



सत्यमेव जयते



## **Letter of Intent (LoI)**

**for**

## **Integrated Clean Energy Material Acceleration Platform(IC-MAP)**

### **Objective:**

- The objective of setting up Integrated Clean Energy Material Acceleration Platform (IC-MAP) is to accelerate the discovery of high performance low cost clean energy materials for energy harnessing, energy storage and energy efficiency for diverse sectors such as power, buildings, transportation, storage, construction etc. Each IC- MAP is expected to focus its activities on a specific segment of above thrust areas, identify the gaps and missing links and commit to a tangible output over a time frame of 3 years. IC-MAP needs to also leverage the R&D infrastructure already available and bring in funding from private sector. It is important that the research consortium is engaged in cutting edge R&D and has proven research and technical competence to execute the project. The lead organization hosting the MAP should have ability to connect with various stakeholders to translate the research outputs for practical applications.
- This call for Letter of Intent is to identify the interested researchers keen to develop this multi-disciplinary platform leveraging their individual expertise through forming inter-disciplinary teams. The first stage will include identification of individual researchers in all relevant domains. The second stage will be catalyzing formation of inter-disciplinary teams of these researchers who would formulate proposal for IC-MAP.

### **Focus:**

- Advanced theoretical, applied physical chemistry/materials science, next-generation computing, artificial intelligence (machine learning) and robotics tools in a fully integrated approach to help model, simulate, predict, synthesize, characterize, and test the properties and performance of new clean energy materials up to 10 times faster.

### **Target Materials:**

- High performance low cost clean energy materials for energy harnessing, energy storage and energy efficiency for diverse sectors such as power, buildings, transportation, storage, construction etc.
- Combining material science with three key technologies – robotics, artificial intelligence and advanced computing to accelerate development of Clean Energy materials.

**Work plan and timelines for IC-MAP (to be awarded to maximum 5 consortia, each with focus in diverse sector such as power, buildings, transportation, storage, construction etc after successful Stage-II):**

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**Duration:** 3years

### **Eligibility:**

- Faculties/Scientists working in regular position in recognized Academic Organization /Public funded R&D Institution/ Laboratories. Participation of industries and industry association is also strongly recommended. However, they would be required to partner with Academia or R&D organizations.
- The shortlisted researchers will also be given opportunity to collaborate with other Mission Innovation countries working in this domain and an exposure visit may be planned if the domain area matches with parallel initiatives elsewhere.

### **Components of Funding:**

- Additional research manpower especially hired for the project in India (existing research manpower will not be eligible for funding).
- Travel (domestic and international) for student / researcher mobility
- Dissemination activities and stakeholder workshops
- Contingent expenditure such as stationery, incidentals etc.
- Equipment, wherever possible, researchers are advised to make use of existing facilities and equipment, including those hosted at MI countries. If equipment is needed as part of the research proposal, applicants must follow DST norm for requesting equipment which will be made available only on the basis of strong dedicated requirement for the project.
- Outsourcing / Fabrication costs.

### **Evaluation Process:**

The evaluation process will be conducted in two stages:

**Stage-I:** All interested applicants are invited to submit an Expressions of Interest.

**Stage-II:** From these initial submissions, Evaluation Committee (EC) will shortlist the eligible applicants through peer review process. A consortium / consortia will evolve out of these eligible participants and they will be required to submit the detailed proposal for setting up material acceleration platform. The EC will be constituted by DST.

Applicants found eligible at Stage-I evaluation will be requested to submit detailed proposals for participation in Stage-II and these will be critically evaluated by constituted expert committees in India

### **Assessment criteria for Expressions of Interest:**

Expressions of Interest of IC-MAP Proposals will be considered by the Evaluation Committee. Applicants

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will not only be assessed on their professional background and expertise, but also on their personal skills that are needed in this interactive process of joint research development and competencies in terms of co-creation and interdisciplinary research.

Overall, the selection will be based on the specific criteria outlined below:

#### **Academic / professional attributes**

- Strength of expertise relevant to the thematic focus as defined in this call document;
- The ability to develop innovative and high quality research ideas from a systems perspective;
- The potential to contribute to research between disciplines.

#### **Personal attributes**

- The ability to work in a team across disciplines and nations;
- The motivation and ability to work in an inter-disciplinary group (e.g. openness to new ideas, ways of thinking and working, creative, curious, collaborative etc).

The Evaluation Committee will seek for a balance of complementary expertise to be present. Participants will be chosen to allow balanced representation in the different fields of expertise.

#### **Timelines:**

Call for Expression of Interest (EoI) – 01<sup>st</sup> June 2020 Last  
date of submission of EoI Form – 30<sup>th</sup> September 2020

#### **General Guidance on Proposal Formulation (Applicable for Stage-II):**

*The points below are not exhaustive but are designed to help interested organizations to develop proposals.*

- Proposed proposals should necessary be based on clean energy and should be truly innovative and transformational. Proposals should make clear how they are adding value and not duplicating an existing solution; multiple forms of innovation are eligible and will be considered. Proposals should also clearly illustrate how the work proposes to overcome technical barriers of the current issues in Clean Energy material.
- Proposed proposals should be oriented towards applied research, establish proof-of-concept in the early stages of development, defined broadly as the critical transition phase of idea/ concept to development thus making support from this grant would be most impactful.
- The maximum duration of the proposals **should not be more than 3 years**. Each proposal is subject to review at key milestones to continue funding.
- The project administrative costs should be kept to a minimum. The permanent equipment maximum upto 20% of the cost of proposal may be provided to the organization.
- The grant places strong emphasis on evidence-based results. Proposals must clearly define the indicators of success in the application form to show quantified tangible gain during the project life cycle.

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**Department of Science and Technology**  
**Ministry of Science and Technology**  
**Government of India**

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INNOVATION**

accelerating the clean energy revolution

The grant also places a strong emphasis on sharing the results more widely. Project implementing organizations will be required to maintain an Open Access Policy.

### **Application Format and Submission:**

Please submit the EoI online at <http://onlinedst.gov.in/Login.aspx>. Soft copy is also to be emailed to [ranjith.krishnapai@gov.in](mailto:ranjith.krishnapai@gov.in) on or before 30th September 2020.