

**RESEARCH GRANT OPPORTUNITY
FOR
APPLIED RESEARCH PROJECTS ON
LOSS REDUCTION IN NATURAL GAS
TRANSMISSION AND DISTRIBUTION SYSTEM
INCLUDING LEAKAGE DETECTION AND
MONITORING**

Program Solicitation: EPRC/58-2023-019

<http://researchgrant.eprc.gov.bd/>

Bangladesh Energy and Power Research Council

Power Division

June 2023

PROGRAM REQUIREMENTS

Program Title:

Research grant opportunity for applied research projects on loss reduction in natural gas transmission and distribution system including leakage detection and monitoring.

Synopsis of Program:

This solicitation mainly focuses on applied research-based projects that would unfold technologies, tools, and strategies paving the way of innovative solutions for system loss reduction as well as leakage detection and monitoring in natural gas transmission and distribution system of Bangladesh. Funded projects will help new or improved technologies to reduce and protect the theft or system loss or to detect and monitor leakages in existing natural gas transmission and distribution network.

These projects will develop innovative technologies/tools/ideas/system which can be replicated at different locations in Bangladesh and will ensure that system losses are reduced or leakages are detected and monitored as well as the transmission and distribution grid systems of natural gas become smarter.

Research Focus Areas:

Proposers submitting applied research proposals can address the following key research topics of interest, but are not limited to:

- Develop sensors, signal and/or any other signature analysis, communications, and deployment for real-time monitoring technology for detecting gas loss through transmission and distribution pipeline;
- Identifying the impact of illegal tapping or leak such as monitoring pressure changes between the upstream and downstream pipes;
- Development of reliable monitoring for transmission and distribution pipeline such as GPS system based real time monitoring system;
- Smart meter for pipeline gas usage monitoring and billing;
- Application of Software based methods like mass/volume balance, real time transient modeling, acoustic/negative pressure wave, pressure point analysis, statistics or digital signal processing;
- Application of hardware based gas leak detection technique like acoustic, optical, cable sensor, soil monitoring, ultrasonic flow meters and vapor sampling;

- Utilization of hybrid leak detection techniques combining two or more different approaches or techniques mentioned above;
- Development and application of various Methane detection sensors like optical sensors, calorimetric sensors, pyroelectric sensors, semiconducting oxide sensors, and electrochemical sensors and so on;
- Development of sensor-based automatic/semi-automatic gas leakage detector;
- Natural Gas T&D grid modernization by computer intelligence and IoT;

Award Information:

The maximum funding amount and maximum duration for each project are listed below:

Program Solicitation	Maximum Project Duration	Maximum award amount Per Research Project
Loss reduction in natural gas transmission and distribution system including leakage detection and monitoring	3 Years	BDT 4,00,00,000

BEPRC reserves the right to:

- Increase or decrease the duration and maximum award amount mentioned above.

Key Activities Schedule:

Key activities, dates and times for this solicitation and agreements resulting from this solicitation are presented below. An addendum will be released for any kind of amendment:

ACTIVITY	DATE
Solicitation Release	June 7, 2023
Deadline to Submit Applications	No hard deadline
Anticipated Notice of Award (NOA) Posting Date	One month after Govt. approval
Anticipated Grant Agreement Start Date	15 days after receiving NOA

Eligibility Information:

Who May Submit Proposals:

The categories of proposers eligible to submit proposals to BEPRC are described in the *BEPRC Grants Proposal Innovation Guideline*.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI: 1

An individual may be listed as PI, co-PI, and/or senior personnel in a single proposal under this solicitation area. Listing of an individual in multiple proposals under the same solicitation area and/or ongoing BEPRC funded projects will result in rejection of the proposal.

Proposal Preparation and Submission Instruction:

Full Proposal:

- Proposer must submit a full proposal via BEPRC’s online portal: (<http://researchgrant.eprc.gov.bd>)
- *BEPRC Grants Proposal Innovation Guideline* will be applicable. The complete text of the mentioned guideline is available at: (<http://researchgrant.eprc.gov.bd>)

Collaborative Proposal:

- Proposers from two or more organizations may collaborate on a unified research project and submit the applied research projects under this solicitation. The PI must be a residential Bangladeshi.

Engaging Industry:

- Industrial engagement in cash or kind is highly encouraged for applied research projects submitted under this solicitation.

Proposal Evaluation and Award Information:

BEPRC Grants Proposal Innovation Guideline applies. The complete text of the mentioned guideline is available at: (<http://researchgrant.eprc.gov.bd>)

Inquiries:

Following officials may be contacted in case of any query:

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