

VI. METALS AND ENGINEERING SECTOR

METALS AND ENGINEERING FOR INDUSTRY AND COMPETITIVENESS

Call Overview

The Metals and Equipment Engineering Sector **PCIEERD** (Philippine Council for Industry, Energy and Emerging Technology Research and Development) plays a significant role towards the competitiveness of Philippines manufacturing industries. It principally impacts across the other sectoral priorities of the **PCIEERD** such food, mining, textile, process agri-processing as well on the environment sector and advanced technology sectors.

The Metals and Equipment Engineering (M&E) industries plays a vital role in the country's economic growth and development. The Philippine economic sectors manufacturing, agricultural and service sectors-are heavily dependent on the M&E industry especially in terms of their requirements for tools, implements, machines and equipment, parts and assemblies, among others.

Through this **Call for Proposal**, the Metals and Equipment Engineering Sector through the **PCIEERD**'s Grant-In-Aid for programs and projects will support infrastructure development of metals-related S&T services, the research programs directed towards the development of improved and advanced metal-related technologies. The **PCIEERD** also considers grant support for capacity building and institutional technology development proposals directed to the Metals and Equipment Engineering sectoral priorities.

The Metals and Equipment Engineering sector is calling for proposals for 2023-2025 from qualified local institutions that will address the needs, gaps and problems of the local industry.

Call Objectives

1. To invite submission of S&T and R&D program/projects that will enhance and or develop the M&E Sector.
2. To enjoin qualified local institutions, engineers and scientists and individuals to foster linkages with DOST and PCIEERD in the field of science and technological activities directed to the M&E Sector

The Metal and Equipment Engineering sector comprises four major groups, namely: Machining and Fabrication Sector, Tool and Die Sector, Metalcasting Sector and Surface Engineering Sector.

A. Metals and Engineering Program

Call Rationale

To disseminate and enjoin researchers from private and government agencies to submit projects under the four priority sub-sector/scope of the program: Machining and Fabrication Sector, Tool and Die Sector, and the Metal Casting Sector. This call also presents some of the priority sectors identified during the PCIEERD road mapping session with the regions: NCR, CAR, I, II, III, IVA, IVB, V, VI, VII and VIII and the assessment of project managers.

Call Scope

- Machining and Fabrication Sector
- Tool and Die Sector
- Metal Casting Sector
- Surface Engineering

Call Objectives

1. To develop and provide technologies towards improving the productivity of M&E sector and its allied sectors
2. To partner with public and private research institutions in developing innovative technologies that will contribute to the nation's productivity and competitiveness

Specific Features Sought in this Call

I. **Machining and Fabrication Sector:**

Total budget: P230 million

Timeline: 2023-2025

<i>Mission Call</i>
<ol style="list-style-type: none">1. Development innovative, cost effective and appropriate Machinery, Parts and Engineered Products (MPEPs) for Design and Development that will solve the S&T problems and needs of the following industry<ol style="list-style-type: none">a. Agri-Industry (e.g. Cacao)b. Food Processing industriesc. Essential Oils and Fragrancesd. National Defense and Security needse. Aerospace industries
<ol style="list-style-type: none">2. Micro machining technologies.
<i>Strategic Call</i>
<ol style="list-style-type: none">1. Facilities that will contribute to the competitiveness and productivity of Metals Industry in terms of machining and fabrication2. Capability building for the industry needs in terms of machining and fabrication (e.g. automation and control, CNC Programming, mechanical design and fabrication, etc.)
<i>Open Call</i>
<ol style="list-style-type: none">1. Development innovative, cost effective and appropriate Machinery, Parts and Engineered Products (MPEPs) for Design and Development that will solve the S&T

problems and needs of the Creative and Handicraft industries (Forest-based; composite and natural materials)
2. Mechanical and Robotics for industry adoption and automation
3. Parts and components for automotive industries

II. Tool and Die Sector:

Total Budget: P38 million
Timeline: 2023-2025

Strategic Call
1. Design and development molds and die for processors and fabricators. 2. Capability Building and services for the die and mold needs of the manufacturing sectors
Open Call
Tool and Die for Handicraft Industries

III. Metal Casting Sector:

Total Budget: P50 million
Timeline: 2023-2025

Mission Call
R&D on Advanced Metalcasting Technologies
Strategic Call
1. Projects and Programs on Materials/Metallurgy Technology 2. Facilities that will contribute to the improvement of the Metal casting industry.

IV. Surface Engineering Sector:

Total Budget: P19 million for the Open Call
P400 million for the Strategic Call
Timeline: 2023-2025

Mission Call
1. Metal and composite etching or photo etching 2. Coating, Polishing, Metal Finishing Technologies
Strategic Call
1. Advance Surface Engineering Facility 2. Surface finishing of automotive parts