

CENTER FOR COAL TECHNOLOGY RESEARCH

FUNDING APPLICATION

**The Energy Center at Discovery Park
500 Central Drive, Suite 270
PURDUE UNIVERSITY
West Lafayette, IN 47907-2022**

Last Update: February 12, 2007

A. Synopsis

The Indiana Center for Coal Technology Research (CCTR) was established by the Indiana legislature in 2002 (Senate Bill 29) and is located at Purdue University. According to Sec. 5 of the Bill, the CCTR is to perform the following primary duty:

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

In 2003, the Indiana House passed an amendment (1166) to Senate Bill 29, granting the CCTR the authority to “Administer the Indiana coal research grant fund under IC 4-23-5.5-16.”

To fulfill the duties prescribed in the above, the CCTR is soliciting coal technology proposals on the topics as detailed on the CCTR website. These topics have been identified as critically important to future Indiana coal use.

The CCTR normally expects to give favorable consideration to providing further support to a topic after being successfully provided with an initial scoping study award. Ranges of awards are listed below in the groupings shown:

- **GROUP I Technology Designs & Demonstration Projects**
 > \$250 k; 24 months duration or more
- **GROUP II Long-Term Development Projects**
 \$100 k - \$250 k; 12 - 24 months
- **GROUP III Industrial & Commercial Application Projects**
 \$30 k - \$100 k; 9 – 18 months
- **GROUP IV Scoping Studies**
 \$25 k - \$30 k; 6 – 9 months

B. Goals

The goals of each coal technology project (Group I, II, III, or IV) are:

- To frame and develop a substantial development project that will target issues relating to increased Indiana coal use.
- To initiate substantial development work identified during the process of carrying out an earlier scoping study which was funded by the CCTR, or by another process that targeted issues relating to the production, processing and use of Indiana coal.
- To encourage original ideas with commercial potential relating to Indiana coal technology development (including unsolicited proposals) to be submitted to the CCTR in the procedure outlined.

With new topics the CCTR and its Advisory Panel prefer a preliminary scoping study to be conducted through an initial Group IV award. This is the preferred procedure for identifying a new coal technology development topic before embarking on a full-scale program (Groups I, II, and III) aimed at new technology designs, demonstration projects, long-term development and proving industrial and commercial applications. Direct funding, however, of new projects without

conducting an earlier scoping study will also be considered in special circumstances where outstanding work in the proposed topic has been demonstrated by the principle investigator(s).

- (1) The scoping studies (Group IV) will be expected to:
 - (a) Justify the importance of the project to increasing Indiana coal use
 - (b) Identify previous studies related to the project, and evaluate them as to their relevance
 - (c) Use this evaluation as a starting point, identify policy, scientific and technical barriers related to the project that impede increased and improved Indiana coal use
 - (d) Estimate the kind and amount of resources needed to carry out the technology development project to its successful conclusion
 - (e) Describe a technology development plan with milestones and deliverables for the project
 - (f) Identify potential sources of external funds that could be used to match CCTR resources in undertaking a fuller version of the project
- (2) Projects in Group III will be expected to:
 - (a) Satisfy all of the expectations for the scoping studies as listed in (1) above
 - (b) Provide test results, publication lists and documentary evidence that the level of funding being requested is justifiable
 - (c) Include evidence of at least one committed industrial or commercial partner
 - (d) Indicate sources of matching funds and cost sharing (important selection criteria)
- (3) Projects in Groups I and II will be expected to:
 - (a) Satisfy all of the requirements in (1) and (2) above
 - (b) Include evidence of substantial industrial or commercial partners
 - (c) Provide a statement of the level of matching funds or cost sharing

C. Requirements of Proposal

Each proposal will address one of the current topics as detailed on the CCTR website. Other unsolicited topics will also be considered. Each proposal submission will include the following:

1. *Expand on the importance and justification of each proposal*

Even though the Advisory Panel and the CCTR staff sketched the importance and justification of the topics, they are not to be considered “definitive.” The CCTR will consider alternative strategies for investigating the topics listed. Submitter(s) are encouraged to elaborate the importance and justification of their proposed approach to the technology development topic.

2. *Major tasks and issues*

The proposal must include major tasks and/or important issues of the project. It must also include steps and methods to accomplish the tasks.

3. *Deliverables*

From the approved proposals, investigators will be obligated to provide an interim report and a final report for a scoping study detailing the initial results of the study. The projects in Groups I, II and III will provide quarterly reports and a final report. The results expected for each topic are elaborated in more detail on the website. Presentations will be required to be given at mutually agreed upon quarterly CCTR Advisory Panel meetings. Successful PIs should note the dates of these meetings (listed on the website).

4. *Timeline*

The typical duration of each project is indicated in Section A above as relating to each grouping. 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.

5. *Resources*

CCTR will allocate a maximum of \$30,000 for each scoping study, a maximum of \$100,000 for each industrial and commercial application project, and a maximum of \$250,000 for long-term development projects once approved. The technology development funding is to cover investigator's salary, consultant's fees, equipment costs, travel expenses, graduate student support, and minor office expenses. Investigators are encouraged to cost share at least the overhead and the fees that would normally apply. Each proposal must provide a budget detailing proposed spending.

6. *Eligibility*

All qualified investigators are eligible to submit proposals or as specified on the CCTR website. However, preference will be given to Indiana investigators and to those who at least have a partnership with Indiana entities.

Each proposal must present a plan for significant collaboration with potential users of the results both in the preparation and the execution of the work plan described. Letters of commitment from potential collaborators, which could include pledges of in kind and other support, are required. Depending on the topic addressed, potential users of the technology development findings could be utilities, companies, local, state, and federal agencies, public interest groups, or other organizations with an interest in the results.

No person is allowed to be a principal investigator (PI) for more than one proposal. However, he/she may be a participant in multiple proposals.

7. *Text*

Each proposal must have:

- A title not exceeding 100 characters with keywords closely reflecting the topic of the proposal
- Maximum of 10 pages for Group IV scoping studies, 20 pages for Group III, and 30 pages for Groups II and I, excluding references and biographical information
- A text font size of 12, with single spacing, and with a one inch margin on all sides
- The final version submitted to CCTR in WORD format.

8. *Biographical information*

Each person should include a brief biographical sketch of each participant, including name, organization affiliation, email, phone, fax, mail address, professional experience, publication, etc., which will not exceed two pages.

The PI and his/her co-submitter(s) must provide a brief background of experience that is closely related to the project in the proposal.

D. Dates and Submission Information

1. Proposals in response to CCTR RFPs must be received by the CCTR on or before the date shown on the CCTR website. Proposals past that date will not be accepted. Unsolicited proposals will be accepted at any time.
2. The first two pages of each proposal submission document should be the completed Attachments 1 and 2 of this document. Proposals will not be considered if these two pages are not completed and included at the front of each proposal document.
3. Proposals are accepted only in electronic format submitted through the CCTR email system. The address is: cctr@ecn.purdue.edu. Your proposal must be submitted by the appropriate contracting agency for your organization.
4. The submission date for the scoping study (Group IV projects, 6 to 9 months duration) interim report is at 3 months or at half-time for the longer projects (12 month projects at 6 months etc) following the date of signing the contract between the CCTR and the investigator(s).
5. All projects in Groups I, II, and III will submit progress reports as and when required by the CCTR director which will normally be two weeks prior to giving a presentation at a CCTR Advisory Panel Meeting.
6. Submission of the final report (for all Groups I, II, III, and IV) will be on or before the last day of the contract. In special circumstances and following consultation with the CCTR director a short extension period can be permitted for submission of the final report.
7. Interim, progress and final reports will be submitted electronically in WORD format to the CCTR email address.
8. Three hard copies of the final report will be sent to the CCTR office.
9. The dates of the CCTR Advisory Panel meetings are to be noted by all successful PIs. In consultation with CCTR staff the PI or his/her representative should be prepared to make presentations to the Panel.
10. Power point presentations to the CCTR Advisory Panel will normally be required with both the interim (Group IV projects) and final reports (for all Groups I, II, III, and IV).

E. Proposal Review Process

CCTR staff will review and screen the proposals for responsiveness to the goals and objectives of the CCTR. Applications passing this screening will be sent to an expert group of outside reviewers in the areas proposed. The results of these reviews, along with the recommendations of the CCTR Advisory Panel and staff, will be presented at the next earliest Advisory Panel meeting. Proposers recommended for funding will sometimes be required to make a presentation to the CCTR Advisory Panel describing their technology development plan. The Panel will consider the proposals and make final recommendations on which proposal(s) should be supported.

Proposals will be judged using the following criteria:

- (1) Scientific Merit – Is the technology development plan based on sound principles and demonstrated knowledge of the current state of the art?
- (2) Plan adequacy – Is there evidence of a sound management plan in the proposal for the project?
- (3) Involvement of potential users of the technology developments – Have commitments been received from users, and have the users been involved in the preparation of the proposal of scoping studies?
- (4) Significance to the stated goals 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) Prior experience of the Investigators – do the investigators have a demonstrated record of achievement in the area of the investigation?

F. Expected Time of Award

All proposals received will be notified of the results of the CCTR review process by the date given on the CCTR website. Projects can be started after the awards are announced and both CCTR and receiving agency administrations have the funds transferred.

G. Type of Award

A contractual agreement will be signed between the CCTR and the investigator(s) awarded the contract.

H. Questions Regarding RFPs

Questions will be accepted through CCTR email system (cctr@ecn.purdue.edu).

Questions and answers will be posted in the CCTR website:

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

Telephone inquiries will not be accepted regarding RFPs.

I. CCTR staff and Contact Information

Marty W. Irwin	CCTR Director, Energy Center at Discovery Park
Brian H. Bowen	Associate Director, Energy Center at Discovery Park
Barbara Gotham	Administrative Assistant, 765-494-7037
Email Contact	cctr@ecn.purdue.edu

Attachment 1 - CCTR Project Description and Outline

PROJECT TITLE (maximum 100 characters)			
START DATE:		COMPLETION DATE:	
NAME OF PRINCIPAL INVESTIGATOR (PI)			
PI PHONE:		PI EMAIL:	
PI ORGANIZATION & ADDRESS:			
PROJECT OBJECTIVES & ACTIVITIES (maximum 175 words, size 10 font):			
PROJECT DELIVERABLES (besides interim & final reports & presentation, size 10 font):			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
PROJECT ADMINISTRATION:			
CCTR AWARD : \$		MATCHING FUNDS/COST SHARING: \$	
OTHER FUNDING: \$ (specify source):		PROJECT TOTAL COST: \$	
NAME OF CONTRACTING/FINANCIAL MANAGER:			
Phone		Email:	
DATE OF PROPOSAL SUBMISSION TO CCTR:			

Attachment 2 - CCTR Project Budget Summary

CCTR PROJECT STAFFING COSTS									
	NAME	POSITION	TOTAL DAYS	RATE (\$/DAY)	LABOR COST	BENEFITS	TOTAL		
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
CCTR EQUIPMENT COSTS									
	ITEM NAME & DESCRIPTION						COST		
1.									
2.									
3.									
CCTR TRAVEL EXPENSES									
	TRAVELER'S NAME	APPROXIMATE DATES	GROUND TRANSPORT COSTS	AIR TICKET COSTS	NO. NIGHTS LODGING	TOTAL LODGING COSTS	PER DIEM	TOTAL COST	
1.									
2.									
3.									
4.									
5.									
COSTS TO CCTR:									
CCTR TOTAL LABOR COST: \$			<i>Further budget information:</i>						
CCTR TOTAL EQUIPMENT COST: \$									
CCTR TOTAL TRAVEL EXPENSE: \$									
CCTR MATERIALS & SUPPLY COSTS: \$								<i>(name items):</i>	
CCTR OTHER DIRECT COSTS: \$								<i>(specify):</i>	
CCTR TOTAL COST: \$									
FUNDING FROM NON-CCTR SOURCES: \$			<i>(specify sources):</i>						
\$									