



Indiana Coal Technology Research Request for Proposals

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**CENTER FOR COAL TECHNOLOGY RESEARCH, CCTR
PURDUE UNIVERSITY**

**F.T. Sparrow, R.L. Rardin
Brian H. Bowen, Zuwei Yu**

**Black Beauty Farmersburg Mine
Terre Haute, Indiana**

CCTR OBJECTIVE

According to Section 5 of Senate Bill 29,
the main objective of the CCTR is to:

“Develop technologies that can use Indiana coal in an environmentally and economically sound manner.....”

As the initial step towards this objective,
the CCTR is soliciting proposals for scoping studies.

AUGUST 2004 WORKSHOP

August 18, 2004, CCTR Workshop in Indianapolis.

This workshop was attended by CCTR Advisory Panel members and representatives from government, industry, academia, environmental and public interest groups.

Further information on the workshop, and the two papers dealing with aspects of Indiana coal demand and supply presented at the workshop, are available on the CCTR website:

<http://engineering.purdue.edu/IE/Research/PEMRG/CCTR/>

CCTR FUNDING

CCTR current resources are only sufficient to support the scoping studies themselves, not the research plans to be developed by the studies.

However, by the time the scoping studies are complete, CCTR hopes to have obtained sufficient resources from a combination of state, private and federal funding sources to be able to fund the majority of the research plans described in the scoping studies at a realistic level.

CCTR RESEARCH PROGRAM

While the CCTR's research program will eventually be technology and science oriented, the scoping studies funded by this Request for Proposals will have to include consideration of the policy and legislative aspects of the topics, since they play a decisive role in determining the research plans of any of the topics listed.

PROJECT GOALS 1

- (1) Justify the importance of the research topic area to the use of Indiana coal.**
- (2) Identify previous studies related to the research topic area, and evaluate them as to their relevance to the topic**
- (3) Using this evaluation as a starting point, identify policy, scientific and technical barriers related to the project that impede Indiana coal use.**

PROJECT GOALS 2

- (4) Describe a comprehensive and complete research plan to overcome there barriers with milestones and deliverables for the plan.**
- (5) Estimate the kind and amount of resources needed to carry this research plan to its successful conclusion.**
- (6) Identify potential sources of external funds that could be used to match CCTR resources in undertaking the project.**



PROJECT REQUIREMENTS

- IMPORTANCE & JUSTIFICATION
- MAJOR TASKS & ISSUES
- PROJECT DELIVERABLES
- PROJECT TIMELINE
- PROJECT RESOURCES
- ELIGIBILITY
- TEXT & BIOS
- LETTERS OF COMMITMENT
- DUE DATE & SUBMISSION
- REVIEW CRITERIA
- TIME & TYPE OF AWARD
- QUESTIONS ON PROJECTS

IMPORTANCE & JUSTIFICATION OF EACH PROPOSAL

Although the CCTR Advisory Panel has spelled out the importance and justification of the listed research topic areas, they are not to be considered as definitive and final.

The submitter is encouraged to expand on the importance of what is being proposed to the objectives of the CCTR.

MAJOR TASKS & ISSUES

Each proposal must include descriptions of the major study tasks, the sequencing of these tasks, and the methods expected to be used to accomplish the tasks.

PROJECT DELIVERABLES

- (1) Researchers will be required to provide a final report detailing the results of the project. (Brief outlines of the tentative expected results from each project are given).
- (2) This final report should identify, describe, and discuss the important research and critical application tasks that will be conducted with future and more substantial funding.
- (3) Estimates of resources and funding for the each proposed research task should be determined and included in the report.
- (4) The final report from each study must be submitted within 30 days after project termination, and partial payment will be withheld until the report is accepted by CCTR.

PROJECT TIMELINE

The duration of each project is expected to be no more than nine months. Each proposal must provide detailed timelines for the tasks to be finished and issues to be resolved. Milestones and critical checkpoints should also be included.

PROJECT RESOURCES

CCTR will allocate between \$20,000 and \$30,000 for each selected scoping study, depending on the topic's importance, and resource availability.

CCTR would expect to fund topics 1, 2, 3, 5, 6, and 10, at the \$30,000 level, and topics 4, 7, 8, 9, 11, and 12 at the \$20,000 level. The funds are to cover researchers' salary, necessary travel and minor office expenses.

Organizations are encouraged to cost share, and overhead (indirect cost) sharing is expected. The extent of organizational cost sharing will be one of the criteria to be used in proposal selection.

Each proposal must provide a detailed budget.

ELIGIBILITY

- All organizations are eligible to submit proposals. However, preference will be given to Indiana researchers and/or those who have strong partnerships with Indiana researchers and Indiana coal related stakeholders.
- Each proposal must present a plan involving significant collaboration with potential users of the results from the project. Letters of commitment from potential collaborators, including pledges of in kind and other support are required. Depending on the research topic area addressed, potential users of the research could be utilities, companies, local or state governments, federal agencies, public interest groups, or other organizations with interests in the project results.
- No one is allowed to be a principal investigator (PI) for more than one proposal. However, he/she may be a participant in other proposals.

TEXT & BIOS

Each proposal must have a title not exceeding two lines with keywords closely reflecting the topic/subject of the proposal. Each proposal is expected not to exceed 10 pages excluding references and biographical information. The text font size is 12, single spaced, with a one inch margin on all sides. The final version submitted to CCTR must be in PDF format.

Each organization must provide a resume for each of the principal investigators, including name, organization affiliation, email, phone, fax, mail address, professional experience, and publications. Each resume should include a short statement describing the relevance of the investigator's prior experience to the research topic area, and each should not exceed two pages in length.

LETTERS OF COMMITMENT

Each organization is expected to provide an institutional letter of commitment assuring the CCTR that if their organization is selected, the resources described in the proposal will be available in the timeframe specified, and that the work will be completed within the time allotted for the project.

DUE DATE & SUBMISSION

- Proposals must be received by the CCTR on or before Monday, December 6, 2004.
- Proposals submitted past this date will not be considered.
- Proposals are accepted only in electronic form submitted through the CCTR email system. The submission address is: cctr@ecn.purdue.edu.

REVIEW CRITERIA 1

- (1) Scientific Merit** – Is the research plan based on sound principles and demonstrated knowledge of the current state of the art?
- (2) Planning Adequacy** – Is there evidence of a sound management plan in the proposal for the project?
- (3) Involvement** of potential users of the research – Have letters of commitment been received from identified users, and have they been involved in the preparation of the proposal?

REVIEW CRITERIA 2

- (4) Significance** of the project to the stated goal of the CCTR – Is it clear that if the program spelled out in the project is carried out, the result will be to develop technologies that can “use Indiana coals in an environmentally friendly and economically sound manner”?
- (5) Cost Sharing** - What is the extent of the cost sharing that is being proposed?
- (6) Prior experience** of the Investigators – Do the investigators have a demonstrated record of achievement in the area of the investigation?

TIME & TYPE OF AWARD

All proposers will be notified of the Advisory Board's decisions early in 2005. The projects can start once the funding is in place and awards are made.

A contractual agreement will be signed between the CCTR and each successful submitter.

QUESTIONS ON PROJECTS

- Questions will be accepted by email (cctr@ecn.purdue.edu).
- Questions and answers to the questions will be posted in the CCTR website (<http://engineering.purdue.edu/IE/Research/PEMRG/CCTR>).
- No telephone inquiries are accepted.

PROJECT 1

Advantages of Using Indiana Coals in Clean Coal Technologies

Ranked as **1st choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 2

Indiana's Participation in the “Clean Coal Revolution”

Ranked as **1st choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 3

Key Issues that Encourage or Inhibit the Increased Use of Indiana Coal

Ranked as **2nd choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 4

Coal Combustion

By-Products (CCB)

Technology, Use, Incentives

Ranked as **3rd choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 5

Modeling the Costs of Retrofitting Existing Indiana Coal-Fired Power Plants for Compliance with Environmental Regulation

Ranked as **5th choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 6

The Impact of Likely Mercury Legislation on the Competitiveness of Indiana Coals

Ranked as **8th choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 7

Coal Use and the Environment: Issues including Health Issues, Ash Disposal, and Long-Term Effects of Coal Combustion By-Products

Ranked as 4th choice from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 8

Establishing a Reliable and Comprehensive, Web-based, Statewide Database of Indiana Coal Characteristics in Collaboration with Indiana's Coal Mining Companies and Utilities

Ranked as 7th choice from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 9

Increasing the Use of Indiana Coals by the Indiana Iron and Steel Industry

Ranked as **10th choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 10

Capacity to Expand and Improve Efficiency of Indiana Coal Mining and Production

Ranked as **12th choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 11

Vision, Marketing Strategy and Public Education Programs for Promoting the Use of Indiana Coals across the State and Out- of-State

Ranked as **10th choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 12

A Comparative Modal Study of the Indiana Coal Transportation Infrastructure

Ranked as **13th choice** from among the 16 projects listed on the sent-out questionnaire after the August 18 Workshop

PROJECT 13

Other Appropriate Combinations of Issues in Topics (1) Through (12)