

Integrated Petroleum Environmental Consortium (IPEC)

Guidelines for Preparation of Technical Proposals

Introduction and Criteria for Evaluation

The Integrated Petroleum Environmental Consortium (IPEC) is an environmental consortium of The University of Oklahoma, The University of Tulsa, Oklahoma State University and The University of Arkansas at Fayetteville. IPEC is funded by the U.S. Environmental Protection Agency as an EPA Research Center. The mission of IPEC is to increase the competitiveness of the domestic petroleum industry through a reduction in the cost of compliance with U.S. environmental regulations

Your pre-proposal has been reviewed by the IPEC Industrial Advisory Board (IAB) and the project you have proposed was found by the IAB to be relevant to IPEC's mission. You are now invited to submit a technical proposal to be evaluated by IPEC's Science Advisory Committee (SAC). The SAC consists of a panel of highly-qualified research scientists and engineers from academia, industry and national laboratories. The SAC reviews all technical proposals to ensure that the scientific quality of IPEC funded research meets EPA standards. Final decisions for funding will be made by the IPEC Executive Committee based on SAC input, satisfactory response by the principal investigator to any SAC suggestions, availability of funds, availability of sufficient matching funds, acceptance of the project QA/QC plan by the IPEC Quality Assurance Officer, acceptance of the health and safety plan by the IPEC Safety Assurance Officer. Please note that in addition to scientific quality the following criteria are also considered **critical to a successful proposal**:

- 1) Priority will be given to solving environmental problems with the **greatest economic impact on the domestic petroleum industry**.
- 2) Where appropriate an up-front, **best-case economic analysis** of any proposed technology and an analysis of any regulatory adjustments which would be required to allow industry to utilize the technology must be provided and demonstrate economic viability.
- 3) Special emphasis will be placed on technology development projects that can be brought to a **field testing stage in 3-5 years or less**.
- 4) IPEC strongly recommends an **integrated team approach** to technology development and where appropriate to the development of improved business practices. The teams should not only be integrated with respect to scientific or engineering discipline but also integrated with respect to the technology development process itself. In other words the teams should also consist of members whose expertise is in **scale-up and commercialization** of new technology. If the work product of the team is to make a significant impact in the domestic petroleum industry **the most important member of the team will be the end user of the technology**. A teaming of investigators from different disciplines and representing different levels of the technology development

process will greatly facilitate communication among the investigators and keep the team focused on solving the problem. **The end user of the technology should also be heavily involved in technology development as an advisor and hands-on participant.** As an investment in future technology development, undergraduate and graduate students should be integrated into every aspect of the work consortium sponsored projects.

5) IPEC strongly encourages that all technology development projects have inter-university participation within the IPEC institutions.

6) IPEC's funding has a significant requirement for **matching funds from nonfederal sources.** Although there are no specific requirements for a minimum amount of matching funds on any given proposal, overall IPEC must achieve a 1:1 match of EPA funds. Therefore, nonfederal matching funds are an important criterion for funding. However, **matching can be in the form of appropriate in-kind services.**

Instructions for Preparation of Proposals

IPEC requires no specific forms to be used at this stage. However, please adhere closely to the guidelines given below (especially page limitations) and use a 12 point type, single spaced with appropriate headings and subheadings. It is our desire to have your proposal evaluated by the SAC and ready for funding as soon as possible. Therefore, 11 copies of your proposals must be sent to the Consortium Director at the address below by _____ Please feel free to contact the Director with any questions about this process.

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Proposal Outline:

Items 1-4 are limited to one page total.

1. Title

2. Investigators and Affiliations

3. Nonfederal Financial Participants

4. Abstract

5. Introduction and Background *(limited to five pages)*

Describe the background of the proposal, evaluate existing knowledge in this area, and identify the gaps this project intends to fill. Provide a sufficient review of the literature with citations to allow a technical reader to evaluate the contribution your work will make to the state-of-the-art. State the importance of this research by relating its aims to longer-term objectives. Describe any prior research by the investigators that led to formulating the proposal.

6. Statement of Goals and Objectives *(limited to one page)*

State concisely what the research described in the proposal is intended to accomplish or what hypothesis is to be tested.

7. Environmental Significance *(limited to one page)*

Briefly discuss the significance of the environmental problem(s) addressed by this proposal in terms of risks to human health or environmental receptors.

8. Industrial and Economic Relevance *(limited to two pages)*

Briefly discuss the impact of the problems addressed by this project on the competitiveness of the domestic petroleum industry. How will the results of this project help alleviate the economic challenges of environmental regulations in this industry.

9. Economic and Regulatory Analysis *(limited to two pages)*

Where appropriate IPEC proposals are required to provide a best-case economic analysis for application of any proposed technology. Please provide sufficient information to show that use of any proposed technology is economically viable. In addition, where appropriate, IPEC proposals are required to provide an analysis of any regulatory adjustments which would be required to allow the domestic petroleum industry to utilize proposed technology.

10. Project Plan, Experimental Approach, and Expected Results *(limited to ten pages)*

Carefully detail the research design and the procedures to accomplish the objectives of this project. Describe the tentative sequence of the investigation within a calendar framework. **Provide project milestones.** Describe the means by which data will be analyzed and interpreted. Discuss the methodologies and any potential limitations of the proposed procedures and alternative approaches that may be used to reach the objectives of the proposal.

11. QA/QC Plan *(limited to one page)*

Assuring the quality of environmentally related measurements is a critical factor in assessing the quality of the results of environmental research. It is through appropriate Quality Assurance (QA) and Quality Control (QC) practices that confidence in the validity of data generated from these measurements is achieved. Each principal investigator for an IPEC funded project must address the particular needs for QA/QC in a

project specific QA/QC plan. The project QA/QC plan will describe the parameters to be studied, experimental design features, sampling protocol, QA objectives, analytical procedures, data reduction, validation and reporting, internal QC checks, and a plan for corrective action when necessary. The specific characteristics and requirements of such a plan will be provided to you by the IPEC Quality Assurance Officer if your proposal is approved for funding by the SAC. Each project QA/QC plan will be reviewed and approved by the IPEC Quality Assurance Officer before the project is funded and experimental work can begin. In this section describe the basic elements of a QA/QC plan specific to your proposed project. This section will serve as a starting point for discussion with the IPEC Quality Assurance Officer if your proposal is successful.

12. Health and Safety Plan *(limited to one page)*

Submit here a brief health and safety plan that details the particular needs of your proposed project. This plan will be reviewed by the IPEC Safety Assurance Officer and approved or revised as necessary by the principal investigator prior to the initiation of work. The IPEC Safety Assurance Officer will communicate the Health and Safety plans for IPEC funded projects to the appropriate Health and Safety Office at institutions where work will be performed.

13. Literature Cited *(page length as required)*

14. Budget, Justification, and Matching Funds *(limited to three pages)*

Give sufficient detail in the budget to allow a reviewer to evaluate the allocation of funds including costs related to personnel, fringe benefits, supplies, equipment, travel, and indirect costs. Describe the source and nature of nonfederal matching funds to be used in this project. It is anticipated that most projects will be funded for less than \$100,000; however, proposals for larger amounts of funding will be considered. Projects will be funded on a year by year basis. Multi-year projects must re-compete for funding each year.

15. Vitae

Provide one page vita for each investigator including sufficient information to allow a reviewer to evaluate the qualifications of the investigators to carry out the proposed project.