



U.S. CIVILIAN RESEARCH & DEVELOPMENT FOUNDATION



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PROGRAM ANNOUNCEMENT

COOPERATION IN RESEARCH AND EDUCATION IN SCIENCE AND TECHNOLOGY (CREST)

2008 Competition

Research and Education Center for Energy Efficiency Technologies

**MINISTRY OF UKRAINE FOR EDUCATION AND SCIENCE
U.S. Civilian Research & Development Foundation**

Program Goals

The CREST program has been developed jointly by the Ministry of Ukraine for Education and Science (MES) and the U.S. Civilian Research & Development Foundation (CRDF), and made possible in part by support from the American people through the U.S. Agency for International Development. Its aim is to strengthen the research component, to create a modern experimental base, and to promote integration of science and education in Ukrainian higher education institutions (HEI) of the 3rd and 4th accreditation levels of any administrative subordination.

The current competition will support up-to-date work on some aspect of **Energy Efficiency Technologies in a Research and Education Center (REC)** created at an HEI in Ukraine.

The implementation and the financial part of the Program will be controlled by **the Governing Council** created by the MES and CRDF.

The main tasks of the Energy Efficiency REC are:

- To carry out first-class research, and develop new programs and approaches that promote excellence in and combine research and education;
- To develop up-to-date equipment bases for high-level research and teaching at the university;
- To provide new research opportunities for talented students, graduate students, and promising young investigators on a competitive basis;
- To promote linkages, in both research and education, with other institutions, such as institutes of the National Academy of Sciences of Ukraine (NASU), other Ukrainian and foreign universities, and industries.

Note: This is a provisional Program Announcement and may be subject to changes based on funder requirements. Please check back for a final Program Announcement closer to the proposal due date.

Project Funding

The total funding for the project is the equivalent of US **\$600,000**. CRDF will provide **50% of funding, that is \$300,000**.

The Ukrainian side will carry out funding of the Program from two sources. **25% of the funding, that is the equivalent of \$150,000 in the national currency of Ukraine**, will be provided from the general fund of the state budget of Ukraine, via MES. **The remaining 25%, the equivalent of \$150,000 in the national currency of Ukraine**, will come from sources identified by the applicant university, which may include (in whole or in part) the special state budget funding of the winning HEI, by the codes of the program classification of spending for education and science.

Required Features of Research and Education Centers

The REC is expected to:

- Be based at a HEI;
- Carry out research in the directions stipulated in its statute. The research results will be used in the training of bachelors, specialists, masters and postgraduate students and will serve the development of international cooperation;
- Serve the long-term needs of the host HEI and partner organizations (institutes of the NASU and specialized academies, industries, etc.);
- Provide access to the equipment purchased within the project to the partner organizations and HEIs of the region;
- Provide new research opportunities for talented students, graduate students, and promising young investigators.
- Confirm cost-sharing commitments and fulfill them;
- Submit, at an appointed time, the scientific and financial reports to MES, and the financial reports to CRDF.
- Be managed by a Project Director (who is a researcher and takes active part in the educational activities of the project, but *is not the head of the HEI*).

The Project Director determines three directions of its activities, Research, Education, and International Collaboration, to be coordinated by three Deputy Directors. The Deputy Director for research is simultaneously the First Deputy Director. The Scientific Secretary of a REC will be an administrative coordinator of the Project. The procedures for the appointment of the Director, his/her deputies and Scientific Secretary are determined by Ukrainian legislation.

Eligibility

An HEI should submit a proposal for the competition in the form of a project. An application must be signed by the HEI's rector. Each HEI (including its subsidiaries) may submit only one application.

An institution rector may not participate in the program as a Project Director or Deputy Director. A Project Director may not be simultaneously a Deputy Director.

Proposal Submission Procedures and Timetable

Applications are due no later than 6:00 pm Kyiv time on Monday September 15, 2008. Any application received after September 15, 2008 will be ruled ineligible. All applications received by this program must be complete. Any application not containing all required forms and sections as described below in Section F may be ruled ineligible. No modifications may be made to any application once it has been received and approved. Proposals must be submitted on an electronic proposal submission website AND submitted in hard copy to the Ministry of Education and Science.

An English version of the proposal must be submitted electronically through the CREST Program Electronic Proposal Submission (EPS) site at the CRDF website:

<http://proposals.crdf.org/Crest>

CREST EPS Guidelines

1. Applications may be submitted to the EPS site starting July 15, 2008.
2. During the EPS process applicants will be asked to enter basic information about the proposal and must upload the following two electronic files. The EPS site will NOT accept more than two file uploads per submission.
 1. Electronic copy of the full proposal in English, including Forms A and B (single .doc, .rtf, or .pdf file)
 2. Completed budget (Form C) (single Microsoft Excel file)
3. Proposals should be submitted only ONE time.
4. At the conclusion of the electronic submission process, the applicant will receive a confirmation message from CRDF.
5. Further instructions on electronic proposal submission are available at the above website.

In addition to submission on the EPS website, the entire set of documents for participation in the competition, in Ukrainian and in English, should be brought or mailed **and** registered at MES, between 9 am and 6 pm Kyiv time.

The Ministry of Ukraine for Education and Science
01601 Kyiv, Shevchenko Boulevard 16, Room 307b
Tel.: (044)-246-3806
Malyuta, Olga Volodymyrivna, Coordinator

In particular, **three** printed copies of the proposal in Ukrainian and **one** printed copy in English, as well as a disk with an MS Word electronic copy of the proposal, should be submitted **to the MES**.

Applicants are urged to prepare their proposals with care, as no revisions or supplements to proposals will be accepted after submission. Proposals received after **September 15, 2008** will not be considered, nor will proposals which do not follow the guidelines or which are submitted by fax or email to the MES.

If circumstances change so significantly after the proposal submission that the project can no longer be carried out as proposed, the Project Director should notify the MES by mail, and CRDF by E-mail, and indicate that the proposal is being withdrawn from the competition.

Within the period from **September 15 to October 15, 2008**, the proposals will be subject to scientific and technical expert review. The MES and CRDF will select a small number of applicant HEIs as finalists. Notification of finalist status will occur during **October, 2008**, and a bilateral team will carry out site visits to each of the finalist HEIs.

The Governing Council will determine the winner of the competition based on the scientific and technical expert review and the recommendations of the site visit team. **The result of the competition will be announced in November 2008** on the Web sites of the MES and CRDF.

The funding of the REC in the successful HEI will begin on **January 1, 2009**.

Proposal Review. All proposals will be screened for eligibility (see *Eligibility*) and completeness upon receipt. Each proposal will receive an expert review by a group of Ukrainian and American scientists. The review will follow the requirements of the legislation of both countries. The Governing Council will make the final decision regarding the winner of the competition. The scientific experts will use the following criteria in the evaluation of proposals:

1. **Intrinsic Scientific Merit:** the likelihood that the project may lead to new knowledge or novel perspectives or processes that will have a substantial impact on one or more fields of science.
2. **Integration of Research and Education:** the likelihood that the proposed center will involve students and younger researchers (six years or less since receipt of *Kandidat*, or nine years or less, since graduation from a university) in the research program in meaningful ways.
3. **Innovation:** the REC’s potential to foster the development of new and innovative technologies, products, services, or methods for use in research, teaching, or industry.
4. **The available material base of a HEI** and the technical qualifications of the researchers of the REC.
5. **Management:** the soundness of the plan to manage and coordinate the project.

Confidentiality. The MES and CRDF will treat all proposals as confidential material and will require all reviewers to respect the confidentiality of proposals. However, proposal authors are advised that the successful proposal will be treated as being in the public domain. Therefore, at the author’s discretion, specific information in the proposal that is business-confidential and not intended for public dissemination should be clearly labeled as such at the top and bottom of the applicable page of the proposal. Such passages will be withheld from public distribution if the proposal is successful. Proposals that do not result in awards are not subject to public dissemination. Their manuscripts will not be returned.

Proposal Contents

All proposals should be typed in 12pt Times New Roman font, single-spaced with margins of 2.5 cm on the sides, top and bottom. All pages including forms should be numbered consecutively in the upper right corner. The proposal should present a plan for a three-year project. **Full proposals should not exceed 30 pages (not including cover page, form B, budget form C, and co-funding documents).**

Each proposal must contain the following set of documents with original signatures of the university rector, project director and his/her three deputies.

Checklist of Application Contents
<input type="checkbox"/> 1. Cover Page (Form A)
<input type="checkbox"/> 2. Institution Information Form (Form B)
<input type="checkbox"/> 3. Project Summary
<input type="checkbox"/> 4. Statement of Project Goals
<input type="checkbox"/> 5. Research Plan
<input type="checkbox"/> 6. Education Plan
<input type="checkbox"/> 7. Linkages Plan
<input type="checkbox"/> 8. Integration Statement
<input type="checkbox"/> 9. Young Investigators Support
<input type="checkbox"/> 10. Expected results
<input type="checkbox"/> 11. Instrumentation Plan
<input type="checkbox"/> 12. Budget (Form C and Budget Narrative)
<input type="checkbox"/> 13. Summary Information on Each Project Participant
<input type="checkbox"/> 14. Co-funding documents
<input type="checkbox"/> 15. List of Sources

Guidelines for preparation of the documents:

1. **Cover Page** (Form A) signed by the university rector, Program Director, his/her three deputies and the Scientific Secretary.

2. Institution Information Form (Form B)

3. Project Summary (up to 3 pages). Provide a description of the plans for research and education activities of the REC, the plans for establishing internal and external links, and expected results. Describe the structure of the REC management, duties of the main personnel, the process of the personnel management and control. The summary should highlight the innovative features of the proposed REC. Included in the project summary should be a management plan for the Center.

Other sources of financial support should be indicated (see *Project Funding*).

4. Statement of Project Goals (up to 3 pages). Describe and explain the project's goals in the fields of science and education, the innovative approach to the problems to be resolved, and explain how it will meet the CREST program goals (see **Program Goals**).

5. Research Plan (up to 3 pages). Provide a narrative description of a three-year research plan that reflects the scientific program of the Center. The narrative should describe the scientific problems to be addressed and how the Center's research projects are expected to contribute to their solution (provide a timetable of the REC activities, list the equipment to be used). The research plan should indicate why a Center-based strategy is beneficial or necessary and how the research will be integrated with education. The plan should include a mechanism for the inclusion of students in research projects in an ongoing and substantial way. **NOTE: no research using human subjects may be carried out under this project.**

6. Education Plan (up to 3 pages). Provide a narrative summary of the educational features of the Center. It should illustrate plans for attracting scientists and students (bachelors, specialists, masters), as well as how the center will be integrated into the institution.

7. Linkages Plan (up to 2 pages). Provide a clear description of plans to create or enhance linkages beyond the host institution, including, where appropriate, other Ukrainian and foreign HEIs; institutes of the National Academy of Sciences of Ukraine and specialized academies; industry; local governmental bodies; and international organizations.

Explain the process of strengthening existing contacts via joint scientific or educational programs, exchange visits, conferences, workshops, signing research contracts (cooperation agreements), and publications in international journals.

8. Integration Statement (up to 1 page). Provide an explanation of how the three program components (items 5-7) are related and how they are integrated, both functionally and conceptually. Describe the allocation of funds and justification for equipment purchases.

9. Young Investigators Support (up to 2 pages). Describe a mechanism to select talented undergraduate and postgraduate students, and promising young scientists, to participate in the research activities. Explain measures for guaranteeing participation of students at research and international cooperation activities of the REC. The support of young researchers should account for no less than 10% of the total budget. The young scientists are not necessarily from the winner HEI, but must work in the REC.

10. Expected Results (up to 2 pages). Indicate realistic qualitative and quantitative characteristics (publications, partnerships, conferences held by the REC, scientific achievements, patents) the center hopes to achieve during three years it is supported by the CREST grant. Describe what aspects of the project will be used to evaluate its success.

11. Instrumentation Plan (up to 2 pages). Include a description of planned usage for each major piece of equipment (equipment valued at \$20,000 or more) and list possible users at the university and elsewhere

in the region. For major instrumentation, a plan for shared usage throughout the region should be included and it should be shown that the equipment requested is not readily available in the region.

12. Detailed Budget Form C and Budget Narrative (up to 2 pages). The budget calculation includes the following categories: salary, travel, equipment, fuel and energy for the research and production purposes, payment to secondary collaborating institutions, overhead and other expenses (subscriptions, Internet, communications etc). Describe the equipment costs (if possible, with several price options), the advantages of specific types of equipment over others, their characteristics (producers, models, efficiency, prices, availability from vendors etc). The budget form is available online at: http://www.crdf.org/granteeforms/granteeforms_show.htm?doc_id=687374
Its Ukrainian translation is available at:
http://www.crdf.org.ua/funding/documents/budget_u.xls
The completed sheet “Cost Share and Budget Summary” in Ukrainian should be printed and submitted to the MES as a part of the required set of documents.

13. Summary Information on Each Project Participant Mentioned in Form A. Full CVs must be provided for the Project Director and his/her three deputies, and not more than 1/3 page CVs per additional participant. At least three relevant publications for each participant should be listed, with preference given to publications in international journals.

14. Co-funding documents. All applicant HEIs should submit letters of commitment for support from the special state budget funding by the codes of the program classification of spending for education and science, or from other sources.

The letters must specify a willingness to provide direct financial support for the project in the amount of 25% of the total project budget (see Program Funding). The letter(s) of support must be approved and signed by a head of the HEI or the co-funding organization.

15. List of Sources Provide a list of reference sources in the same numerical order as mentioned in the text of the project.

A Statute of the REC is submitted to the MES only by the successful REC after the competition results are announced.

In case of questions about submission, contact crest@crdf.org.

REC Form A: Page 2 of 3

IV. PROGRAM MANAGER, RESEARCH (FIRST DEPUTY PROJECT DIRECTOR)

- A. Name
Last _____ First _____ Patronymic _____
- B. Sex M ___ F ___ C. Date of Birth (date/month/year) _____
- D. Highest Degree Earned _____ Field _____ Year Awarded _____
- E. Office Phone _____ Fax _____ E-mail _____
- F. Professional Title/Position _____
- G. Experience in Weapons Research? Yes ___ No ___

Complete Mailing Address

Signature* _____ Date _____

V. PROGRAM MANAGER, EDUCATION (DEPUTY PROJECT DIRECTOR)

- A. Name
Last _____ First _____ Patronymic _____
- B. Sex M ___ F ___ C. Date of Birth (date/month/year) _____
- D. Highest Degree Earned _____ Field _____ Year Awarded _____
- E. Office Phone _____ Fax _____ E-mail _____
- F. Professional Title/Position _____
- G. Experience in Weapons Research? Yes ___ No ___

Complete Mailing Address

Signature* _____ Date _____

VI. PROGRAM MANAGER, INTERNATIONAL COLLABORATION (DEPUTY PROJECT DIRECTOR)

- A. Name
Last _____ First _____ Patronymic _____
- B. Sex M ___ F ___ C. Date of Birth (date/month/year) _____
- D. Highest Degree Earned _____ Field _____ Year Awarded _____
- E. Office Phone _____ Fax _____ E-mail _____
- F. Professional Title/Position _____
- G. Experience in Weapons Research? Yes ___ No ___

Complete Mailing Address

Signature* _____ Date _____

REC Form A: Page 3 of 3

VII. SCIENTIFIC SECRETARY

- A. Name
Last _____ First _____ Patronymic _____
- B. Sex M ___ F ___ C. Date of Birth (date/month/year) _____
- D. Highest Degree Earned _____ Field _____ Year Awarded _____
- E. Office Phone _____ Fax _____ E-mail _____
- F. Professional Title/Position _____
- G. Experience in Weapons Research? Yes ___ No ___

Complete Mailing Address

Signature*

Date

VII. LEADING PROJECT PARTICIPANTS (COPY AS NECESSARY)

- A. Name
Last _____ First _____ Patronymic _____
- B. Sex M ___ F ___ C. Date of Birth (date/month/year) _____
- D. Highest Degree Earned _____ Field _____ Year Awarded _____
- E. Office Phone _____ Fax _____ E-mail _____
- F. Professional Title/Position _____
- G. Experience in Weapons Research? Yes ___ No ___

Complete Mailing Address

REC Form B
Institution Information

		at the host university	in the applying center
1	Total number of teaching staff		
2	Number of teachers with D.Sc. / Cand.Sc. degrees	/	/
3	The same in the specialties related to REC	/	/
4	Total number of teaching staff younger than age 35		
5	Number of undergraduate students / graduate students /doctors program participants	_/_/_	_/_/_
6	The same in the specialties related to REC	_/_/_	_/_/_
7	Basic funding of university (state budget allocation/other sources)	_/_/_	_/_/_
8	Number of grants of Ukrainian competitive programs during the last 3 years in specialties related to the REC		
9.	Number of grants from foreign foundations and organizations (CRDF, INTAS, etc.) during the last 3 years in specialties related to the REC		
10	Publications for the last three years in specialties related to the REC (list on a separate page) <ul style="list-style-type: none"> ■ articles in international special journals ■ monographs ■ textbooks 	_____ _____ _____	_____ _____ _____
11	Availability of the Internet (yes or no) / broadband speed / number of workstations	_/_/_	_/_/_
12	Availability of a central library (yes or no)/ number of books in the library	_/_/_	_/_/_
13	NASU institutes in the region with research programs similar to the subject of the project: a list of institutes and research topics (attach a separate page)		
14	Number of conferences, seminars, schools held during the last 3 years (international / national) in specialties related to the REC	_/_/_	_/_/_

Form C: REC Budget

Budget forms can be downloaded at the following web address:

http://www.crdf.org/granteeforms/granteeforms_show.htm?doc_id=687374 (English)

http://www.crdf.org.ua/funding/documents/budget_u.xls (Український)