

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
(Technology Mission Division)

Call for Proposals
for

**Optimal Water Use in Industrial Sector (Water Conservation,
Water Use efficiency, Waste Water Recovery, Utilization of Residues)**

1. Preamble

The water resources scenario of the country is changing fast adversely both in terms of availability as well as quality. The situation is further aggravated by the looming climate change which is going to alter the paradigm of management of water resources. Water is critical natural resources and is being affected by increasing population, industrialization, urbanization, pollution, deforestation and above all climate change. Addressing Water Scarcity is possible by striking a balance between Water Usage, Water Use Efficiency and Water Recovery from waste water stream. Industry is one of the major users of water and optimal water use in this sector is critical for overall water management issue.

2. Objective of Call: The objective of the call is to develop knowledge through R&D and demonstration and developing solutions in the context of Water Conservation, Waste Water Treatment and Water use efficiency in Industry. The focus is on Research and Development proposals, where R&D and private sector work together to design generic solutions for optimal water management in industrial sector. These research leads and solutions are expected to generic best practices for wider adoption. The demand for intervention need to be evident and established clearly in the proposal.

The present call intends to prioritize the following four challenges:

- i) Technological options leading to optimal use of water in industry.
- ii) Industrial waste water treatment and management.
- iii) Near Zero Liquid Discharge Options for effluents (including energysavings).

iv) Balancing water demand and use utilizing technological tools.

3. **Scope of Call:** The call would include following components:

3.1 **Research Stream** : Leading to establishment of Proof-of-Concept.

Concept: Proposal should explore innovative ideas with a view to showcase the unique advantages of their idea over existing alternatives and to demonstrate that their innovative idea has the ability to address a significant end user need. This has to be substantiated by clear articulation on need supported by quantitative performance statement from the participating user industry.

Eligibility: The proposals have to be submitted in the industry -institute partnership only. The proposals are to be led by faculties/ scientists working in regular position in recognized Academic Organization /Public funded R&D Institution/ Laboratories, DSIR recognized SIRO organization, state S&T councils in partnership with other academic/ R&D organisation, state line departments. The industry associations are encouraged to participate and partner. The industry should be interested to explore innovative ideas, Research and in encouraging the development of Concept. The company/industry may show willingness to involve in the project through industry attributable technical inputs and resources in-kind.

Project Cost: Not exceeding Rs. 50 lakh (indicative) where equipment cost is not expected to exceed 30% of the project cost.

Project duration: 2 years maximum

3.2 **Technology Stream**: Leading to lab scale Demonstration.

Eligibility: The proposals have to be submitted in the industry -institute partnership only. The proposals are to be led by faculties/ scientists working in regular position in recognized academic institutions, public funded R&D Institution/ Laboratories, DSIR recognized SIRO organization, state S&T councils in partnership with other academic/ R&D organisation, state line departments, S&T based voluntary organisation etc. Participation of industries/ start-ups and industry association is strongly recommended. The role of industry

in the proposal should be tangible and it should show interest in promoting or encouraging the developed technology. The company/industry has to be willing to contribute at least 10% of the project cost.

Project Cost: No ceiling. Lab Scale Demonstration plant costs will be admissible based on the project requirement. However, other equipment cost should not exceed 30% of the project cost.

Project duration: 3 years maximum

3.3 Technology Validation Stream: Leading to Pilot Scale Demonstration for technology in industrial setting.

Eligibility: The proposals are to be led by Industry and have to be submitted in partnership mode only by any established company/ industry along with faculties/ scientists working in regular position in recognized academic institutions, public funded R&D Institution/ Laboratories, DSIR recognized R&D organization. The applicant company should have a valid R&D recognition from DSIR and have at least 51% of its shares held by Indian promoters.

Project cost: No ceiling. The Scheme provides grants to academic/R&D institute(s), technically supporting the applicant company as a partner for success of the project, for setting up of demonstration plant, provided the partner company demonstrates willingness to validate the technology through providing tangible inputs to the project.

Project duration: 18 months maximum

4. Call Dates

Call Opening Date : 05.09.2018 (September 05, 2018)

Call Closing Date : 31.10.2018 (October 31, 2018)

5. Proposal Formulation:

The applicants are encouraged to identify current & emerging challenges on the identified topic in consultation with stakeholders, especially participating industry. The relevance of the research should be based on identified need. The formulation exercise would typically

involve collecting site specific conditions and assessing holistic water requirement. The strategy for sustainability of intervention post intervention also needs to be explicitly stated.

6. Criteria for evaluation

The proposals would generally be evaluated based on the following criteria. However, weightage of each of these criterion will vary depending upon the anticipated output of each stream:

- i) Demand or need of proposed work
- ii) Credibility Track Record and commitment of Project Team
- iii) Novelty, feasibility and scientific merit of proposed work
- iv) Superiority of proposed work over existing alternatives.
- v) Proposed formulation with clear definition of problem proposal is going to solve, why it is important, clear articulation of methodology and delineation of roles and responsibilities.
- vi) Potential, Technical, social, environmental and economic viability of proposed work.

DST at the behest of Expert Panel may introduce any other criteria considered to be critical for successful implementation of the project.

7. Proposal Format and Submission:

Proposals may be submitted at e-PMS (onlinedst.gov.in) under Technology Mission Division in prescribed format of Individual Proposal which is available on e-PMS and at DST website.

Two (2) hardcopies of uploaded research proposal should also be sent to Dr. G.V Raghunath Reddy, Scientist 'E', Technology Mission Division (E&W), Department of Science & Technology (DST), Technology Bhavan, New Mehrauli Road, New Delhi- 110016 by Speed Post and reach before the closing date of the call. The envelope should be superscribed with the **“Call for proposals for Optimal Water Use in Industrial Sector, Component: _____ (Research Stream/Technology Stream/Technology Validation Stream), Name of Principal Investigator”**.