



U.S. CIVILIAN RESEARCH & DEVELOPMENT FOUNDATION AND ESTONIAN SCIENCE FOUNDATION 2009 ENERGY RESEARCH COMPETITION

I. Introduction and Scope

In cooperation with the Estonia Science Foundation (ETF), CRDF is announcing a joint 2009 Energy Research Competition which provides up to two years of support to joint research teams of U.S. and Estonian scientists and engineers. Applications must fall under one of the following two (2) areas of energy research and development:

I. Clean Fossil Fuels Energy:

- Minimization of CO₂ emissions in energy production;
- Sustainable mining;
- Solid fossil fuels high yield liquefaction technologies;
- Effective use of wastes from solid fossil fuels energy production;
- Gasoline and diesel-fuel or their components production from solid fossil fuels

II. Renewable Energy:

- Second generation biofuels (algae, cellulose);
- H₂-Energy;
- Effective energy storing;
- Solar energy;
- Fuel Cells and Electrolyzers;
- Smart Grids – Bridging Over Different Energy Resources

The primary goals of the Energy Research Competition are to:

- Support high-quality, innovative, basic and applied research that can further renewable and clean energy development
- Establish sustainable joint U.S.-Estonian research collaborations
- Increase the international profile of Estonia's scientific resources and expertise.
- Strengthen the overall quality of civilian research in both countries.

CRDF is a private, nonprofit, charitable organization created by the United States Government in 1995 to promote international scientific and technical collaboration. More information about CRDF can be found at <http://www.crdf.org>. CRDF receives funding for this program from the National Science Foundation (NSF).

The Estonian Science Foundation (ETF), established in July 1990 by the Estonian Government, is an expert research-funding organization. Its main goal is to support the most promising research initiatives in all fields of basic and applied research. The ETF uses state budget appropriations to award peer-reviewed research grants to individuals and research groups on a competitive basis. More information about ETF can be found at <http://www.etf.ee/>.

II. Program Guidelines

A. General. The total maximum grant size is \$50,000 for up to two years of research and development. The Estonian team is eligible to receive 78% of the funds for their expenses, including institutional support. The U.S. team is eligible for 22% of the award total. These funds will be allocated separately and administered directly to the individuals and institutions involved.

Proposals will be accepted to the competition according to the following schedule:

2009 Energy Research Competition Proposal Deadline	Eligible General Scientific Areas	Announcement of Results
Tuesday, December 1st, 2009 11:59 pm (23:59) Eastern Standard Time	All proposals must be related to renewable energy or clean fossil fuel energy <ul style="list-style-type: none">• Biology• Chemistry• Geology• Mathematics• Physics• Electronic, Material, Mechanical, and Manufacturing Engineering	Friday, March 26, 2010

Please see the instructions below for details on eligibility and submission requirements.

B. Eligibility. All proposals must meet each of the following eligibility criteria:

1. Proposals submitted to the competition must have **one Estonian Principal Investigator** and **one U.S. Principal Investigator**, who share the overall responsibility for the project in their respective countries and coordinate all project participants and institutions.
2. Each Principal Investigator must:
 - a. Possess the degree of Ph.D., M.D., or the equivalent research experience;
 - b. Have at least five (5) scientific publications in peer-reviewed scientific literature; and
 - c. Work full-time in a civilian research environment.¹
3. The Estonian Principal Investigator and participants on the Estonian team must be citizens or permanent residents of Estonia. All Estonian participants must reside in Estonia during the project period.
4. The U.S. Principal Investigator and participants of the U.S. team must be U.S. citizens or permanent residents of the U.S. and must reside in the U.S. during the project period. U.S. graduate students may be foreign nationals, but they must be enrolled in an accredited degree program at a U.S. institution.
5. All projects must be oriented toward non-military objectives and must be carried out in a civilian research environment.
6. Each proposal is evaluated independently and therefore should not be part of, nor depend on, the success of other proposals submitted to this program.
7. U.S. Principal Investigators who have an existing CRDF award that is within six (6) months of completion are eligible to apply to this program. Applicants who are previous or current CRDF grantees must be up to date on the submission of all progress reports, including final project reports, to CRDF.

¹ U.S. Government Laboratory employees working on civilian-oriented research and development projects are eligible to apply to this program.

8. CRDF reserves the right to restrict the participation of any individual or institution from its programs. CRDF complies with all U.S. laws and regulations pertaining to export control and the participation of foreign nationals or institutions in its activities. It is the policy of CRDF not to conduct any transactions with U.S. restricted entities without appropriate authorization from the U.S. Government.

C. General Proposal Submission Instructions. All proposals must be submitted electronically through the Research Grants Program Electronic Proposal Submission (EPS) site at the CRDF website:

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

All submitted proposals must include a Cover Sheet (Form A) with basic information about the proposal, Estonian Principal Investigator, Estonian Institutional Representative, U.S. Principal Investigator, and the U.S. Institutional Representative.² Each proposal must include all of the elements in Section II.F. below, including information on key project personnel.

Proposals should be submitted only ONE time and by only ONE Principal Investigator on the project. The Estonian and U.S. Principal Investigators should jointly develop the proposal and obtain the concurrence of the Estonian Institute Director and U.S. Institutional Representative. Once the proposal has been finalized, they should select one Principal Investigator to submit the proposal electronically through the CRDF website.

At the conclusion of the electronic submission process, both the Estonian and U.S. Principal Investigator will receive a confirmation message from CRDF; a copy of this message will also be sent to the Estonian Institute Director and the U.S. Institute Representative identified in the proposal. Further instructions on electronic proposal submission are available at the above website.

D. Review of Proposals. All proposals will be screened for eligibility and completeness upon receipt by CRDF and ETF. Scientific merit reviews will be performed independently by expert panelists and external reviewers appointed by both financing organizations. The panelists will use the evaluation criteria described below in Section II.E. to reach their funding recommendations.

CRDF and ETF will select up to four proposals for funding under this competition: two (2) in Clean Fossil Fuels Energy and two (2) in Renewable Energy. All CRDF and ETF decisions are final.

E. Evaluation Criteria. CRDF panels and external reviewers utilize the following criteria in the evaluation of proposals for this program.

1. **Technical Merit:** Whether the project proposes innovative methods and how well the individual elements of the research plan fit with the overall project goals.
2. **Research Plan:** The technical soundness of the proposed work, practicality of the project's management plan, and adequacy of the resources available, both technical and financial.
3. **Research Impact:** The probability that the project will result in new knowledge or have impact on one or more research fields, and the potential that the project processes or results will serve as the basis for new or improved technology.
4. **Personnel Capacity:** The expertise of the investigators and other participants, including the strengths and weaknesses of each partner, as well as the balance of the collaboration and distribution of partnership benefits.
5. **Benefit to Education and Infrastructure:** Appraisal of the project's provision of opportunities for personnel (participation of young scientists, university researchers, female scientists), the sharing of equipment and resources among all institutions involved, and the project's long-term positive impact on social, economic, or environmental issues in the countries involved.

² The U.S. Institutional Representative is an individual with the legal authority to commit the U.S. institution to the proposal/contractual arrangement and to negotiate the financial terms of an award agreement with CRDF.

F. Proposal Contents. All proposals must be written in English. We highly encourage all applicants to review CGP's **Frequently Asked Questions** and **Grant Writing Tips** at http://www.crdf.org/focusdocs/focusdocs_show.htm?doc_id=428393.

These resources include sample forms and examples on how to avoid common mistakes in proposal preparation.

Each proposal must include all of the following elements. Only applications that include this information will be considered eligible and complete for review. All proposals should be typed, single-spaced, in English, with margins of one inch at the sides, top, and bottom, and with pages numbered consecutively in the upper right corner. Proposals should also use Arial font and a font size of no less than 10 points.

Applicants are required to use the electronic templates for Forms A-D, provided at the end of this Program Announcement. Prior to submission, please refer to the **Checklist of Documents Required for Proposal Submission** located at the bottom of Section III.

IMPORTANT: No proposal may have font that is **smaller than 10-point Arial. Times New Roman 10-point font is NOT Allowable.**

1. **Cover Sheet (Form A).** The cover sheet includes basic information about the proposal, Estonian Principal Investigator, Estonian Institution Director, the U.S. Principal Investigator, and the U.S. Institutional Representative. The U.S. Institutional Representative is the individual who would be responsible for negotiating contractual and financial terms in the case of award. This information must also be entered during the electronic proposal submission process.

IMPORTANT: CRDF requires that Form A be signed by both the Estonian Principal Investigator and Estonian Institute Director.

2. **Abstract.** In one concise paragraph, summarize all relevant aspects of the project, with special attention to its objectives, methods, and potential results.
3. **Project Narrative (8 pages maximum, including any graphs, diagrams, photos and references cited).** Describe:
 - a. The approach, objectives, milestones, and measurements of success that will be used;
 - b. A clearly defined project timeline, noting all project tasks and goals to be accomplished on a quarterly basis;
 - c. How the individual and combined competencies of the Estonian and U.S. research teams will enable the project to be carried out, and what relevant prior work has been carried out by members of the team. Prior CRDF awards must also be described: see Section II.O.1 **Special Note on Requests for Renewed Funding** below;
 - d. The anticipated results of the project and how they address the CRDF evaluation criteria listed in Section II.E;
 - e. How the project compares to current research conducted in the topic area;
 - f. Equipment to be utilized in the project, with special focus on justifying requests for any equipment for which CRDF support is requested;
 - g. How the Estonian and U.S. Principal Investigators will coordinate project implementation and assess progress at regular intervals. Each project must involve significant and substantive cooperation between the Estonian and U.S. teams. All proposed international travel to be funded under the project must be described in terms of its purpose and duration.

4. **Estonian and U.S. Principal Investigator *Curricula Vitae*.** The proposal must contain a *curriculum vitae* of no more than one page for each Principal Investigator. It should include the individual's name, title, educational background, current and previous institutional affiliations with dates, area of expertise, and his or her most recent scientific publications of relevance to the project. Each Principal Investigator must list at least five (5) publications of relevance.
5. **Estonian and U.S. Personnel Data (Form B).** Please fill this form out for each participant on the Estonian and U.S. team, including researchers/engineers, technical/scientific support staff, graduate and undergraduate students, administrative/clerical support staff, and secondary collaborators.

IMPORTANT: Form B should not exceed **half a page**; two forms should be combined on a single page.

Form B is for additional team personnel only; the Estonian and U.S. Principal Investigators do not need to complete Form B with their own information. In the relevant section within Form B, a short *curriculum vitae* for each Estonian and U.S. participant must be included. Each participant's *curriculum vitae* should include brief information on the participant's educational background, current and previous institutional affiliations with dates, area of expertise, and his or her most recent scientific publications of relevance to the project. All information provided in Form B, including the list of publications, must be written in English.

IMPORTANT: U.S. personnel are not required to offer information regarding their dates of birth.

6. **Budget (Form C).** A complete budget must be submitted using the Form C template. Applicants should submit one budget (Form C) for the entire award period. Applicants should refer to the "Budget Guidelines" in **Appendix 3** for information to be listed in the budget.

Note on Cost-Sharing and In-Kind Contributions: *CRDF encourages cost-sharing under its programs to maximize the resources devoted to projects it supports. Under this CGP competition, CRDF requires cost-sharing from for-profit companies applying to the program. General guidance on cost-sharing and in-kind contributions can be found in **Appendix 2** and on the CRDF website at http://www.crdf.org/policies/policies_show.htm?doc_id=318877.*

7. **Budget Narrative.** A separate sheet explaining all budget items in detail must follow the Budget (Form C). This sheet should be clearly marked "Budget Narrative." Applicants should refer to the "Allowable Costs" in Section II.G and the "Budget Guidelines" in **Appendix 3** for information that should be described in detail in the Budget Narrative. Requested equipment items with a value of over \$1,000 must be explained in the Budget Narrative.
8. **Statement of Other Support (Form D).** Both Principal Investigators must complete the Statement of Other Support (Form D), listing current and pending sources of support for all their research projects, excluding those that are already included under the "**COST-SHARING FROM NON-CRDF SOURCES**" section in the budget. Applicants with grants from U.S. Government sources, such as NIH or NSF, should indicate the grant number, duration of the award and level of effort. If a Principal Investigator has no other sources of support, please check the box marked "None" at the top of Form D and include this page with the proposal. If this proposal has also been submitted to another organization, please indicate this information clearly in Form D.
9. **U.S. Principal Investigator Partnership Statement.** The U.S. Principal Investigator must provide a signed statement on organizational letterhead certifying his or her agreement to the collaboration. A scanned copy of this agreement must be included in the proposal when it is submitted to CRDF. An example of a Partnership Statement can be found in **Appendix 4**. Please note that the Partnership Statement does NOT count towards the 22-page maximum, and you will be requested to upload it as a separate document during the electronic proposal submission process.

G. Allowable Costs. No proposal requesting more than \$50,000 will be considered by CRDF. *In case of an award, the project budget may be subject to revision by CRDF staff.*

The following costs are permitted under CRDF guidelines for this program:

1. **Estonian Team Expenses.** *Support for the Estonian team's expenses may account for 78% of the total amount requested.* ETF allowable expenses include items listed in Sections G.1.a,b,c,d. CRDF allowable expenses include items listed in Section G.2.a,b,c,d.

a. **Individual Financial Support.** Individual Financial Support (IFS) is defined as payments to individual project participants for work performed on the project (i.e., labor costs). Full-time personnel financed from other governmental sources (educational budget, target financing or other projects) are not eligible for IFS. The Estonian team may request individual financial support for undergraduate and graduate students (master course or PhD course) member of the team. The limits and the rules are same as in the ETF Standard Grant Scheme.

For a definition of "Level of Effort" in IFS Payments, please refer to http://www.crdf.org/granteefags/granteefags_show.htm?doc_id=300514.

b. **Equipment, Supplies and Services.** This includes support for research equipment, including computers and telecommunications devices and/or services, subscriptions to scientific journals, reagents, and other materials to be used in the research. Any item of requested equipment valued at more than \$1,000 must be specifically described and justified in the Budget Narrative.

If the proposal is to include services of professional consultants or service providers such as legal counsel, patent consultants, or other services, these services must be detailed in the Budget Narrative with a justification as to their necessity for successful execution of the project.

c. **Travel.** Transportation and per diem support for travel of Estonian personnel in connection with the project should be requested and described in the Budget Narrative. International travel to the collaborating lab is strongly encouraged. Travel funds supported by ETF may also be used for domestic and international travel. Travel funds provided by CRDF may only be used for travel to the U.S. team member's lab. The following cost guidelines should be used in preparing the budget:

1. **International Transportation.** CRDF-supported travelers must purchase the lowest-cost applicable round-trip airfare from Estonia. Travelers must comply with the provisions of the Fly America Act. For more information, please see http://www.crdf.org/policies/policies_show.htm?doc_id=291723.
2. **Travel Allowances.** Applicants should refer to CRDF International Travel Allowances when preparing their travel budget. These allowances can be found on the CRDF website at http://www.crdf.org/policies/policies_show.htm?doc_id=291725 for Estonian grantees traveling to the United States. These allowances cover lodging, meals, and incidental expenses. Health insurance is mandatory for all travel under CRDF awards and should be included in the proposal budget in addition to the travel allowance. Visa fees are allowable expenses and may be included in the proposal budget.

The maximum time abroad for any one supported traveler is eight months over the course of an award. No single visit may exceed four months. It is also important to provide a justification and a description of the travel plans within the Budget Narrative.

d. **Institutional Support.** Estonian grantees can include in their budgets an allowance for institutional costs but not more than 10% of the total Estonian team expenses funded by ETF. Institutional costs and ETF funded research expenses cannot exceed total ETF funding of \$30,000.

f. **Administrative Superiors.** An "Administrative Superior" is defined as an individual who has direct administrative authority over the Project Director/ Principal Investigator, and who works within the same division, laboratory, or unit as the Project Director/Principal Investigator. CRDF discourages the inclusion of an administrative superior in a proposal in any role for which individual financial support is requested. For authorization to include an administrative superior in a

project, please see CRDF's guidelines at http://www.crdf.org/policies/policies_show.htm?doc_id=311224.

2. U.S. Team Expenses. Support for the team's expenses may account for 22% of the total grant budget. U.S. teams from universities, non-profits, or U.S. government institutions may request funds for expenses. U.S. teams from for-profit companies may not request any U.S. team expenses from CRDF. As described in **Appendix 2**, such companies are required to cover all U.S. team expenses and contribute 10% towards the Estonian team's expenses by committing cash, material, or in-kind contributions. These expenses and their amounts should be described in the Budget (Form C) and in the Budget Narrative.

For eligible teams, CRDF will distribute support to the U.S. team on a cost-reimbursable basis. Allowable expenses include:

a. **Travel Expenses.** US project participants are encouraged to travel to the partner labs to ensure an effective exchange of ideas and research findings. Transportation and travel allowances for U.S. personnel traveling to Estonia in connection with the project are permissible expenses and should be described in the Budget Narrative. All CRDF-supported travel for U.S. personnel must comply with the Fly America Act. For more information, please see http://www.crdf.org/policies/policies_show.htm?doc_id=291723.

Travel allowances for U.S. travelers to foreign destinations may not exceed the listings found on the CRDF website at http://www.crdf.org/policies/policies_show.htm?doc_id=291099.

b. **Equipment, Supplies and Services.** This includes support for research equipment, including computers and telecommunications devices and/or services, subscriptions to scientific journals, reagents, and other materials to be used in the research. Any requested item of equipment valued at more than \$1,000 must be specifically described and justified in the Budget Narrative.

c. **Graduate Student Stipend.** The U.S. team may request financial support for a graduate student member of the team. The graduate student stipend may include fringe benefits or tuition remission. Please include a description of how the stipend amount is calculated in the Budget Narrative. For graduate students who are not yet identified, but whose participation is planned, please clearly indicate their participation and request for support in the Budget Narrative. Applicants should indicate such graduate students on the Budget (Form C) as "Planned Graduate Student."

For the U.S. team, CRDF does not provide individual financial support for non-student participants, and does not support large-scale equipment purchases.

d. **Administrative Fee.** To cover expenses incurred in the administration of the CRDF grant, the U.S. Principal Organization is allowed to request up to 10% of the U.S. team's expenses to cover administrative costs. This amount in conjunction with the U.S. team's expenses cannot exceed the 22% portion of the project total that the U.S. is allowed to request.

I. Intellectual Property. CRDF makes no claim to intellectual property rights under any award. CRDF's primary interest is that intellectual property rights be equitably allocated. Both the Estonian and U.S. parties should be familiar with, and abide by the laws regarding intellectual property in their respective countries, including regulations regarding grants for research projects.

J. Award Administration Terms and Conditions. Applicants may refer to the CRDF website for guidance on CRDF policies and procedures relating to the financial and contractual management of CRDF grants, including conflict of interest guidelines. An online library of resources and reference documents may be viewed at the following location: <http://www.crdf.org/granteeinfo/>.

K. Conflict of Interest. CRDF requires that all Project Directors/Principal Investigators and Principal Institutions adhere to the highest ethical standards in all matters related to CRDF awards. CRDF Conflict of Interest Guidelines are further outlined at http://www.crdf.org/policies/policies_show.htm?doc_id=296472.

L. Confidentiality. CRDF will treat all proposals as confidential material and will require all panelists and reviewers to respect the confidentiality of proposals. However, proposal authors should be aware that

successful proposals will be treated as public information. Therefore, at the author's discretion, if there is specific information in the proposal that is business-confidential and not intended for public dissemination, it 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.

CRDF will also share copies of proposals with its counterpart agencies in Estonia upon request of those counterpart agencies. CRDF requires the counterpart agencies to follow the same policies above regarding the confidentiality of all proposals.

M. Proposal Documentation and Special Requirements. Additional proposal documentation and special certifications may be required for proposals that contain any of the following elements:

- a. Cost-sharing and the participation of for-profit companies (See Appendix 2);
 - b. Requests for renewed funding of a previous or existing CGP award.
1. **Special Note on Requests for Renewed Funding.** CRDF accepts new proposals that are submitted as a continuation of previous and current awards provided that the awardees are up-to-date on semi-annual status and final reports, as well as all other award obligations. All status reports from previous or existing awards will be available to expert reviewers.

Investigators on current awards are only eligible to submit a new proposal if their projects are within six (6) months of completion as of the relevant submission deadline. Principal Investigators and core team members may apply to CGP for more than one project; however, Principal Investigators are not eligible to receive CGP funding more than twice (once as a Principal Investigator, once as a participant).

Proposals that are continuations of previous awards must be submitted using the standard CGP submission template forms. Applications should include a summary of achievements from the previous or existing awards in the project narrative.

III. Information

For questions about the electronic proposal submission process, or for further information about this program, please contact the CRDF offices below. **Inquiries by e-mail are strongly encouraged and will result in prompt response.**

UNITED STATES

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Cooperative Grant Programs
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Telephone: 703-526-9720
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ESTONIA

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Website: www.etf.ee
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CHECKLIST OF ITEMS REQUIRED FOR PROPOSAL SUBMISSION

REQUIREMENTS FOR ALL SUBMISSIONS

- Cover Sheet (Form A)
- Project Abstract (**Only the English version of the abstract should be separately copied in CRDF's EPS system during the application process**)
- Project Abstract in Estonian
- Project Narrative
- U.S. & Estonian Principal Investigator Curricula Vitae
- U.S. & Estonian Personnel Data (Form B)
- Budget (Form C)
- Budget Narrative
- Statement of Other Support (Form D)
- U.S. Principal Investigator Partnership Statement

SPECIAL REQUIREMENTS

- Both Abstracts should be written on the same page, with each being a maximum length of a half a page.
- U.S. For-Profit companies only: Letter of Commitment to contribute 10% of Estonian expenses and coverage of all U.S. expenses
- Estonian For-Profit companies only: Letter of Commitment to contribute up to 5-10% of total Estonian expenses
- Proposals with In-Kind contributions: Letter of Commitment from contributing U.S. and/ or Estonian institution

APPENDIX 1 - LIST OF GENERAL SCIENTIFIC AREAS AND SUB-DISCIPLINES

Biological & Biomedical Sciences & Engineering

Agriculture & Agronomy
Bacteriology
Behavioral Biology
Biochemistry
Biophysics
Biotechnology
Botany (Plant Biology)
Cardiology
Cell Biology
Conservation Biology
Developmental Biology
Entomology
Environmental Health
Epidemiology
Genetics
Hematology
Immunology
Marine Biology
Medicine
Molecular Biology
Molecular Medicine
Mycology
Neurology
Oncology
Ophthalmology
Physiology
Population Biology
Radiology
Toxicology
Microbiology
Virology
Zoology

Chemical Sciences and Engineering

Analytical & Surface Chemistry
Biochemistry
Catalysis
Chemical Engineering
Inorganic Chemistry
Organic Chemistry
Physical Chemistry: General
Physical Chemistry: Kinetics
Physical Chemistry: Physical Organic
Physical Chemistry: Reactions/Mechanisms
Physical Chemistry: Theory & Dynamics
Polymer Chemistry

Electrical, Materials, and Manufacturing Sciences and Engineering

Aero/Astro Engineering
Ceramics
Composite Materials
Electrical Engineering
Electronic Materials
Instrumentation
Lasers
Magnetic Materials
Manufacturing
Materials Science
Mechanical Engineering
Metallurgy
Nuclear Engineering
Optical Materials

Polymers
Power Engineering
Superconducting Materials

Geological Sciences and Engineering

Atmospheric Science
Civil and Mechanical Engineering
Environmental Science
Geochemistry
Geological Engineering
Geology
Geophysics
Hydrology
Meteorology
Mineralogy
Oceanography
Paleoclimate
Petroleum Geology
Radioactivity
Remote Sensing
Seismology
Soil Science
Volcanology

Mathematical and Information Sciences

Abstract Algebra
Applied Mathematics (non-physics)
Complex Systems & Chaos
Computer Science
Geometry & Topology
Mathematical Logic & Number Theory
Mathematical Physics
Mathematical Statistics and Probability
Modern Analysis
Numerical Methods

Physical Sciences

Acoustics
Astronomy/Astrophysics
Atomic and Molecular Physics
Beams
Condensed Matter: General
Condensed Matter: Magnetic Properties
Condensed Matter: Structure
Condensed Matter: Superconductivity
Condensed Matter: Theory and Transport
Electronics
Fluids
Holography
Hydrodynamics
Lasers
Mechanics
Medical Physics
Nonlinear Optics
Nuclear Physics
Optics and Spectroscopy
Particles and Fields
Plasma Physics
Space
Theoretical Physics
Quantum Computing and Cryptography
Quantum Statistic

APPENDIX 2
INSTRUCTIONS FOR COST-SHARING AND IN-KIND CONTRIBUTIONS

GENERAL GUIDELINES

1. All cost-sharing must comply with the CRDF Cost-Sharing Guidelines. For complete guidelines and descriptions of cost-sharing types, please see the CRDF website at http://www.crdf.org/policies/policies_show.htm?doc_id=318877.
2. CRDF strongly encourages cash and in-kind cost-sharing by participating institutional performers in all its activities.
3. The value of all cost-sharing should be quantified on Budget (Form C) under "Total Cost-Sharing From Non-CRDF Sources," and described in the Budget Narrative of the proposal.
4. All cost-sharing funds listed on the Budget (Form C), both current and pending, must be described fully in the Budget Narrative.

REQUIREMENTS FOR PARTICIPATION OF FOR-PROFIT COMPANIES

1. Research collaborations involving for-profit companies are strongly encouraged to consult CRDF Industry Programs webpage at http://www.crdf.org/focus/focus_show.htm?doc_id=290099 for available opportunities before applying to the Cooperative Grants Program.
2. Proposals that involve strictly R&D activities and include the participation of Estonian or U.S. for-profit companies are eligible for the CGP, but the for-profit company must comply with the requirements listed below. For-profit companies can commit cash, material, or pledge in-kind contributions. Direct cash contributions must be administered by CRDF as part of the award to the Estonian team. Guidelines for allowable in-kind contributions can be found at http://www.crdf.org/policies/policies_show.htm?doc_id=318877.
3. **U.S. For-Profit Companies are required to:**
 - a. Cover all of the U.S. Team expenses. No funds may be requested from CRDF.
 - b. Contribute a minimum of 10% of the total dollar amount requested by the Estonian Team.
4. **Estonian For-Profit Companies are required to:**
 - a. Contribute up to 5-10% of the total dollar amount requested by the Estonian Team.
 - b. Estonian For-Profit companies are not required to make contributions to the U.S. Team's expenses.
5. At the time of submission, for-profit companies are required to provide a letter of support to CRDF that includes:
 - a. The Signature of an authorized representative of the for-profit company
 - b. A detailed description of the company's contribution in U.S. Dollars

SPECIAL NOTE ON SALARIES INCLUDED AS COST-SHARING

Please note that under this competition, the following salary items are not considered cost-sharing:

1. Salary for U.S. or Estonian for-profit company representatives
2. Salary originating from a U.S. or Estonian Government source

APPENDIX 3

BUDGET GUIDELINES

OVERALL

- No proposal requesting more than **\$50,000** will be considered by CRDF
- Support for the Estonian team's expenses may account for **no less than 78%** of the total amount requested.
- Support for the U.S. team's expenses may account for **no more than 22%** of the total amount requested (except for U.S. for-profit company applicants, who may not request any U.S. team support from CRDF).

INDIVIDUAL FINANCIAL SUPPORT (IFS)

- No IFS is permitted for U.S. team members other than U.S. graduate students.
- The U.S. Principal Investigator may request up to \$11,000 (for the entire award period) to support a participating U.S. graduate student.
- The Estonian team IFS should be calculated using the level of effort and professional level guidelines provided in Section II.G.1.a. of this Program Announcement.
- The Estonian team may request individual financial support for a graduate student (master course or PhD course) member of the team. The monthly limit for PhD student stipend is equal to \$590 US/6500 kroon (EEK) and for master course student \$410 US/4500 kroon EEK. The graduate student are eligible for receiving stipend from project only if he/she is not receiving at same time any stipend from governmental sources.

EQUIPMENT, SUPPLIES AND SERVICES

- All single items costing \$1,000 or more must be justified in the Budget Narrative.
- The U.S. team is not eligible to request support for large-scale equipment.

INSTITUTIONAL SUPPORT

- Estonian Institutional Support is calculated as 10% of the total Estonian team expenses funded by ETF.
- The total amount of Estonian institutional support requested for the entire award period may not exceed \$3,000.

ADMINISTRATIVE FEES

- The U.S. Principal Organization is allowed to request up to 10% of the U.S. team's expenses to cover administrative costs incurred by the university to administer the grant.
- This amount in conjunction with the U.S. team's expenses cannot exceed the 22% portion of the project total that the U.S. is allowed to request.

TRAVEL

- CRDF contribution to the Estonian team can only be used for travel.
- All Estonian and U.S. personnel must travel on the lowest-cost applicable round-trip airfare.
- Travelers must comply with the provisions of the Fly America Act. For more information, please see http://www.crdf.org/policies/policies_show.htm?doc_id=291723
- Domestic travel expenses for field work and other necessary project-related travel within Eurasia are allowed.
- Travel allowances for Estonian personnel on research visits within the U.S. must follow the guidelines set forth at http://www.crdf.org/policies/policies_show.htm?doc_id=291725.
- Travel allowances for U.S. personnel on research visits to Eurasia must follow the guidelines set forth at http://www.crdf.org/policies/policies_show.htm?doc_id=291099.
- The maximum time abroad for any one CRDF-supported traveler is eight months over the course of an award. No single visit may exceed four months.

U.S. FOR-PROFIT COMPANY CONTRIBUTIONS

- U.S. for-profit companies are required to cover all U.S. team expenses and should describe these expenses in U.S. Dollar amounts in the Budget and in the Budget Narrative.
- U.S. for-profit companies are required to contribute a cash, material or in-kind contribution of 10% of the total Estonian team expenses. This contribution should be described in the Budget Narrative.

ESTONIAN FOR-PROFIT COMPANY CONTRIBUTIONS

- The Estonian for-profit company must contribute 5-10% of the total Estonian expenses by committing a cash, material, or in-kind contribution and should indicate these expenses in U.S. Dollar amounts in the Budget and Budget Narrative.

APPENDIX 4
EXAMPLE OF U.S. PRINCIPAL INVESTIGATOR PARTNERSHIP STATEMENT

[U.S. Institution Letterhead]

[Date]

[U.S. Host Institution Address]

Re: [Full Proposal Title]

Dear CRDF,

I, [U.S. Principal Investigator Name], hereby acknowledge that I have submitted a proposal to the U.S. Civilian Research & Development Foundation's 2009 CGP-ETF Energy Research Competition jointly with [Estonian Principal Investigator Name] of [Estonian Institution Name].

If awarded, I undertake this research in good faith and will uphold my portion of the collaborative work as proposed in the submission.

Best regards,

[USPI Signature]

[USPI Typed Name]

FORM A: COVER SHEET

GENERAL PROJECT INFORMATION

Total Amount Requested from CRDF		Projected Length of Project (1-2 years)	
General Scientific Area (select from Appendix 1)		Sub-discipline (select from Appendix 1)	
Brief descriptive title of proposal (not to exceed twenty-five words)			
Is this proposal submitted as a continuation of a previous award?	YES <input type="checkbox"/> NO <input type="checkbox"/>	If yes, state previous award number	

INFORMATION ON THE ESTONIAN PRINCIPAL INVESTIGATOR

Full Name (Last, First, Middle)			
Position/Title			
Institution Name Complete Mailing Address			
Estonian Principal Investigator E-mail		Web Page Address	
Date of Birth (MM/DD/YY)		Personal Code	
Sex (Male or Female)		Highest Degree Earned	
Field of Degree		Year Awarded	
Telephone #		Fax #	
Name of Institution Director		E-mail Address	
Have you received a grant under a previous CRDF program or been a participant in a CRDF-funded workshop?			Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>If "Yes," please list program and grant number or workshop title.</i>			
Total Number of Estonian-based investigators, including Estonian Principal Investigator and graduate students			

INFORMATION ON THE U.S. PRINCIPAL INVESTIGATOR

Full Name (Last, First, Middle)			
Position/Title			
Institution Name Complete Mailing Address			
U.S. Principal Investigator E-mail		Web Page Address	
(Must Check One) <input type="checkbox"/> Permanent Resident <input type="checkbox"/> U.S. Citizen			
Sex (Male or Female)		Highest Degree Earned	
Field of Degree		Year Awarded	
Telephone #		Fax #	
U.S. Institutional Representative Name & Title		E-mail Address	
U.S. Institutional Representative Address		Phone	Fax
Have you received a grant under a previous CRDF program or been a participant in a CRDF-funded workshop?			Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>If "Yes," please list program and grant number or workshop title.</i>			
Total Number of U.S. investigators, including U.S. Principal Investigator and graduate students			

SIGNATURES *Signed copies of this cover sheet ARE REQUIRED*

Estonian Principal Investigator Signature		Date	
Estonian Institute Director Signature		Date	

Form B: Personnel Data

(For all members of the **Estonian and U.S. team** other than the Principal Investigators. Please copy this page as necessary.)

IMPORTANT: U.S. personnel are not required to offer information regarding their Date of Birth.

Full Name (Last, First /Middle)				<input type="checkbox"/> Estonian Participant
				<input type="checkbox"/> U.S.Participant
Current Position Institution Name Complete Mailing Address				
E-mail Address		Fax Number		
Highest Degree and Year Awarded		Personal Code		
Sex (Male or Female)		Date of Birth (MM/DD/YY) Estonian Participants Only		
Classification on Project (please check one)				
Researcher/Engineer <input type="checkbox"/>	Technical/Scientific Support <input type="checkbox"/>	Student <input type="checkbox"/>	Administrative/Clerical Support (Estonian Only) <input type="checkbox"/>	
Have you received a grant under a previous CRDF program or been a participant in a CRDF-funded workshop?			Yes <input type="checkbox"/>	No <input type="checkbox"/>
If "Yes," please list program and grant number or workshop title.				
Does the listed individual have experience in weapons-related subjects?			Yes <input type="checkbox"/>	No <input type="checkbox"/>
Short Curriculum Vitae (past employment experience, educational history, and relevant publications):				

Full Name (Last, First, Middle)				<input type="checkbox"/> Estonian Participant
				<input type="checkbox"/> U.S. Participant
Current Position Institution Name Complete Mailing Address				
E-mail Address		Fax Number		
Highest Degree and Year Awarded		Personal Code		
Sex (Male or Female)		Date of Birth (MM/DD/YY) Estonian Participants Only		
Classification on Project (please check one)				
Researcher/Engineer <input type="checkbox"/>	Technical/Scientific Support <input type="checkbox"/>	Student <input type="checkbox"/>	Administrative/Clerical Support (Estonian Only) <input type="checkbox"/>	
Have you received a grant under a previous CRDF program or been a participant in a CRDF-funded workshop?			Yes <input type="checkbox"/>	No <input type="checkbox"/>
If "Yes," please list program and grant number or workshop title.				
Does the listed individual have experience in weapons-related subjects?			Yes <input type="checkbox"/>	No <input type="checkbox"/>
Short Curriculum Vitae (past employment experience, educational history, and relevant publications):				

FORM C: PROJECT BUDGET (COMPLETE IN US DOLLARS)

Individual Financial Support		ETF	CRDF	
			Estonian Team	U.S. Team
Participant Name <i>(Please add rows if necessary)</i>	Number of Full Months			<i>Note: Grad Student Stipends Only</i>
1.				
2.				
3.				
4.				
5.				
TOTAL INDIVIDUAL FINANCIAL SUPPORT				
Equipment, Supplies and Services <i>(Please list. All items over \$1,000 must be justified in the Budget Narrative. Rows may be added as necessary.)</i>				<i>Note: Expendable materials & supplies only</i>
1.				
2.				
3.				
4.				
5.				
TOTAL EQUIPMENT, SUPPLIES AND SERVICES				
Travel <i>(Please describe in Budget Narrative.)</i>			-----	-----
Domestic Transportation				
Domestic Per Diem				
International Transportation				
International Living Allowance/Per Diem				
Other Travel Expenses (e.g. visa fees, conference registration fees, etc.)				
TOTAL TRAVEL				
TOTAL RESEARCH EXPENSES				
ESTONIAN TEAM INSTITUTIONAL SUPPORT (UP TO 10% OF TOTAL ESTONIAN TEAM EXPENSES – \$3,000)				
U.S. TEAM ADMINISTRATIVE FEE (UP TO 10% OF U.S. TEAM EXPENSES – \$1,100)				
TOTAL EXPENSES				
TOTAL COST-SHARING FROM NON-CRDF AND NON-ETF SOURCES <i>(including For-Profit and In-Kind contributions - please describe in</i>				
PROJECT COST SUBTOTAL				
TOTAL PROJECT COST (U.S. + ESTONIAN EXPENSES)				

FORM D: OTHER SOURCES OF SUPPORT OF KEY PERSONNEL
(Required for BOTH Principal Investigators. Please copy this page as necessary.)

“None” – Check here if no other sources of support are listed.

Investigator Name			
Support	<input type="checkbox"/> Current <input type="checkbox"/> Pending Submission Planned in Near Future		
Project/Proposal Title			
Source of Support		Level of Effort (%)	
Award Amount		Period Covered	
Location of Research			

Investigator Name			
Support	<input type="checkbox"/> Current <input type="checkbox"/> Pending Submission Planned in Near Future		
Project/Proposal Title			
Source of Support		Level of Effort (%)	
Award Amount		Period Covered	
Location of Research			

Investigator Name			
Support	<input type="checkbox"/> Current <input type="checkbox"/> Pending Submission Planned in Near Future		
Project/Proposal Title			
Source of Support		Level of Effort (%)	
Award Amount		Period Covered	
Location of Research			