

**Philippine Council for Industry, Energy and Emerging
Technology Research and Development**
Department of Science and Technology
(PCIEERD-DOST)

**CALL FOR PROPOSALS
2016**

I. R&D FUNDING OPPORTUNITY

The Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) of the Department of Science and Technology (DOST) is ready to accept research and development (R&D) proposals for CY 2016 for possible funding. The R&D proposals should be directed towards harnessing the potential of emerging technologies, expand technology development and innovation for the industry, energy and transportation sectors, and develop S&T interventions and solutions for climate change adaptation and mitigation and disaster risk reduction.

This funding opportunity encourages S&T collaboration and applied research among State Colleges and Universities (SUCs), government Research and Development Institutes (RDIs), non-profit S&T networks and organizations, and other proponents seeking funding for their R&D initiatives.

The PCIEERD research agenda is aligned to the government's policy directions for: 1) Rapid, inclusive and sustained economic growth; 2) Poverty reduction and empowerment of the poor and vulnerable; and 3) Integrity of the environment and climate change adaptation and mitigation. It also aims to contribute towards the achievement of the committed outcomes of the DOST.

A. Scope of R&D Work

Proposals must be aligned with the PCIEERD R&D Agenda and Priority Thrust and should include the following research topics, but are not limited to:

1. Sustainable Energy

Ex. Micro Hydro Technology Development and Efficiency Optimization; Cost-Competitive Indigenous/Alternative Bio Fuel Sources; Direct ethanol fuel cell for low-energy applications; Supercapacitor coupled with artificial photosynthesis system; Energy harvesting devices

2. Sustainable Mass Transport

Ex. Cost-Effective Marine Craft Design and Construction; Cost-Competitive Light Weight PUJ Components and Assembly; Traffic Violation Detection and Non-Contact Apprehension Systems; GIS-Based PUV Road/Route Network and Capacity Analysis in Metro

Manila

3. Appropriate Technologies for Industry Competitiveness

Ex. Sensors and Controls with applications in, but not limited to health and medical, food quality monitoring and recovery of valuable materials from wastes; ICT application for Education; Big Data Analytics and Internet Data Mining; Application of fullerene-based nanomaterials in optoelectronics; Bench-scale production of metal nanowires for application in foldable electronics (e.g. screens); Sensors for nitrogen nutrient in soil; Nanomaterials for printed electronics; Pilot-scale production and application of nano-composite materials (nanosilica for arsenic detection and remediation, cellulosic nanocrystals from bamboo, biodegradable films for mangoes); Bench-scale production of lagundi and banaba markers using optimized molecularly imprinted polymers; Safety standards for handling of Nanomaterials; Research on Prolonging the Shelf-life of Local Exotic Fruits for export (e.g. Marang); Laser Systems Development; Development of Intermediate Food Products and Ingredients from local raw materials; Development of Innovative Food Products; Improvement of Existing Local Food Products and By-Products Development; Development of Packaging Design and Technology for Philippine Products; Lab-grown food for alternative protein sources; Development of Technologies for Industrially Important Biotechnology Products for Diverse Applications such as Microbial Colorants/Flavorants; Technological Support for the Upgrading of Local Cacao and Cocoa Industry; Natural rubber product development (i.e. thermoplastics, rubber wood); Extraction and Refinement Technologies for Local Gums, Resins and Oils; Value adding Technologies for Pili; Design and Development of Low Cost Processing Equipment and Technologies for the MSMEs; R&D on Copper, Nickel Iron; Gold and Chromite for Industrial and Emerging Applications, Rare Earth Elements Exploration and Extraction

4. Environment, Climate Change Adaptation and Disaster Risk Reduction

Ex. Industry Waste Material Utilization; Multi-Hazard Monitoring Scenario Analysis and Visualization Command Center; Modular Desalination Systems; Pilot-scale application of Nanosensors for ammonia; Sensors and Controls for the environment; Environmental Protection, Biodiversity Conservation and Rehabilitation Technologies for Mined-out Areas; Industrial Wastewater and Treatment Technologies; Development of Eco-Friendly and Compact Systems for both Industrial and Domestic Wastes

B. **Expected Outputs¹ and Outcomes²**

1. Expected outputs from the projects to be funded may include any of the following:

- Innovative and novel technologies (products and processes) and scientific methods (services) developed
- Technology transfer, training, and/or deployment of technology
- Techno-economic feasibility and pre-feasibility studies
- Databases and other tools that facilitate DOST projects or provide access to information
- Training and/or capacity building
- Publications in ISI Journals

2. Projects to be funded under this announcement are expected to contribute to any of the following DOST Outcomes:

- Innovative, cost-effective and appropriate technologies that enable micro-, small- and medium-scale enterprises (MSMEs) to develop and produce competitive products that meet the world class standards;
- State-of-the art facilities and capabilities that enable local industries to move up the value chain and attain global competitiveness;
- Science-based weather information and climate change scenarios with associated impact assessments that enable concerned agencies to develop appropriate mitigation strategies for a disaster- and climate change-resilient Philippines.

II. **FUNDING AWARD INFORMATION**

A. **Fund Information**

The estimated funding for this competitive opportunity is **PHP200,000,000**. The PCIEERD-DOST anticipates R&D award ranging from approximately PHP500,000 to PHP5,000,000 of research agreements. Programs and projects requiring larger budgets will also be entertained and may be endorsed to DOST-GIA for co-funding.

B. **Anticipated Number of Projects**

PCIEERD-DOST anticipates up to approximately 50 research

1 The term "OUTPUT" means an activity, effort, and/or associated work product related to project goals and objectives that will be produced or provided over a period of time or by a specified date. Outputs may be quantitative or qualitative but must be measurable during an assistance agreement-funding period.

2 The term "OUTCOME" means the result, effect or consequence that will occur from carrying out a project or activity that is related to programmatic goal or objective. Outcomes may be environmental, behavioral, health-related, or programmatic in nature, but must be quantitative. These may not necessarily be achievable within an assistance agreement-funding period.

agreements under this announcement, subject to evaluation on the quality of proposals. In addition, the PCIEERD-DOST may give additional project grants under this announcement, consistent with the PCIEERD and DOST policies, if additional funding becomes available after the original selections.

C. **Partial Funding**

The PCIEERD-DOST may partially fund discrete portions or phases of proposed projects. If PCIEERD-DOST decides to partially fund a proposal, it will do so in a manner that does not prejudice any applicant or affect the basis upon which the proposal or portion thereof, was evaluated and selected for award, and therefore maintains the integrity of the selection process.

D. **Deadline of e-Proposals Submission**

Proposals must be submitted through the PCIEERD-DOST **e-Proposals Submission Facility** before the closing date, **13 October 2015**. Proposals received after the date will not be considered. A notification will be issued to eligible entities whose proposals have been evaluated and preliminarily recommended for award. A PCIEERD R&D Manager will then be assigned to each project proponent to provide guidance in finalizing their proposals.

E. **Commencement Period for Approved Project**

The commencement period for approved projects will begin in January 2016.

F. **Type of Funding**

The funding for selected projects will be in the form of a research agreement under the PCIEERD Grants-In-Aid (GIA) Program. Research agreements permit substantial involvement of the PCIEERD designated R&D Managers and the selected applicants in the performance of the work supported. Although PCIEERD-DOST will negotiate precise terms and conditions relating to substantial involvement as part of the award process, the anticipated substantial Government involvement for this project will be:

- Close monitoring of the successful applicants' performance to verify the results reported by the applicant;
- Collaboration during performance of the scope of work;
- Review of the substantive terms of proposed contracts and review of competitive procurement procedures (PCIEERD-DOST will not select contractors)
- Approval of qualifications of key program/project personnel (PCIEERD-DOST will not select employees or contractors employed by the award recipient);
- Review and comment reports prepared under the research agreement

G. Supplementary Information

Demonstrations must involve new or experimental technologies, methods, or approaches, where the results of the project will be disseminated so that others can benefit from the knowledge gained in the demonstration project. A project that is accomplished through the performance of routine, traditional, or established practices, or a project that is simply intended to carry out a task rather than transfer information or advance the state of knowledge, however worthwhile the project might be, is not considered a demonstration project. Such projects/activities are not eligible for funding under this announcement.

III. ELIGIBILITY INFORMATION

A. ELIGIBLE ENTITIES

Any Filipino, public or private entity with proven competence may apply for GIA support of DOST/PCIEERD and its grant-giving units, provided that projects fall under the specific research areas with overall goal to benefit Filipinos.

Preference will be given to public and private universities and colleges, Research and Development Institutes (RDIs), R&D Consortia, non-profit laboratories, other public or private non-profit S&T institutions located in the Philippines. Non-profit S&T organizations are those, which: (1) are operated primarily for scientific, educational, service, or similar purposes in the public interest; (2) are not organized primarily for profit; and (3) use its net proceeds to maintain, improve, and/or expand its operations. Non-profit organizations engaged in lobbying activities are not eligible to apply.

B. COST SHARING AND MATCHING

The Applicant should provide at least 20% counterpart funding. Only eligible and allowable costs may be used for counterpart fund and/or in-kind contribution (ex. utility costs, office space rental, etc.), as determined by PCIEERD-DOST. The proposal must describe how the applicant will provide the counterpart fund/in-kind contribution and the role that PCIEERD-DOST funding will play in the overall project.

C. THRESHOLD CRITERIA

The following are requirements during proposal submission to ensure consideration for funding:

1. Only proposals from Eligible Entities that meet all of the criteria will be evaluated against the ranking factors in Section V of this announcement. Applicants found ineligible for funding consideration as a result of the threshold eligibility review will be notified within 15 calendar days of the ineligibility determination.

2. Proposals to be submitted and or funded under this announcement must demonstrate the advancement of Science and Technology, alignment to government's economic policy direction and fall under at least one of the DOST Outcomes and PCIEERD R&D Agenda, Priority Thrust and Directed Research identified in Section I.
3. Proposals (including all project documents submitted) must be written in English.
4. Proposals must comply with the proposal submission instructions and requirements set forth in Section IV of this announcement, otherwise these proposals will be rejected.
5. Proposals must be received by the PCIEERD on or before the proposal submission deadline specified in Section II of this announcement. Applicants are responsible for ensuring that their proposals reach the PCIEERD on the set deadline of submission.
6. Proposals received after the submission deadline will be considered late and returned to the sender without further consideration unless the applicant can clearly demonstrate that lateness was due to mishandling on the part of PCIEERD.

IV. **PROPOSAL AND SUBMISSION INFORMATION**

A. **Content of e-Proposals**

1. **Letter of Intent and Endorsement**

Together with the proposal, PCIEERD-DOST requires submission of a formal letter of intent from the applicant and an endorsement from the authorized head of their organization. The authorized head of the organization will also be the principal signatory of their organization for the research agreement award.

The letter of Intent and Endorsement Letter should be addressed to:

Carlos Primo C. David, Ph.D.

Executive Director

Philippine Council for Industry, Energy and Emerging Technology
Research and Development (PCIEERD)

Department of Science and Technology (DOST)

5th Level, Science Heritage Building, DOST Compound,
Gen. Santos Ave., Bicutan, Taguig City

2. **Narrative Proposal**

Applicants are advised to download all applicable PCIEERD-DOST GIA Forms from the [PCIEERD website](#) or the [e-Proposals website](#) and completely accomplish these forms. Aside from the Frequently Asked

Questions (FAQs) in the e-Proposals website, Guidelines for Uploading Files can be viewed once the applicant registers and logs on in the system. Instructions for the e-Proposals submission are available upon downloading these forms from the PCIEERD website.

The narrative proposal work plan must explicitly describe the following in the downloaded forms.

a. **Project Rationale and Description**

Describe the project rationale and significance of the proposed project to the current needs of the country.

b. **Project Objectives**

State the specific purpose to be addressed by the project on the problem areas identified.

c. **Review of Literature**

Summarize related researches/activities that have been conducted. Include the state-of-the-art of current technology/ information/ services from which the proposal will take off.

d. **Methodology**

Summarize approaches on how the associated work products, processes, information and services will be implemented, developed and acquired.

e. **Work Plan**

Describe specific activities and/or methods to be undertaken and estimated timeline for each task.

f. **Project Outputs, Deliverables and Expected Outcome**

Identify the expected project outputs and how the progress towards achieving the outputs will be tracked and measured. Identify the expected quantitative and qualitative outcomes of the project; including what measurements will be used to track the progress towards achieving the outcomes and how the results of the project will be evaluated.

Indicate the specific products, processes, or services which the project is expected to produce and quantify possible socio-economic benefits, environment impacts and contribution towards the advancement of S&T which can be derived from the project.

g. **Financial Budget Requirement Work Plan**

Indicate the estimated funding amounts for each work component/task, which should be consistent with the Line-Item Budget (LIB).

h. Line Item Budget

Provide the total budget requirement for the project reflecting the counterpart of the Applicant using [PCIEERD-DOST Forms 2B-2](#). Applicants must itemize the costs related to personnel, travel, equipment, supplies, other direct costs, and total costs. Equipment and other large expense items should be supported with justification. Estimation for the rates of project personnel should be in accordance with the prescribed rates for [Honoraria](#) and hiring of [DOST GIA Personnel](#).

i. Attachments

Applicants may attach documents to the Narrative Proposal. These may include related information on the proposed program/project like, resumes or curriculum vitae, support letters from relevant agencies/organizations, market supply/demand projections, etc. Below are explanations of required information, which should be attached in the narrative proposal. These can be submitted through the e-Proposals submission facility of PCIEERD for this CFP.

a. Roles of the Applicant and Partners, if there is any.

b. Institution's Track Record

Description of the applicant's organization and experience related to the proposed project.

c. Project Team Information

Short description of the roles of each project staff, expertise/qualifications, staff knowledge. The Applicant may want to expound on how the manpower resources can be obtained to successfully achieve the goals of the proposed project.

d. Past Performance

Programmatic Capability: Submit a list of government funded assistance agreements or foreign equivalent assistance agreements similar in size, scope and relevance to the proposed project that your organization performed within the last three years (no more than 5 projects agreements, and preferably PCIEERD/DOST agreements) and describe (i) whether, and how, you were able to successfully complete and manage those agreements and (ii) your history of meeting the reporting requirements under those agreements including submitting acceptable final technical reports.

B. e-Proposals Submission

Applicants are required to submit proposals through the PCIEERD-DOST

e-Proposals submission facility before the Closing Date on 13 October 2015. Applicants will receive automatic reply through email confirming receipt of proposals.

C. Pre-Proposal Assistance and Communication

PCIEERD staff are available to provide appropriate assistance to potential applicants interested in competing for this call for proposals. This may include assistance to potential applicants in determining eligibility of the applicant or the applicant’s proposed project for funding, questions about administrative issues relating to the submission of a proposal, and clarifications on the announcement.

Contacts:

Energy, Transportation and Disaster Risk Reduction Sectors:

Nonilo A. Peña, +632 8372935,
nilo_pcierd@yahoo.com

Industry and Environment Sectors: Niñaliza Escorial, +632 8372926,

ninaescorial@gmail.com

Emerging Technologies Sectors: Nelson Beniabon, +632 8372071 to 82

local 2106, nobainob@gmail.com

V. EVALUATION CRITERIA

Only those proposals that meet the threshold criteria in Section III Part C will be evaluated according to the criteria set forth below. Applicants should directly and explicitly address these criteria as part of their proposal submission. Each proposal will be rated using points system, with a total of 100 points.

A. Evaluation Criteria

Criteria	Points
<p>1. Project Approach: The PCIEERD will evaluate the following factors:</p> <ul style="list-style-type: none"> 1.1 Strategies of implementation for addressing all of the requirements in Section I; 1.2 Technical soundness of the proposal 1.3 Reasonable timeframe for the execution of the tasks associated with the project; 1.4 If proposal includes a commitment for the involvement of partner institution or a private cooperator to utilize the technology, services and or eventual transfer of results of the project. 	30

<p>2. Outputs and Outcomes</p> <p>2.1 Extent and quality to which the proposal describes the evaluative component of the project, including how the applicant's success in achieving the expected project outputs and outcomes for addressing the requirement in Section I Part C;</p> <p>2.2 How results can be quantified, tracked and measured, as mentioned in the Project Results of the Narrative Proposal Section.</p>	30
<p>3. Track Record of Applicant-- The PCIEERD will evaluate the applicant's technical ability to successfully complete and manage the proposed project taking into account the following:</p> <p>3.1 Track record in successfully completing and managing equivalent funded assistance agreements (assistance agreements include government and/or foreign equivalent grants and agreements) similar in size, scope, and relevance to the proposed project performed within the last 3 years,</p> <p>3.2 History of meeting reporting requirements under government and/or foreign equivalent funded assistance agreements (assistance agreements include government and/or foreign equivalent grants and agreements) similar in size, scope, and relevance to the proposed project performed within the last 3 years and submitting acceptable final technical reports or the equivalent under those agreements, and</p> <p>3.3 Institution's existing facility/capability to carry out similar project towards achieving the expected outcomes and outputs (e.g., results) under government and/or foreign equivalent funded assistance agreements performed within the last 3 years.</p>	15
<p><i>NOTE: In evaluating applicants under this criterion, the PCIEERD may also consider relevant information from other sources including agency files and prior/current grantors (e.g., to verify and/or supplement the information supplied by the applicant). Applicants with no relevant or available past performance or reporting history will receive a neutral score for these elements. A neutral score is half of the total points available in a subset of possible points. If no response is provided for these items, the applicant may receive a score of 0 for these factors.</i></p>	
<p>4. Staff Expertise/Qualifications:</p> <p>4.1 Project Personnel expertise/qualifications to successfully achieve the goals of the proposed project, and</p> <p>4.2 Description of the applicant's organization and experience relating to the proposed project.</p>	15
<p>5. Budget/Resources:</p> <p>5.1 Proposed project budget is reasonable/justifiable to accomplish the proposed goals, objectives, and measurable project outputs and outcomes</p> <p>5.2 Applicant's counterpart to complement the PCIEERD funding as a requirement in Section III Part B. Extent on how the applicant will allocate the use of PCIEERD funding with other sources of funds to carry out the proposed project(s).</p>	10
<p>TOTAL</p>	100

B. Review and Selection Process

A review team will evaluate each proposal using the evaluation criteria described above. Each proposal will be given a numerical score and will be ranked accordingly. Preliminary funding recommendations will be forwarded to the Approving Authorities based on this ranking.

C. Other Factors

The Approving Authorities, based on the rankings and preliminary recommendation of the PCIEERD evaluation team, will make final funding decisions. In making the final funding decisions, the Approving Authorities

may also consider programmatic priorities and geographic diversity of grants.

VI. AWARD ADMINISTRATION

A. Award Notices

Following the evaluation of proposals, all applicants will be notified regarding their status.

Proposal Notifications.

- a. PCIEERD will notify the *successful* applicant, via telephone, fax, electronic or postal mail by November 16, 2015. The notification informs the Applicant that his/her Proposal has been successfully evaluated and recommended for award.
- b. This notification is **NOT** an authorization to begin implementation. The award notice signed by the PCIEERD Executive Director is the authorizing document and will be used for the execution of the project through a Memorandum of Agreement (MOA) among parties.
- c. PCIEERD will also notify the *unsuccessful* applicant(s) via electronic or postal mail by November 16, 2015.

B. Administrative and DOST GIA Policy Requirement

The Grants-In-Aid award shall be governed by the [DOST GIA Guidelines](#).

C. Reporting Requirement

Quarterly progress reports and a detailed final report will be required. Quarterly progress reports summarize technical progress, planned activities for next quarter and summary of expenditures. The final report shall be completed within 90 calendar days after the completion of the period of performance. Required forms are downloadable from the PCIEERD website and may be provided by the PCIEERD upon the awarding of the agreement to eligible applicants.

VII. PCIEERD CONTACT

For further inquiries, the applicant may contact:

Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD)

ATTN: ALBERT G. MARIÑO

5th Level Science Heritage Building

DOST Complex, Gen. Santos Ave.

Bicutan, Taguig City

agmarino@pcieerd.dost.gov.ph

+632 8372071 to 82 Local 2107

All questions or comments must be communicated in writing via postal mail, facsimile, or electronic mail to the above contact person.