



## Call No.2: Development of a System for the Utilization of Low-Potential Heat

**Issued by: DAC**

**Start of Submissions: 10/9/2023**

**Deadline for Submissions: 30/1/2024**

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### 1. Background

DAC invites qualified engineering firms, research institutions, or consortia to submit proposals for the joint development of a System for the Utilization of Low-Potential Heat, aimed at industrial, energy, and environmental applications. This system is a key component of DAC's portfolio of advanced energy recovery technologies.

### 2. Objective

The goal is to develop a System for the Utilization of Low-Potential Heat (hereinafter, the "System"), intended to capture, convert, and utilize low-temperature heat sources for industrial, energy, and environmental applications, specifically – DAC devices.

The co-development process will include research, engineering design, prototyping, testing, and validation of the System to achieve high efficiency and commercial viability.

The Parties shall collaborate by sharing expertise, intellectual property, research facilities, production infrastructure, and financial resources as necessary for the successful completion of the project.

### 3. Scope of Work

The project is structured in four development phases:

#### Phase 1: Conceptual Design & Feasibility Study

- Identification of usable low-potential heat sources
- Development of system concepts, initial models, and performance simulations
- Technical and economic viability analysis

#### Phase 2: Engineering & System Design

- Selection of working fluids, heat exchangers, turbines, and auxiliaries
- Thermodynamic optimization and detailed technical documentation
- Delivery of 3D models and system schematics

#### Phase 3: Prototyping & Testing

- Fabrication of the initial functional prototype
- Controlled environment testing for efficiency and durability
- Iterative refinement based on test data

#### Phase 4: Industrial Validation & Commercialization

- Pilot deployment and real-world evaluation
- Regulatory compliance and certification
- Strategy for industrial rollout and market scaling

### 4. Deliverables

Proposals must include:

- Technical concept and development approach for the entire system



- Simulations, models, and performance projections
- Preliminary mechanical and thermal design
- Prototype testing methodology
- Timeline and budget estimation
- Team qualifications and prior experience in thermal system development

### **5. Evaluation Criteria**

Proposals will be assessed based on:

- Technical soundness and innovation
- Compliance with DAC's performance goals
- Feasibility of implementation and scaling
- Quality of the proposed design and testing approach
- Experience and technical capacity of the team
- Budget and schedule realism

### **6. Submission and Timeline**

All proposals must be submitted in PDF format. Shortlisted candidates may be invited for follow-up interviews and technical clarifications.

We look forward to receiving proposals that will contribute to the creation of high-efficiency systems for sustainable heat utilization in industrial settings.