



Proposal Deadline: December 1, 2024
Proposal Funding Level - \$65,000 - \$75,000

Evaluation of Research Proposals (RP)

The NAFA Foundation Board, and additional reviewers as needed, will perform an initial evaluation of the proposals using the RP Review Form (below) to determine whether or not it should be considered for funding by the NAFA Foundation:

- a. **Innovation**: Is the proposed research innovative in concept and application?
- b. **Distinctiveness**: Does the proposed research involve unique approach, skills, equipment which otherwise are not available to any other researchers?
- c. **New Research Topic**: Is this a new subject of research?
- d. **Co-Funding**: Is significant co-funding or cost sharing available for the proposed research?

AT LEAST ONE QUESTION ABOVE MUST BE ANSWERED "YES".

Following approval and contract finalization, the NAFA Foundation will establish a Project Monitoring Committee (PMC) to oversee the progress of the project and to approve the final report.

RP Review Form used by the NAFA Foundation and Co-Reviewers

Project ID		
Project Title		
Principal Investigator (PI)		
Cost / Duration		
Classification: Research or Technology Transfer		
Check List Criteria	VOTED NO	Comments & Suggestions
Innovation: Is the proposed research innovative in concept and application?		
Distinctiveness: Does the proposed research involve unique approach, skills equipment which otherwise are not available to any other researchers?		
New Research Topic: In this a new subject of research?		
Co-funding: Is significant co-funding or cost sharing available for the proposed research?		
AT LEAST ONE "YES" VOTE ABOVE IS REQUIRED TO QUALIFY FOR FURTHER CONSIDERATION. IF THERE IS NOT AT LEAST ONE "YES" VOTE ABOVE, MARK "REJECT" BELOW		
State-of-the-Art (Background): The proposal should include some level of literature review that documents the importance / magnitude of a problem.		
Advancement to the State-of-the-Art: Is there enough justification for the need of the proposed research? Will this research significantly contribute to the advancement of the State-of-the Art?		
Relevance and Benefits to NAFA: Evaluate whether relevance and benefits are clearly explained in terms of: a. Leading to innovations in the field of Air Filtration b. Valuable addition to the missing information which will lead to new design guidelines and valuable modifications to handbooks and standards. c. Is this research topic appropriate for NAFA Foundation funding? If not, Reject.		
Proposed Project description Correct? Are there technical errors and/or technical omissions that the WS has that prevents it from correctly describing the project? If there are, then reject the proposal		
Task Breakdown Reasonable? Is the project divided into tasks that make technical and practical sense? Are the results of each task such that the results of the former naturally flow into the latter? If not, then reject the proposal.		
Adequate Intermediate Deliverables & Critical Project Milestones Identified? The project should include the review of intermediate results by the PMC at logical milestone points during the project. Before project work continues, the PMC must approve the intermediate results.		
Proposed Project Doable? Can the project as described in the proposal be accomplished? If difficulties exist in the proposal that prevent a successful conclusion of the project, then the project is not doable. In this situation, reject the proposal		
Time and Cost Estimate Reasonable? The time duration and total cost of the project should be reasonable so that the project can be as it is described in the proposal.		
PI Qualifications: Is PI adequately qualified to successfully complete the proposed research? Does PI have enough resources and access to suitable laboratory and equipment to perform the research? If not, then reject the proposal.		
Decision Options	Decision	Approval Conditions
ACCEPT		
REJECT		

Guidelines for Unsolicited Research Proposals

These are proposals, which are developed and planned by a researcher and then presented to the NAFA Foundation in response for a Request for Quotes, for full or partial funding. The RP should not exceed 5 pages and should include the following information.

1. Title
2. Executive Summary
100 word statement that could be used to succinctly summarize the current state-of-the-art, the advancement this project is expected to accomplish, and its value to NAFA and the filtration community.
3. Application of Results
Explain how the results of the proposed project will be disseminated to HVAC&R industry and Association in general. What are the practical benefits expected from this research?
4. State-of-the-Art (Background)
Description of the amount and quality of past research, and quantify existing gaps.
5. Advancement of the State-of-the-Art
Explain the improvement/impact expected from this research and explain why this information is needed by the public or by industry.
6. Justification
State the likelihood and how the improvement would be adopted by industry.
7. Objectives - A paragraph describing what this RP intends to accomplish.
Explanation of project's goals and how this project will accomplish its intended advancement to the state-of-the-art.
8. Scope/Technical Approach
Provide a complete description of technical approach and task statement. Describe the parameters of the research project, including such items as: subject matter to be explored; materials, equipment, literature or other variables to be researched; materials, equipment, etc. to be excluded from the project; outline the research methods to be used; description of the standards to be followed; discussion of how the data is to be reduced, analyzed and presented; description of the format for the reported results; if appropriate, describe project phases.

It is important for the scope of a research project to be broken down into tasks or phases, where a task will yield results of interest to NAFA and the PMC, or where the results of a task will significantly define how subsequent tasks will be carried out. Make sure that the project objectives are reflected in the tasks. The RP should specify deliverables corresponding to these tasks in the "Deliverables" section to facilitate project monitoring by the PMC.

9. Deliverables

Progress, Financial and Final Reports, Research or Technical Paper(s), and Data shall constitute the only deliverables (“Deliverables”) under this Agreement and shall be provided as follows:

a. *Progress and Financial Reports*

Progress and Financial Reports shall be made to the Foundation at biannual intervals; specifically on or before each of the Technical and Annual Convention Meetings.

Furthermore, the Institution’s Principal Investigator, subject to the Foundation’s approval, shall, during the period of performance and after the Final Report has been submitted, report in person or Virtually at the Annual and Technical meetings, and be available to answer such questions regarding the research as may arise.

b. *Final Report*

A written report, design guide, or manual, collectively, shall be prepared containing complete details of all research carried out under this Agreement.

The Final Report shall include an Executive Summary of approximately 800 words that includes the need that initiated the project, a brief description of the technical approach, the results and how the results will benefit the industry and/or the public.

Following approval by the PMC and the NAFA Foundation Board, in their sole discretion, final copies of the Final Report will be furnished by the Institution as follows:

- An executive summary in a form suitable for wide distribution to the industry and to the public.
- Two copies; one in PDF format and one in Microsoft Word.

c. *Data*

The Institution agrees to maintain true and complete books and records, including but not limited to notebooks, reports, charts, graphs, analyses, computer programs, visual representations etc., (collectively, the “Data”), generated in connection with the Services. Association representatives shall have access to all such Data for examination and review at reasonable times. The Data shall be held in strict confidence by the Institution and shall not be released to third parties without prior authorization from the Association. This restriction will be in effect for a period of one year after which time the Data shall be “open source” and freely available to all parties. The original Data shall be kept on file by the Institution for a period of two years after receipt of the final payment and upon request the Institution will make a copy available to the Association upon the Association’s request.

d. *Project Synopsis*

In addition to the approximately 800 word summary in the final report, Contractor will prepare a written synopsis totaling approximately 100 words in length and written for a broad technical audience. The synopsis shall document 1. Main findings of research project, 2. Why findings are significant, and 3. How the findings benefit NAFA membership.

NAFA may also request the Institution submit a technical article suitable for publication in NAFA’s Air Media magazine. This is considered a voluntary submission and not a Deliverable. Technical articles shall be prepared using dual units; e.g., rational inch-pound with equivalent SI units shown parenthetically. SI usage shall be in accordance with IEEE/ASTM Standard SI-10.

(The above deliverables are necessary, but not sufficient, to monitor a research project. The PMC have the responsibility to review the contractor’s on-going activities and intermediate results, to ensure that the methods used and results obtained will be valid and well-enough substantiated to be labeled as “NAFA-approved findings.” Proper oversight cannot wait until the final report, when most of the budget has already been expended.

Therefore, each major task or phase of the research method outlined in the Scope should also be linked to a deliverable report, memorandum, or summary. These in-progress deliverables should not add to the cost of the project, as they will most likely become chapters of the final report. Examples of deliverables that could be required during the project include:

- If one task is a literature review, then the deliverable could be an annotated list of references and conclusions/summary of the current state of the art.
- If the contractor must propose specific sites (e.g., buildings), experiment topologies (e.g., duct configurations), materials (e.g., appliances, insulation or building materials), experiment protocols, and/or instrumentation, then short memos describing those proposed methods, materials, etc. should be deliverables to be reviewed and approved by the PMC before moving on to the next research task.
- If analysis of preliminary data or results will decide how to proceed (e.g., CFD models of 12 duct configurations will be used to select 2 duct configurations to be built and subjected to wind tunnel tests), then the contractor should write up the results of the initial analysis, recommend the areas for additional detailed investigation, and justify those recommendations.

In short, the technical approach for a research project should be broken down into tasks or phases, and where a task will yield results of interest to NAFA and the PMC, or where the results of a task will significantly define how subsequent tasks will be carried out. The RP should specify such intermediate deliverables for the PMC to review. This approach will make it easier for the PMC to gauge progress and technical merit of on-going NAFA research projects and will provide a framework for the Foundation to provide technical oversight and assistance to identify and correct problems as they occur.)

10. Schedule
Provide a description of Critical Project Milestones and the likely month of completion based upon project's duration. List for example major project intermediate deliverables such as a completed literature review or the availability of initial test results or major project events such as the completion of the test fixture or access granted to field site as a critical project milestone that could have a significant negative impact on the overall project if missed or significantly increase the risk that the project will fail and in what month it is likely to expect completion of the critical project milestone based upon the contractor's estimated duration of the project.
11. Costs
Detail breakdown of expenses into categories and itemized list of equipment, travel, subcontracts, and other direct expenses; Timing of expenditures; Description of cost sharing of proposing organization or others.
12. Personnel
Education, experience and expertise of researchers qualifies them to perform the work.
13. References
List references cited in the proposal.

A copy of the RP, containing a completed "Application for Grant of Funds" form, should be submitted to the Executive Director of NAFA, who will then distribute it to the appropriate research liaison for review and evaluation.

The deadline to submit a proposal to be considered is **December 1, 2024**. The results of the reviewing committees' actions will be made known to all proposers immediately following review and no later than February 28, 2025. Fieldwork should commence no later than April 1.

Proposals should be submitted to:

Emily Bardach, CAE, CNAP
Executive Director
ebardach@nafahq.org

RESEARCH PROPOSAL (RP) DISCLOSURE ACKNOWLEDGEMENT

1. NAFA recognizes the need to encourage innovative research proposals which address the needs of NAFA members and the Association in general. In order to be considered for funding, RPs should fall within the general research goals of the air filtration industry.
2. RPs will be accepted only with the understanding that they are non-confidential, although every attempt will be made to respect the proprietary nature of the proposal. This non-confidentiality will permit, if need be, a modification of the RP.
3. If the RP is considered for funding, then the NAFA Foundation will be responsible for managing the evaluation process.
4. Research proposals will only be accepted by the Foundation upon receipt of a signed acknowledgment of this Procedure.

I have read and understand the above policy on disclosure of Research Proposals (RPs) submitted to NAFA.

Signed: _____
Principal Investigator

Date: _____

Printed Name and Title: _____

Signed: _____
Authorized Representative of Proposing Institution

Date: _____

Printed Name and Title:

Institution (if applicable): _____

Title of Proposal:

NAFA Foundation APPLICATION FOR GRANT OF FUNDS
(to be completed by Applicant)

- 1.0 Title: _____
- 2.0 Principal Investigator (PI): _____
- 3.0 Name of Contracting Institution: _____
Mailing Address of P.I.: _____
E-mail address of P.I.: _____
Phone No. of P.I.: _____
Other Key Personnel: _____
- 4.0 Any subcontractors: _____
- 5.0 Objective & Scope:* _____
- 6.0 Project Start Date: _____ Total Project Length: _____
- 7.0 Total Cost: US\$ _____ Foundation Funding Requested: US\$ _____
- 8.0 Details of Financial Support:
- | | | |
|---------------------------------------|----------|----------------------------|
| a) Professional Salaries | \$ _____ | Total Person Months _____ |
| b) Research Assistants | \$ _____ | P.I. Months or hours _____ |
| c) Fringe Benefits (%) | \$ _____ | |
| d) Supplies & Materials | \$ _____ | |
| e) Travel | \$ _____ | |
| f) Other | \$ _____ | |
| g) Total Direct Costs | \$ _____ | |
| h) Indirect Costs (not to exceed 20%) | \$ _____ | |
| i) TOTAL | \$ _____ | |
- 9.0 Qualifications of Principal Investigator: _____
- 10.0 Signature of Project Manager or P.I.: _____
Title: _____ Date: _____
Signature of Executive Officer of Institution: _____
Title: _____ Date: _____

Key personnel were () were not () involved in writing the NAFA request for proposal for this project.

* All sections must be completed. Use of terms such as "See Attached Proposal" may result in rejection of proposal.

ADDITIONAL INFORMATION FOR CONTRACTORS

In preparing a response to this request for proposal, contractors should be aware of, and be agreeable to, the following NAFA Foundation policies, procedures, traditions and contractual requirements. Costs for meeting these should be considered when preparing research proposal budgets.

By submitting a proposal, the Principal Investigator is acknowledging he/she understands and agrees to comply with the policies listed below. The inability or unwillingness to comply should be pointed out in the transmittal letter accompanying any proposal or should result in no proposal being submitted.

1. It is the practice of the NAFA Foundation to use fixed price contracts for research projects. Unlike some other government or foundation research sponsors, the NAFA Foundation generally does not approve cost extensions nor accept scope reductions except in the most unusual of cases. Such cases reflect unfavorably on the contractor with regard to future work.
2. All fiscal values should be stated in US dollars.
3. Twenty five percent of the contracted sum will be withheld pending completion of the work. Fifteen percent will be paid upon submission of the final report. Thirty percent of the contracted sum will be paid on contract initiation. The remaining thirty percent will be paid in equal quarterly progress payments.

30%	Upon contract initiation
30%	Equal quarterly progress reports
15%	Submission of final report
25%	Completion of work

4. The winning bidder is required to meet with the PMC virtually at the start of the project to review the project's scope. The results of this meeting shall be summarized by the contractor in the first progress report.
5. During the period of the contract the Principal Investigator is expected to personally attend the NAFA Annual Convention and Technical Seminar and report on the progress of the project.
6. A Final Paper shall be prepared in a form suitable for presentation at an Association meeting and the author should be prepared to attend such a meeting to make the presentation. This paper should be submitted for peer-reviewed journal publication.

All Deliverables under this Agreement and voluntary technical articles shall be prepared using dual units; e.g., rational inch-pound with equivalent SI units shown parenthetically. SI usage shall be in accordance with IEEE/ASTM Standard SI-10.

7. NAFA, in return for their financial support, expects that the sponsored research will be reported first at a NAFA meeting and in a NAFA publication.
The Principal Investigator should be willing to wait for this to take place before presenting the work elsewhere.
8. Any patentable inventions or copy written computer programs developed as a result of this research shall be made available to NAFA in recognition of their financial support of the work.
9. One section of the final report will be entitled "Utilization" and will state:
 - a. Aspects of the research confirming present knowledge or extending present knowledge.
 - b. Suggestions for further research identified through that completed.
10. The signed original of this document should be enclosed with the proposal's letter of transmittal. Multiple copies are not desired.

The above conditions are acceptable:

Principal Investigator (date)

Institution Authority (date)