

Guidelines for Public Call of the Moonshot Research and
Development Program/
Realization of sustainable resource circulation to recover
the global environment by 2050

February 20, 2020

Updated on April 10, 2020 (for extension of the period of
public call, etc.)

Updated on May 14, 2020 (for extension of the period of
public call)

National Research and Development Agency
New Energy and Industrial Technology Development Organization (NEDO)
Moonshot Research and Development Program Promotion Office,
Innovation Promotion Department

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Public Call of the Moonshot Research and Development Program/Realization of sustainable resource circulation to recover the global environment by 2050
(February 20, 2020 [open, updated on April 10, 2020, updated on May 14, 2020](#))

[We updated the words underlined and highlighted in Red \(P1, 4, 8, 9, 10, 14, 24-28\) on April 10, 2020.](#)

[We updated the words underlined and highlighted in Blue \(P1, 4, 8, 14\) on May 14, 2020.](#)

The New Energy and Industrial Technology Development Organization (hereinafter referred to as NEDO) will implement called the Moonshot Research and Development Project from FY2020. If you are interested in this program, please apply for participation according to these guidelines.

The subject of the public call shall be "Realization of sustainable resource circulation to recover the global environment by 2050" from among the moonshot goals.

1. Subject

Moonshot Research and Development Program/Realization of sustainable resource circulation to recover the global environment by 2050

2. Program overview

(1) Background/purpose

The Council for Science, Technology and Innovation (hereinafter referred to as the "CSTI"), decided to aim for the creation of disruptive innovations developed in Japan, and to advance challenging research and development based on bolder ideas going beyond the mere extension of existing technology (moonshot).

NEDO, as a research advancement corporation that will conduct work related to this research and development, will establish funding, and advance challenging research and development based on the Basic Plan in order to accomplish the moonshot goal (hereinafter referred to as the "MS Goal").

(2) Program details

The MS Goal of this public call is:

Realization of sustainable resource circulation to recover the global environment by 2050.

For information regarding the field and area of the research and development that is the subject of this public call, please refer to Moonshot Goal 4's R&D Concept: "Realization of sustainable resource circulation to recover the global environment by 2050," as well as the subsequent Item (i).

(i) Supplemental explanation of the R&D concept

The following is a supplemental explanation of "3. Direction of Research and Development" of the R&D concept.

The business of this program is research and development oriented toward solving the problem of global warming (the Cool Earth) or solving the problem of environmental pollution (the Clean Earth), in order to recover the global environment.

The substances attempting to realize sustainable resource circulation on will be limited to substances that cause global warming or environmental pollution, and have been difficult to recover utilizing the existing technologies as described below. As such, the circulation of substances that are not presently being released into the environment, or substances that can be readily recovered using traditional technology will not be the subject of this public call.

- Substances spread widely into the environment
- Substances being released into the environment in low concentrations

Regarding methods to realize sustainable resource circulation of the subject substances described above, methods involving one of the technologies described below will be subjects of the public call.

- Technologies that can recover the subject substances and convert them into valuable materials
- Technologies that decompose or detoxify the subject substances

Note, regarding the methods that recover subject substances and convert them into valuable materials, partial proposals that develop either a method of recovery or a method of conversion will be permitted, but an complete image including the remaining portion (from resource recovery to use) must be anticipated in the proposal.

Methods that are useful to recover the global environment, but do not directly constitute a form of resource circulation (i.e., methods to control or reduce release of substances, etc.) will not be subjects of the public call. Therefore, that store recovered substances, but do not convert them into valuable materials, shall also be excluded from the public call. However, if this storage method is a highly promising, such as novel technology that differs from traditional storage technology, and demonstrates high compatibility with recovery technologies, investigation of the storage methods will be permitted.

Furthermore, if the method recover or detoxify substances that are different from the substances that cause global warming or environmental pollution, such methods will also be excluded from the public call.

Regarding technological level for research and development, challenging research and development that are not currently being undertaken shall be the target. Furthermore, regarding the current stage of research and development, the subject research and development level shall be technologies in between the laboratory level to the bench test level, while technologies that are already in the pilot stage or prototype level shall be excluded from the public call.

(ii) Execution system of the program

Under this public call, NEDO will, as general, select multiple Project Managers (hereinafter referred to as the “PMs”), who manage research and development projects, and multiple research and development projects including the details of research and development and involved researchers (these research and development projects being hereinafter referred to as “Projects”), and implement research and development programs (hereinafter referred to as the “Programs”) comprised of multiple Projects oriented toward accomplishing the MS Goal . Based on the MS Goal set by CSTI as well as the R&D Concepts formulated by the Ministry of Economy, Trade and Industry, NEDO shall appoint Kenji Yamaji, Senior Vice President and Director-General of Laboratories of the Research Institute of Innovative Technology for the Earth (RITE), a public interest incorporated foundation, to the position of Program Director (hereinafter referred to as the “PD”). The PD develops a portfolio for strategic fulfillment of the MS Goal (a management plan that compiles the policies of project composition (structure) and resource allocation, etc. Hereinafter referred to as the “Portfolio”) and provides unified direction and supervision for the Program. For details on the policy, roles of PD and PMs, and the method of performance of research and development, please refer to the “Guidelines for Operation and Evaluation of the Moonshot R&D”.

(3) Program period

The total project period shall be maximum of ten years from FY2020. However, CSTI will decide whether to continue or conclude the Program to accomplish the MS Goal on the 5th year (2024) after the start of research and development.

As a general rule, the initial contracts shall last for three years. But the contracts for the project whose execution plan exceeds three years shall be extended, revised, or

canceled based on the results of stage-gate reviews. Unless otherwise specified, stage-gate reviews shall be conducted in the third (FY2022), fifth (FY2024), and eighth year (FY2027) after the start of this program. However, the timing of these reviews may be advanced, whenever deemed necessary based on the progress of each research and development project.

(4) Budget scale/program budget

There is no upper budget limit for each Project, but multiple PMs and Projects shall be chosen. Furthermore, 20.4 billion yen in funding has been prepared up to the present as the budget required for 5 years of research and development.

3. Application requirements

We anticipate applications by multiple companies. Corporations eligible for this application shall be companies, universities, research and development partnerships, and others, which satisfy the conditions shown in the following (1) through (7), the Basic Plan, and the Implementation Policy for FY2020.

- (1) These corporations shall have a track record in research and development of the technology or the related technologies, and they also shall have the organization and personnel needed for them to achieve their research and development targets and to implement their proposed research and development plans.
- (2) These corporations shall have the management base needed to implement contract work smoothly, and they also shall have sufficient ability to manage funds and facilities.
- (3) These corporations shall have the system to appropriately implement the measures needed for NEDO to promote its projects based on entrustment contracts.
- (4) The representative organization of the proposal is a Japanese business, university, or other such entity, and is an organization which has PM candidates among its staff. Note that, even if the applying organizations do not have any PM candidates on staff at the time of their proposals, if the organization plans to hire such an individual after they are chosen for the adoption, they may submit a proposal. Further, NEDO will not inquire as to the nationality of the PM candidates.
- (5) The organization has capability sufficient to establish and realize practical application and commercialization plans for the research and development results of the applicable Project. Note, if the proposing organizations plan, for example, to incorporate businesses, etc. into their implementation system during the project, or plan to start up businesses during the project, in anticipation of eventually

implementing the research and development results into society, then applications made solely by universities and other similar organizations at the start of research and development is also permitted.

- (6) These corporations shall agree to Standard Form of Business Entrustment Contracts (draft) and Special Conditions for the Moonshot Research and Development Program that NEDO presented.
- (7) In the interest of ensuring secure controls over trade, this public call shall, as a means of preventing outflow or leakage of sensitive technologies, exclude from its business any proposals that include in its implementation system, businesses, organizations, etc. that are published on the “foreign user list” developed by the Ministry of Economy, Trade and Industry in response to the trends in development of nuclear weapons, among other concerns, regulated by Article 4, Paragraph 1, Item 3(b) of the Export Trade Control Order (hereinafter referred to as the “Businesses, etc.”), or any Businesses, etc. affiliated with nations to which weapons or weapons-related exports are prohibited via UN Security Council resolution (nations and regions under a UN arms embargo) (Schedule 3-2 of the Export Trade Control Order), (*1) as well as the 3 nations of concern under such resolution (Schedule 4 of the Export Trade Control Order)(*2).

*1, *2: Please refer to the following website for details on “Schedule 3-2 of the Export Trade Control Order” and “Schedule 4 of the Export Trade Control Order”: website of the Ministry of Economy, Trade and Industry
<<https://www.meti.go.jp/policy/anpo/law02.html>>

4. Submission closing date and place of submission

Please prepare 12 copies of your written proposal (one original copy and 11 duplicate copies) as well as electronic files (CD-R or DVD-R. The data must be editable in Microsoft Office 2013, and no PDFS are allowed), according to these guidelines for public call and mail or take it to the place of submission by the closing date shown below. The submission of your proposal via fax or email is not acceptable. Note that the written proposals must be submitted in either Japanese or English (partially or in its entirety).

(Period of public call: From Thursday, February 20, 2020 to [Tuesday, June 2, 2020](#))

- (1) Submission closing date/time: Not later than noon of [Tuesday, June 2, 2020](#)

* Closing date has been extended from [May 20, 2020](#) to [June 2, 2020](#), considering infection control measures against new coronavirus (COVID-19) and its impact on proposal preparation work.

* The period of public call may be extended depending on the status of the application and for other reasons. When the period of public call is extended, you will be informed on the NEDO website.

If you register for the NEDO email delivery service, you will receive email notifications, as needed, concerning the latest information about this public call, which will be posted on the NEDO website.

You are recommended to register for this service.

<https://www.nedo.go.jp/nedomail/index.html>

(2) Place of submission:

Moonshot Research and Development Program Promotion Office, Innovation Promotion Department, New Energy and Industrial Technology Development Organization
Muza Kawasaki Central Tower, 20F, 1310 Omiya-cho, Saiwai-ku, Kawasaki City, Kanagawa 212-8554, Japan

* **When** you submit your written proposal by postal mail, please write in red on the envelope, Enc. a written proposal for the Moonshot Research and Development Program.

* For foreign companies, etc. that will not be able to submit the template for their cover sheets on time, submissions of copies will be permitted.

* If you are unable to register your written proposal on the e-Rad by the closing date, be sure to consult the responsible NEDO department in advance.

5. Procedures for application

(1) Preparing your written proposal

- Refer to Attachment 1, 2, and 11 for the format of the cover, abstract, and body text in your written proposal. Make your plans for the commercialization of research and development results according to Attachment 3.
- You need to submit 12 copies of your written proposal (one original copy and 11 duplicate copies).

(2) Documents to be attached to your written proposal

- Attach the following documents or the equivalent thereof to your written proposal.
- One copy of your company profile (descriptions about your organization such as company history, business units, and research centers). (This requirement does not apply if you had a contract with a NEDO department/section to which you submitted a written proposal within the last one year.)

- One copy of the most recent business report
- One copy of financial statements (balance sheet, income statement, and cash flow statement) (for the last three years)
- If there is a doubt not conforming to Standard Form of Business Entrustment Contracts (draft), 2 copies of documents showing the details (one original copy and one duplicate copy), because agreeing to Standard Form of Business Entrustment Contracts(draft) and Special Conditions for the Moonshot Research and Development Program that NEDO presented is the requirement for submitting your proposal.
- Research CV of the PM candidate and key researchers (see Attachment 4 for details)
- The numbers of young researchers (aged 40 or younger) and female researchers
- The status of certification regarding work-life-balance promoting companies (see Attachment 5 for details)
- The questionnaire to survey achievements in NEDO research and development projects (see Attachment 6 for details).
- A written proposal for e-Rad application (see (4) for details).

(3) The cases where the acceptance of your written proposal and written proposal itself are incomplete

- Proposals submitted by those ineligible for this application or incomplete written proposals are not acceptable.
 - When receiving written proposal you submitted, NEDO will submit to you a proposal document receipt certificate at a later date. Please [mail](#) the Proposal Document Acceptance Form in Attachment [Z](#), with your company name and others filled in advance.
 - Submitted written proposals may not be returned.
- If your written proposal is incomplete, and if the inadequacy is not rectified by the application closing date, the proposal will be treated as invalid. In that case, the documents will be returned.

(4) Registration for the Cross-Ministerial Research and Development Management System (e-Rad)

When applying for this public call, you also need to submit a written proposal for an e-Rad application. When multiple corporations are involved in joint names, one representative corporation should register for the e-Rad application. If you are business, university, or other such entity in outside Japan, and newly require to obtain research institute ID, please contact to the e-mail address in 10. Contact information for inquiries. The registration

method will be advised. Please refer to the e-Rad portal site for details.

e-Rad portal site <http://www.e-rad.go.jp/>

6. Protection of confidential information

NEDO stores the written proposal you submitted for a certain period under close supervision and under relevant regulations stipulated in line with the guidelines concerning the management of administrative documents based on the Act concerning the Management of Public Records and Archives. In this case, NEDO may use the personal information obtained only for the examination of your research and development implementation system, excluding those submissions required by laws and regulations. However, NEDO may use such information as part of the statistical data in which specific individuals cannot be identified. Additionally, under Article 3 of the Act on the Protection of Personal Information Held by Incorporated Administrative Agencies, NEDO shall discard the Research CV of the PM candidate and Key Researchers, which is one of the attachments to your written proposal, in an appropriate way immediately after an adopted corporation is determined. In the meanwhile, NEDO shall treat the information registered in e-Rad (project names, application names, researcher names, research institution names, budgets, and project periods) and the summary of such information as information that is scheduled to be made public, which is stipulated in Article 5-(i)(a) of the Act on Access to Information Held by Independent Administrative Agencies (Act No. 140 of 2001). Please be aware in advance that NEDO may request the PM, in addition to the information described above, to provide a variety of other forms of information in response to a request from the Cabinet Office, among other governmental entities.

7. Selection of Entrustees

(1) Methods of examination

The selection of Entrustees shall be examined in two stages: the Adoption Examination Committee by the PD, external experts and NEDO's internal Contract/Grant Examination Committee.

The Contract/Grant Examination Committee determine a final contractor based on the results of preliminary examination and under the criteria that NEDO stipulated. When the need arises, NEDO may conduct a hearing examination and require you to attend such hearing and submit additional information.

Because the selection of contractors is not made open to the public, please be forewarned that NEDO shall not be able to respond to inquiries regarding the examination process, such as the progress of the examination.

(2) Examination criteria

- a. Criteria for adoption examination
 - i. The details of your proposal are consistent with the MS Goal and Research and Development Concept (with no unnecessary parts included).
 - ii. The proposed approach is novel and technologically superior to others.
 - iii. In the case of a joint proposal, individual proposals are complementary to each other, or are otherwise structured in an efficient and effective way.
 - iv. The proposed details and research schemes are feasible (from the standpoints of technical feasibility, the appropriateness of schemes and interim targets, etc.)
 - v. The applicant has the proven capabilities needed to fulfill this research and development (track records in development and others in the related fields, implementation systems including re-entrustment contractors, the participation of excellent researchers, etc.).
 - vi. As a result of the applicant conducting this research and development, a positive ripple effect on people's life and economic society shall be expected. (Companies shall expect the practical application and commercialization of these technical results. When the applicant is a university or public research and development institution that is not involved in the practical application and commercialization of technical results, it envisions in what forms resulting products and services will be put into practical application and commercialized.)
 - vii. The status of certification regarding work-life-balance promoting companies. (On March 22, 2016, the Headquarters for Creating a Society in which All Women Shine approved the Guidelines for Utilization of Public Procurement and Subsidies towards the Promotion of Women's Advancement. To drive initiatives to realize work-life balance throughout society, which is a precondition for women's advancement, the guidelines stipulate a new scheme by which work-life-balance promoting companies are given additional points more extensively in scoring auction-based projects under Article 20 of the Act on Promotion of Women's Participation and Advancement in the Workplace. Based on these guidelines, companies certified under the Women Empowerment Act (Eruboshi-certified companies), companies certified under the Act for Measures to Support the Development of the Next Generation (Kurumin-certified and Platinum Kurumin-certified companies), and companies certified under the Youth Employment Promotion Act (Youth Yell-certified companies) are given additional points in scoring auction-based projects.)
- viii. Comprehensive evaluation

Furthermore, when young researchers (aged 40 or younger) and female researchers are registered as the PM candidate or key researchers, and if the proposal is based on their past performance and potential, they are given additional points. From the view point of importance on fairness of research and development, ensuring transparency and fairness of research and development activity, proper treatment of research and development result will be also considered.

b. Criteria for selection by the Contract/Grant Examination Committee

The Contract/Grant Examination Committee shall select Entrustees based on the following criteria.

- i. The details of the written proposal relating to contract work shall comply with the following items.
 1. Targets of development and others are consistent with NEDO's intentions.
 2. The methods and details of development and others are excellent.
 3. The cost effectiveness of development and others is excellent.
- ii. The ability of Entrustees to accomplish this development and others complies with the following items.
 1. Having a track record in development and others in the related fields.
 2. Having an established system to implement this development and others.
(This includes Re-Entrusted Contractors and others. In the context of an international joint research framework, the merits of working with these Entrustees are clear. If they are trying to receive (or already receiving) assistance from research and development supporting institutions particularly in the partner countries, its appropriateness shall be verified.)
 3. Having the existing facilities needed for this development and others.
 4. Having an established management foundation.
 5. Having the researchers and others needed for this development and others.
 6. Having the system to appropriately implement the measures NEDO needs for the management of contract work.

In selecting Entrustees, NEDO takes the following points into consideration.

1. Incorporating excellent partial proposers into development and other systems.
2. Rationalizing the division of development and contract work fees for each of the development items.
3. Developing competitiveness and other systems.

4. Clearly defining the division of roles when utilizing general incorporated associations/foundations, research and development partnerships, or others.

(3) Announcement and notification of Entrustees

a. Announcement of adoption results

NEDO shall release adopted projects (implementer names, program overview) on its website and others. For unadopted projects, NEDO shall notify the proposers about the result and the reasons why they were not adopted.

b. Announcement of the names of adoption examiners

NEDO shall disclose the names of adoption examiners when announcing adopted projects.

c. Incidental conditions

NEDO may impose additional conditions upon adoption (such as not accepting proposed re-entrustment, joint research with other institutions, participation as re-entrustment research, changes to performance plan (including budget), etc.)

(4) Schedule

Year 2020

February 20: Start of public call

[Orientation meetings was cancelled](#)

[June 2](#): Public call closing

[From the middle of June to middle of July](#) (plan): Adoption Examination Committee (examination by external experts)

The end of [July](#) (plan): Contract/Grant Examination Committee

The beginning of [August](#) (plan): Determination of Entrustees

The beginning of [August](#) (plan): Announcement (press release)

Around [October](#) (plan): Contract signing

8. Points of attention

(1) Contract

Upon the conclusion of a new business entrustment contract, NEDO applies the latest General Conditions of Business Entrustment Contract and Special Conditions for the Moonshot Research and Development Program. NEDO requires you to conduct paperwork for contract work based on the paperwork manual NEDO presents.

Reference

- Procedures for entrusted programs: General conditions and forms

<https://www.nedo.go.jp/itaku-gyomu/yakkan.html>

- Procedures for entrusted programs: Manuals

<https://www.nedo.go.jp/itaku-gyomu/manual.html>

- (2) Re-entrustment from an independent administrative agency for research and development to private companies

Unless otherwise specified, NEDO may not accept re-entrustment from an independent administrative agency for research and development to private companies or joint performance between the two parties (excluding those without the flow of funds to Re-Entrusted Contractors or Joint Contractors).

- (3) Revision and cancellation of research and development plans

NEDO may revise the contents of research and development or cancel the research and development halfway through.

- (4) Change of plans for commercialization

If an event occurs after the conclusion of a contract, which applies for Article 27-2 of the General Conditions of Business Entrustment Contract, NEDO shall require you to promptly change and submit Plans for Commercialization of Research and Development Results (Attachment 3).

- (5) Research CV of the PM candidate and key researchers

You need to describe in your research CV the information about the PM candidate, as well as key registered researchers who become the registered researchers in charge of each program item and the registered researchers and others serving as supervisory managers across multiple program items. See Attachment 4 for more information.

- (6) The status of certification regarding work-life-balance promoting companies

Concerning Entrustees described in the implementation system of your written proposal, you need to describe the status of certification under the Women Empowerment Act (Eruboshi certification), certification under the Act for Measures to Support the Development of the Next Generation (Kurumin certification and Platinum Kurumin certification), and certification under the Youth Employment Promotion Act (Youth Yell certification). See Attachment 5 for more information.

- (7) Filling in the questionnaire to survey achievements in NEDO research and

development projects

You need to describe in the questionnaire about your technical results in the past NEDO research and development projects. See Attachment 6 for more information.

Please be sure to submit this questionnaire because NEDO shall utilize these survey results for adoption examination.

(8) Follow-up surveys and evaluations

After the completion of this research and development, NEDO may require you to cooperate with follow-up surveys and evaluations on your technical results. For more information, please read attached Reference Material 1. Outline of Follow-up Surveys and Evaluations.

(9) Intellectual property management

The Basic Policy on intellectual property management in NEDO Moonshot Research and Development Program is applied to this program. See Attachment 8 for more information. NEDO shall require you to cooperate with the Survey on Utilization of Patents, Etc. (Bayh-Dole survey) concerning patents and others as this program's technical results.

(10) Data management

The Basic Policy for Data Management in NEDO Moonshot Research and Development Program is applied to this program. See Attachment 9 for more information. Furthermore, as a form of advanced data management, the classifications of saving, sharing, publishing, etc. of research data will be clarified in accordance with the open/close strategy, and the information exchange between researchers as well as the saving, sharing, and publishing of research data will be supported through the use of Research Data Infrastructure System (NII Research Data Cloud), etc.

(11) Activity for Scientific and Technical Dialogue with the People

Business operators entrusted with this project are able to charge the direct expenses needed for activities to explain the contents and technical results of their research activities to society and people in an easily understandable way (hereinafter referred to as Scientific and Technical Dialogue with the People). If you are conducting activities for Scientific and Technical Dialogue with the People in this project, describe the details of such events and needed expenses in your written proposal for submission. NEDO shall judge the necessity of expenses for such activities by taking into account their impact on the research activity itself.

If you have conducted such activities, describe your accomplishments in the Performance Report and others at the end of the fiscal year.

While NEDO does not preclude your voluntary involvement in these activities outside this project, if you have conducted these activities using overhead expenses, report the fact to NEDO by describing them in the Performance Report (only matters related to these activities).

Reference

Council for Science and Technology on June 19, 2010

Promotion of Scientific and Technical Dialogue with the People (a basic initiative)

<http://www8.cao.go.jp/cstp/stsonota/taiwa/>

(12) Taking measures to the dishonest use and reception of public research funds

Concerning the dishonest use and reception of public research funds (hereinafter referred to as Dishonest Use, Etc.), as a fund distribution organization, NEDO shall take necessary measures based on Guideline for Responding to Dishonest Use, etc., of Public Research Funds (which was formulated by the Ministry of Economy, Trade and Industry on December 3, 2008, hereinafter referred to as Guideline for Dishonest Use *1) as well as Organizational Directive concerning Measures for Suspension of Grants and Suspension from Designation Pertaining to Contracts (Organizational Directive No. 1 of FY2004 on April 1, 2004, which was formulated by NEDO, hereinafter referred to as Organizational Directive concerning Suspension of Grants*2).

At the same time, NEDO requests the implementers of this project to take necessary measures as research institutions.

If the dishonest use of public research funds is identified, involving research funds for this project and other funds from projects supported by government agencies, NEDO shall take the following measures.

*1. Go to the website of the Ministry of Economy, Trade and Industry for Guideline for Dishonest Use:

http://www.meti.go.jp/policy/economy/gijutsu_kakushin/innovation_policy/kenkyu-fusei-shishin.html

*2. Go to the website of NEDO for Organizational Directive concerning Suspension of Grants: https://www.nedo.go.jp/itaku-gyomu/kokuhatu_index.html

- a. If the dishonest use of public research funds is identified in this project:
 - i. Depending on the severity of the fraudulence and others, NEDO shall have you refund

- all or part of the research funds.
- ii. NEDO shall suspend the conclusion of contracts and grants for the business operators and others that were involved in the dishonest use of public research funds.
(Based on Organizational Directive concerning Suspension of Grants, NEDO shall take measures to suspend the conclusion of contracts and grants for up to six years after the first day of suspension.)
 - iii. NEDO shall reject application for its projects by the researchers who conducted the dishonest use of public research funds and those who conspired with them (including those who violated the obligation of diligence; the same shall apply hereinafter).
(Based on Guideline for Dishonest Use, NEDO shall reject applications for its projects by these researchers for one to five years following the fiscal year when the research funds were refunded, depending on the severity of the fraudulence. If the use of research funds to obtain personal profits for private purposes is identified, NEDO shall reject application by those involved for ten years.)
 - iv. NEDO shall provide fund distribution organizations of government agencies and others with information about the measures against the dishonest use of research funds and those researchers subject to the measures. Because of this arrangement, those who led the fraudulence and those who conspired with them may see their applications for research funds rejected by fund distribution organizations of government agencies and others. Conversely, when fund distribution organizations of government agencies and others provide NEDO with information about the fraudulence, NEDO may take similar action. In the event of the dishonest use of research funds in other government agencies, NEDO may take the measures i through iii above against those researchers.
 - v. As a measure against the dishonest use of research funds, NEDO shall disclose the company name (researcher names) and the details of the fraudulence.
- b. The status of the progress in system development and others based on Guidelines for Responding to Dishonest Use, Etc. (which was formulated by the Ministry of Economy, Trade and Industry on December 3, 2008)
- Before signing a contract for this project, each research institution should develop the management/audit system of research expenses based on the guidelines.
- NEDO may request you about the status of the progress in your system development.
- When NEDO requests, please report your situation immediately. If you already have submitted a similar report in the fiscal year to separately apply for other research funds, including those supported by government agencies and others, the submission of a copy of that report may substitute for the reporting requirement of NEDO.

NEDO may conduct an on-site survey concerning the status of the progress in system development and others based on the guidelines.

(13) Response to misconduct in research activities

Concerning misconduct in research activities (fabrication, falsification, and plagiarism), NEDO as a fund distribution organization and this project's implementer as a research institution shall take necessary measures based on Guidelines for Responding to Misconduct in Research (which was formulated by the Ministry of Economy, Trade and Industry on December 26, 2007, hereinafter referred to as Guidelines for Misconduct in Research ^{*3}) as well as Organizational Directive concerning Response to Misconduct in Research Activities (Organizational Directive No. 17 of FY2007, which was formulated by NEDO on February 1, 2008, hereinafter referred to as Organizational Directive concerning Research Misconduct ^{*4}). For this reason, in addition to setting up a whistleblower helpdesk, NEDO shall take the following measures when misconduct is identified from research papers related to research activities funded by this project and other projects supported by government agencies.

*3. Go to the website of the Ministry of Economy, Trade and Industry for Guidelines for Misconduct in Research:

http://www.meti.go.jp/policy/economy/gijutsu_kakushin/innovation_policy/kenkyu-fusei-shishin.html

*4. Go to the website of NEDO for Organizational Directive concerning Research Misconduct: https://www.nedo.go.jp/itaku-gyomu/kokuhatu_index.html

a. If misconduct is identified in this project:

- i. Depending on the severity of the misconduct, NEDO shall have you refund all or part of the research funds.
- ii. NEDO shall reject application for its projects after the following fiscal year by those involved in misconduct.

(The rejection period of application: Depending on its severity, two to ten years following the fiscal year when the misconduct was identified.)

- iii. For those who were considered responsible for the misconduct to a certain degree, though not identified as being directly involved, NEDO shall reject their application for its projects after the following fiscal year, because they neglected the obligation of diligence as responsible persons for such papers.

(The rejection period of application: Depending on the degree of responsibility, one to three years following the fiscal year when the misconduct was identified.)

- iv. NEDO shall provide fund distribution organizations of government agencies and others with information about the measures against the misconduct and those researchers subject to the measures. Because of this arrangement, those involved in the misconduct and those considered liable to a certain degree in the iii above may see their application for projects rejected by fund distribution organizations of government agencies and others. Conversely, when fund distribution organizations of government agencies and others provide NEDO with information about misconduct, NEDO may take similar action.
- v. After determining measures against the misconduct, NEDO shall disclose the names and affiliations of those who were subject to the measures, the details of the measures, the name of the research fund affected by the misconduct, the amount of the research fund involved, the details of the research and misconduct, and a report on survey results of identifying misconduct.

- b. When it is found that there was misconduct involving national research funds in the past:

Those who were identified as involved in misconduct in research activities supported by national research funds (including those who were responsible for the contents of research papers affected by the misconduct), NEDO may reject their participation in its projects based on Guidelines for Misconduct in Research.

NEDO requests the implementers of this project, as research institutions, to strive for the development of regulations and the establishment of a whistleblower helpdesk based on Guidelines for Misconduct in Research.

- c. Contact information about NEDO's whistleblower helpdesk concerning research misconduct and others

The following is the contact information of NEDO's whistleblower helpdesk for accusations, consultations, and reporting concerning the dishonest use of public research funds and misconduct in research activities.

Risk Management Department, National Research and Development Agency New Energy and Industrial Technology Development Organization

1310 Omiya-cho, Saiwai-ku, Kawasaki City, Kanagawa 212-8554, Japan

Phone: 044-520-5131

Fax: 044-520-5133

Email: helpdesk-2@ml.nedo.go.jp

Website: The whistleblower helpdesk concerning misconduct in research activities and the

dishonest use of research funds

https://www.nedo.go.jp/itaku-gyomu/kokuhatu_index.html

Contact by phone: 09:30–12:00 and 13:00–18:00 on weekdays

- (14)** Voluntary research activities by young researchers at universities and the National Research and Development Agency, among other similar organizations

Following the formation of new contracts from 2020 onward, voluntary research for the advancement of the present Project by young researchers under the age of 40 (until the final day of the fiscal year in which the researcher turns 40 years old) retained by universities or the National Research and Development Agency, and other organizations may be implemented.

Note that, after being adopted, universities and the National Research and Development Agency, and other similar organizations, will include mention of such young researcher voluntary research in their Execution Plans, and report on the accomplishments of such young researchers to this organization via daily reports or monthly reports, among other methods.

- (15)** Hiring doctoral students as RAs (research assistants) and the like

In order to attract talented students and adults from Japan and overseas, certain goal values were set for the 3rd, 4th, and 5th Science and Technology Basic Plans by the Cabinet Office: to better provide for the economic needs of students, particularly doctoral students, the plans set goals to ensure that “around 20% of current doctoral students receive salaries equivalent to their living expenses.”

Cabinet Office Science and Technology Basic Plan

<https://www8.cao.go.jp/cstp/kihonkeikaku/index5.html>

For this program, doctoral student RAs, etc. can be registered as researchers, and be paid researcher fees.

Note that any doctoral students who handle confidential information through their involvement in this program must enter into an employment contract that includes a confidentiality obligation with the university organization contracting with NEDO, and all individuals who directly engage in this program must register as researchers.

- (16)** Disclosure of information about contracts of National Research and Development Agencies

In accordance with the Basic Policy on the Review of Administrative and Business Operations of Incorporated Administrative Agencies (Cabinet Decision dated December 7,

2010), please be forewarned that NEDO may disclose information about the relationship between you and NEDO on its website after making an adoption decision, as shown in Attachment 10. NEDO regards your application for this programs your agreement to this arrangement.

(17) Security trade control measures (measures to technology leakage to overseas)

- a. To ensure international peace and security including Japan, the Japanese government is implementing export control measures* under the Foreign Exchange and Foreign Trade Act (Act No. 228 of 1949) (hereinafter referred to as the Foreign Exchange Act). When exporting (providing) cargoes and technologies regulated by the Foreign Exchange Act, you need to obtain permission from the Minister of Economy, Trade and Industry under the Foreign Exchange Act.

* Under international agreements, Japan's security export control system consists mainly of (i) a system that requires permission from the Minister of Economy, Trade and Industry when exporting (providing) cargoes (technologies) with at least a certain level of specifications/capabilities such as carbon fiber and NC machine tools (i.e., list controls) and (ii) a system that requires permission from the Minister of Economy, Trade and Industry when exporting (providing) cargoes (technologies) that do not apply to list controls and satisfy a certain level of conditions (application/demand-side conditions or informed conditions) (i.e., catch-all controls).

- b. Not only the export of cargoes but also the provision of technology is subject to control under the Foreign Exchange Act. When providing foreign persons (non-residents) with technologies under list controls, you need to obtain prior permission. The provision of technology includes not only the provision of technical information such as drawings, specifications, manuals, samples, and prototypes on recording media such as paper, e-mail, CDs, and USB memory devices but also the provision of operational knowledge through technical guidance and skill training and technical assistance in seminars. Accepting international students from overseas and conducting joint research activities may involve frequent exchanges of technologies, which could be subject to control under the Foreign Exchange Act.
- c. Please be reminded that exporting (providing) technologies obtained through this entrusted program could be subject to control. For a project designated by the Ministry of Economy, Trade and Industry, NEDO shall check at the conclusion of the entrustment contract whether the trustee plans to export cargoes/technologies that

apply to export control of the Foreign Exchange Act, and shall also check the presence of an export management system if the entrustee has an intention to export them. Note that this confirmed status may be reported to the Ministry of Economy, Trade and Industry based on a request from said Ministry. Furthermore, if a violation of regulations under the Foreign Exchange Act is identified concerning technologies obtained through this entrusted program, NEDO may cancel all or part of the contract.

- d. Please refer the following for the details of security trade control.
- Ministry of Economy, Trade and Industry: Security trade control (general):
<http://www.meti.go.jp/policy/anpo/>
(Q&A: <http://www.meti.go.jp/policy/anpo/qanda.html>)
 - Ministry of Economy, Trade and Industry: Security Export Control Handbook:
<http://www.meti.go.jp/policy/anpo/seminer/shiryo/handbook.pdf>
 - Center for Information on Security Trade Control: <http://www.cistec.or.jp/>
 - Guidance for the Control of Sensitive Technologies for Security Export for Academic and Research Institutions
http://www.meti.go.jp/policy/anpo/law_document/tutatu/t07sonota/t07sonota_jishukanri03.pdf

(18) Eliminating duplication

If a project proposed this time is judged as the same research and development theme (in terms of the names and contacts of allocated research and development) as a past or ongoing project by the same proposer in other schemes in which subsidy, trust money, etc. are subsidized by the government (including national research and development agencies), NEDO shall not adopt the proposed project.

(19) Ownership and disposition of research and development assets

a. Ownership of assets

Among the acquired assets that were purchased or manufactured to implement contract work (when companies and public interest corporations are Entrustee), NEDO has ownership of assets whose purchase prices are 500,000 yen or more (including consumption tax) and whose statutory useful life is one year or more. (Article 20 (1) of General Conditions)

* Entrustee have ownership of research and development assets when they are national

research and development agencies and others (national research and development agencies, independent administrative agencies), universities and others (national universities, inter-university research institutions, private universities, technical colleges), and local incorporated administrative agencies.

b. Disposition of Assets

Based on the business entrustment contract, after the completion of the contract work period, Trustees are supposed to take over assets under NEDO's ownership on a payment basis. The price of those assets shall be equal to the remaining value on the project completion date. (Article 20 (2)(i) and (iii) of General Conditions)

Note, as assets belonging to NEDO will be subject to the limitations on property disposition described in Article 22 of the Act on Reasonable Execution of Budget Related to Subsidies (Act No. 179 of 1955), there may be conditions placed on the disposition by the Minister of Economy, Trade and Industry.

(20) Language

The authentic text for the Guidelines for Public Call will be in Japanese. Even if an English version of the text has been prepared for reference, only the authentic text in Japanese shall have any effect, and under no circumstances shall the English text have any effect.

9. Opening an orientation meeting

All of the scheduled briefings and individualized consultations regarding the details of this contract work, public call of proposals, procedures for this contract, and proposal documents, among other matters, to be held throughout the country, was cancelled due to the infection control measures against new coronavirus.

10. Contact information for inquiries

NEDO may receive your inquiries no later than 1 week before the public call deadline only via e-mail to the following address. Please be reminded that NEDO would not respond to inquiries about the progress of examination and the like.

Moonshot Research and Development Program Promotion Office, Innovation Promotion Department, New Energy and Industrial Technology Development Organization (NEDO)
E-mail: moonshot-office@nedo.go.jp

11. Improvement survey concerning work related to NEDO activities

NEDO always accepts work improvement surveys concerning NEDO activities

If you would like to share your opinions with us, please submit them through item “7. Improvement survey concerning work related to NEDO activities” found at the link below.

<https://app13.infoc.nedo.go.jp/enquete/form.rbz?cd=1645>

Please note that the content need not be limited to the present business matters.

Relevant documents

Moonshot Goal 4 “Realization of sustainable resource circulation to recover the global environment by 2050”

R&D concept “Realization of sustainable resource circulation to recover the global environment by 2050”

Guidelines for Operation and Evaluation of Moonshot R&D Program

Basic plan for the “Moonshot Research and Development Program”

Implementation Policy for FY2020

Format of a written proposal

Attachment 1: Special instructions for preparing a written proposal, the front cover, and body text

Attachment 2: Form for summary table and entrustee summary table

Attachment 3: Plans for the commercialization of research and development results

Attachment 4: Filling out research CV of the PM candidate, key researchers, [young researchers and female researchers](#)

Attachment 5: The status of certification regarding work-life-balance promoting companies

Attachment 6: Filling out the questionnaire to survey achievements of NEDO research and development projects

Attachment 7: Proposal document receipt certificate

Attachment 8: Basic Policy for intellectual property management in the NEDO Moonshot Research and Development Program

Attachment 9: Basic Policy for data management in the NEDO Moonshot Research and Development Program

Attachment 10: Disclosure of information about research contracts

Attachment 11: Proposal Summary

Reference material 1: Outline of follow-up surveys and evaluations

Business Entrustment Contract (draft), General Conditions of the Business Entrustment Contracts, and Special Conditions for the Moonshot Research and Development Program.

(Reference) Proposal Documents to be submitted by each party

<u>Proposal Document Name</u>	<u>A) Representative Organization</u>	<u>B) Joint Proposer except for A)&C)</u>	<u>C) Re-Entrusted Contractor</u>	<u>Note</u>
<u>Front Page</u>	<u>Yes</u>	<u>Yes</u>	<u>No</u>	
<u>Confirming the absence of interested parties</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>A) may summarize this form with the others parties</u>
<u>Proposal: Body text</u>	<u>Submit by each proposer</u>			
<u>Attachment 2: Summary table including all of Contractors</u>	<u>Submit by each proposer</u>			
<u>Attachment 2: Summary table of Entrustee, Joint Contractor, and Brach Office</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes (Formulate "Summary table of Re-Entrusted Contractor and Joint Contractor" by using the similar form)</u>	
<u>Attachment 3: Plans for the commercialization of R&D results</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>If you plan to advance your R&D via joint proposal, consortium, or other collaborative method, and you plan to jointly work toward practical application and commercialization of</u>

				<u>your R&D, you are free to clarify how each party plans to contribute toward practical application and commercialization in a joint submission.</u>
<u>Attachment 4: PM candidate and key researcher CV</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	
<u>Attachment 4 Young and Female researcher CV</u>	<u>Yes</u> <u>(Submit by each proposer)</u>		<u>No</u>	
<u>Attachment 5: The status of certification regarding work-life-balance promoting companies</u>	<u>No for overseas parties</u>		<u>No</u>	
<u>Attachment 6: Filling out the questionnaire to survey achievements of NEDO R&D projects</u>	<u>Yes</u> <u>(Only private company)</u>	<u>Yes</u> <u>(Only private company)</u>	<u>Yes</u> <u>(Only private company)</u>	
<u>Attachment 7: Proposal document receipt certificate</u>	<u>Submit by each proposer</u>			
<u>Attachment 11: Proposal Summary</u>	<u>Submit by each proposer</u>			
<u>Company profile (descriptions about your organization such as company history, business units, and research centers)</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	

<u>the most recent business report</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	
<u>Financial statements (balance sheet, income statement, and cash flow statement) (for the last three years)</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	
<u>Doubt not conforming to Standard Form of Business Entrustment Contracts</u>	<u>Yes, if you have the doubt.</u>	<u>Yes, if you have the doubt.</u>	<u>Yes, if you have the doubt.</u>	
<u>e-Rad application</u>	<u>Submit by each proposer</u>			