

Carbon Recycling Fund Institute

Application Guidelines for FY2021 Research Grant Program

These application guidelines are made in Japanese and translated into English. The Japanese version is the original and the English version is for reference purposes. If there is any conflict or inconsistency between these two versions, the Japanese version shall prevail.

I. Purpose of Research Grant Program

The Carbon Recycling Fund Institute (hereinafter the “Institute”) establishes the research grant for researches on carbon recycling according to: 1) Article 131 of the Act on General Incorporated Associations and General Incorporated Foundations; 2) Articles 29 through 32 of its Articles of Incorporation; and 3) Article 2, item (1) of its Rules on Donations.

There has been little advance in basic researches on CO₂ utilization, on which carbon recycling technologies depend. Further, established carbon recycling technologies have rarely been commercialized due to such reasons as high production cost. In 2019, following the establishment of the Carbon Recycling Promotion Office in February, the Ministry of Economy, Trade and Industry announced the Roadmap for Carbon Recycling Technologies in June, to promote carbon recycling. In its report published in July 2019, the Natural Resources and Fuel Committee under the Advisory Committee for Natural Resources and Energy pointed out that the private sector’s voluntary support for carbon recycling would be important to achieve innovation.

In his policy speech in October 2020, Prime Minister Yoshihide Suga declared that Japan will aim to realize carbon-neutral society by 2050 and stated that revolutionary innovations such as carbon recycling are key to achievement. The carbon recycling industry was identified as one of 14 priority fields in Japan’s Green Growth Strategy announced at the end of 2020, and a two trillion yen Green Innovation Fund has also been established.

Under these circumstances, the Research Grant Fund is aimed at contributing to the creation of carbon recycling innovation through grants and support for researches designed to reduce the cost of carbon recycling technologies or to solve issues hindering the introduction of carbon recycling practices into society.

II. Application Guidelines

1. Research Grant Targets

A) Researches on carbon recycling and related technologies to use CO₂ (or carbon atoms) as a resource to solve social issues; and B) researches in the field of social science intended to achieve carbon recycling.

2. Research Fields (Specific Examples)

- CO₂ recycling and utilization field
 - ✓ Chemicals (production of olefins, BTX, biodegradable plastics, etc.)
 - ✓ Fuels (methanation, biofuel production, use of enhanced oil recovery (EOR), etc.)
 - ✓ Mineralization (concrete products, mineral carbonation, etc.)
 - ✓ Utilization of living organisms (blue carbon, improvement of photosynthesis efficiency through genetic manipulation or breed improvement, etc.)
 - ✓ Functional materials (production of carbon nanotube, graphene, etc.)
 - ✓ Biomimicking (artificial photosynthesis, etc.)

- Fields relating to the separation and capture of CO₂ and H₂ that are necessary for carbon recycling
 - ✓ Efficient production of H₂ (water electrolysis technologies, bacteria for enhancing hydrogen production, etc.)
 - ✓ Technologies for the efficient separation and capture of CO₂ associated with CCS*¹, DACCS*², BECCS*³, and other approaches (absorption solvent, solid sorbent, membranes, direct air capture, etc.)

Notes:

- *1. CCS : Carbon dioxide Capture and Storage
- *2. DACCS : Direct Air Capture with Carbon Storage
- *3. BECCS : Bio-energy with Carbon Capture and Storage

- Direct use of CO₂
 - ✓ Medical field (utilization of carbonic acid effect, etc.)
 - ✓ Fields of agriculture, forestry and fisheries (forcing culture using plastic greenhouses, etc.)
- Social science and other fields (CO₂ reduction scenarios, scenarios for promoting the introduction of carbon recycling, etc.)
- Others

3. Research Themes

Select one research theme from those listed below and indicate your selected theme on Form 1: Research Grant Application Form Cover Sheet.

No.	Research Themes
1.	Technologies for CO ₂ fixation through mineralization (concrete and other materials)
2.	Technologies for conversion to fuels
3.	Technologies for conversion to chemicals
4.	Technologies related to CO ₂ separation and capture (including direct air capture)
5.	Social science and other fields
6.	Research related to CO ₂ sinks (such as on soil, forests, blue carbon, use of organisms, and agriculture, forestry, and fisheries)
7.	Other themes (such as hydrogen production, geo-engineering, functional materials, and the medical care field)

4. Scope of Applicants

An applicant(s) must be a researcher(s) or a research team affiliated with a university, company, incorporated association/foundation, etc. (hereinafter referred to as the “affiliated institution”). An application should be submitted after obtaining approval from the affiliated institution. The principle investigator may be of any nationality but must belong to Japanese affiliated institution, and not be required of the “Institute” membership.

5. Amount of Grant

A maximum of 10 million yen will be granted per selected research. (The average amount granted in FY2020 was approximately 7 million yen per selected research.)

6. Period of Grant

In principle, the research period subject to the grant shall be of less than one (1) year from the date when grant decision is made.

If, however, there are unavoidable circumstances, a research period of up to two (2) years from the day the grant decision is made will be permitted.

7. Application Method

(1) Documents to Be Submitted

- Applicants must submit application documents in both hard copy and email attachment formats to the address given under item 12 below.

- Postal mail

Submit documents 1) and 2) below to arrive at the Secretariat by 5:00 p.m. on Monday, June 14, 2021, using postal mail or specified correspondence delivery.

Please be aware that submitted documents will not be returned.

- 1) One (1) original and ten (10) duplicates of the Grant Application Form (a set including Form 1: Research Grant Application Form Cover Sheet and Form 2: Research Grant Application Form)
- 2) One (1) copy of reference material that indicates the details of the affiliated institution's activities, such as a company information booklet or brochure

- Email

Submit electronic data (PDF in color) of Grant Application Form (a set including Form 1: Research Grant Application Form Cover Sheet and Form 2: Research Grant Application Form) to arrive at the Secretariat by 5:00 p.m. on Monday, June 14, 2021.

(2) Application Period

Applications must be submitted during the application window from Monday, May 17, 2021 through (no later than) 5:00 p.m. on Monday, June 14, 2021.

No public briefing for researchers will be held. If you have any questions, please contact us at the address given under item 12 below.

In the event that the affiliated institution's seal cannot be obtained on an application form by the submission deadline due to effects of the COVID-19 pandemic, the application form will be accepted without a seal. In such cases, however, a sealed application form must be submitted by Friday, July 16.

8. Selection Method

- (1) Applications will be screened by the screening committee.

- (2) In the screening process, certain applicants may be required to attend a face-to-face interview or other meeting conducted online or by other means with the committee in cases where necessary.

- (3) The results of the selection will be notified to applicants in about mid to late July.

- (4) Successful applicant(s) will receive the Grant Decision Notice and documents describing procedures for receiving the grant.

* No questions or inquiries will be answered during the screening period.

- (5) Applicant information (name of principal investigator and affiliated organization) and the theme of research selected for the grant will be publicized on the Institute's website. In addition, the same information may be announced at seminars hosted by the Institute, as well as at seminars and academic conferences hosted by other organizations.

9. Awarding the Grant

- (1) The Institute will deposit the grant into the account designated by the affiliated institution after receiving the Results Report. When it is deemed particularly necessary, the Institute will consult with the applicant, at the time of the decision being made to award the grant, to determine the timing and method of the grant payment.
- (2) When the grant is awarded, the applicant must submit an acknowledgement that he/she adheres to the conditions specified under item 10 below.
- (3) The grant is not required to be repaid except for cases described under item 10, paragraph (8) below.
- (4) Indirect expenses are not covered by the grant.

10. Conditions for Receiving the Grant

- (1) A grant recipient shall perform the grant research with the care of a good manager, adhering to the decisions made in relation to the grant and conditions attached thereto.
- (2) The grant will be awarded in accordance with the descriptions in the Research Grant Application Form.
- (3) When it becomes necessary to modify the descriptions above in the course of performing the research, the recipient shall promptly inform and consult with the Institute.
- (4) When the research is completed, the Results Report outlining the research results shall be submitted to the Institute. The Final Progress Report shall also be submitted to the Institute within 30 days after the completion.
- (5) After the research is completed, the recipient shall present the details of the Report at a final progress reports meeting organized by the Institute.
- (6) When conducting a new research based on the results of the research or commercializing its achievements, the recipient must agree to discuss the details and methods with the Institute.
- (7) When publishing a paper or the like regarding the research, the recipient shall clearly indicate that the research was funded by the Institute.
- (8) The grant shall be repaid in the case of not conducting the research described in the Research Grant Application Form.
- (9) No particular restrictions have been set for the use of the grant, as long as the expense is truly necessary for the research. However, the grant should not be used for indirect expenses of the affiliated institution.
- (10) The recipient shall keep books and records and distinguish accounting relating to the research from that of others and respond to inquiries from the Institute.
- (11) If the Institute wishes to visit its research facility, the recipient shall respond to it to the extent possible.
- (12) The recipient shall be responsible for performing accounting and tax procedures relating to the grant received and expense items to be used for the research.
- (13) If the Institute requests that the recipient give lectures at seminars and other events hosted by the Institute, prepare material during the period of research, or otherwise cooperate, the recipient shall comply to the extent possible.

11. Handling of Personal Information

Unless otherwise required by law, etc., the Institute will not provide any third party with the personal information provided in the submitted documents without prior consent of the individual.

12. The Secretariat (Application Submission Address and Contact Information)

Person in charge: Saito (Mr.), Nakamura (Mr.), Sakimoto (Mr.), and Kashima (Mr.)

CARBON RECYCLING FUND INSTITUTE
Innovation Department

Address: Daiwa Nishi-Shimbashi Building 3F, 3-2-1, Nishi-shimbashi, Minato-ku,
Tokyo, 〒105-0003
TEL: 03-6432-0011
Email: grant@carbon-recycling-fund.jp