Less than one year.

3. Use Representatives:

Outside researchers. **A person can apply as a research representative or a user representative for (A) Planned joint research, (B) Proposal-based Joint Usage/Joint Research, or (C) Joint Usage of Facilities. Each applicant may submit one proposal.**

4. Briefing:

An applicant may be required to explain the research content, required expenses, and other pertinent information to the Joint Usage/Joint Research Planning Committee. The application must clearly explain how the joint research relates to Zero-Emission Energy. The maximum allowable funding, which includes purchase and travel expenses, per application is four hundred thousand (400,000) JPY.

5. Research Report:

The user must submit a Joint Research Implementation Result Report [research results obtained (A4: 2 sheets), a list of published papers, and a list of oral presentations] to the Director of the Institute by **Friday, February 4, 2028**.
Additionally, the research representative must report the research outcomes at the Research Outcome Meeting, which is scheduled for the second half of FY2027.

6. About Acknowledgments:

When reporting outcomes, one of the following sentences must be added: “This work is (was) supported by the Joint Usage/Research Program on Zero-Emission Energy Research, Institute of Advanced Energy, Kyoto University (Reference No.).” or “This work is (was) supported by the ZE Research Program, IAE (Reference No.).”

(D) Research meetings public offerings

1. Research Meeting:

A research meeting to promote information exchange and communications among researchers studying Zero-Emission Energy and to help establish a network for Zero-Emission Energy research. Prior to submitting an application, please consult with a faculty member of the Institute.

2. To be Held:

Within FY2027.

3. Meeting Representatives:

Outside researchers. **Note that a person can only apply once as a meeting representative.**

4. Briefing:

An applicant may be required to explain the research meeting outlines, meeting period, required expenses, and other pertinent information to the Joint Usage/Joint Research Planning Committee. In addition, the research meeting must be organized jointly with this research base. The application must clearly explain how the joint research relates to Zero-Emission Energy. The maximum allowable funding, which includes purchase and travel expenses, per application is four hundred thousand (400,000) JPY.

5. Implementation Result Report:

Users must submit a Joint Usage Implementation Result Report (meeting outlines; A4: 1 sheet) to the Director of the Institute by **Friday, February 4, 2028**. Additionally, users may be required to report the implementation result outlines at the Research Outcome Meeting, which is scheduled for the second half of FY2027.