

CRDF Global Request for Proposals (RFP)

2017 U.S.-Russian University Alternative Energy Research Competition

Proposal Deadline: Thursday, April 20th 2017 (23:59) U.S. Eastern Standard Time (EST)

TABLE OF CONTENTS	Page
<u>I. COMPETITION SNAPSHOT</u>	2
<u>II. BACKGROUND</u>	2
<u>III. SCOPE AND PURPOSE</u>	2
<u>IV. ELIGIBILITY</u>	4
<u>V. REVIEW OF PROPOSALS</u>	5
<u>VI. PROPOSAL PREPARATION AND SUBMISSION</u>	6
<u>A. Proposal Submission</u>	6
<u>B. CRDF Global Policies and Applicant Resources</u>	7
<u>C. Proposal Formatting</u>	7
<u>D. Proposal Elements</u>	8
<u>VII. ALLOWABLE COSTS</u>	11
<u>VIII. CRDF GLOBAL EXPECTATIONS OF GRANTEES</u>	13
<u>IX. ADDITIONAL INFORMATION AND SUPPORT</u>	13
<u>X. CHECKLIST OF ITEMS REQUIRED FOR PROPOSAL SUBMISSION</u>	14
<u>APPENDIX A: Application Forms</u>	16

I. COMPETITION SNAPSHOT

Eligible Applicant(s)	Teams comprised of scientists employed at U.S. Universities, who are currently working on collaborative research projects with a team of Russians that are employed at Russian Universities. Only the U.S. side of the collaborative team will be funded through this program. U.S. teams will be responsible for demonstrating that they are currently working on collaborative research projects in the eligible topic/scientific areas with Russian counterparts.
Competition Opens	Friday, February 17th, 2017
Submission Deadline	Thursday, April 20th, 2017 (23:59) U.S. Eastern Standard Time (EST)
Announcement of Results	September 2017 Principal Investigators should expect projects to start approximately 60-90 days after results are announced.
Eligible Research Scope	Alternative Energy
Project Duration	Up to 1 year
Award Amounts	No More than \$50,000 USD for 1 year of support
Complete Competition RFP and Proposal Forms	Download RFP and Word version of proposal forms and templates at: http://www.crdfglobal.org/funding-opportunities/USRussiaEnergy2017
How to Apply	All proposals must be submitted through the Electronic Proposal Submission (EPS) website: https://eps.crdfglobal.org/USRussia2017 (NOTE: website will be active on Friday, March 3rd, 2017) E-mail attachments and hard copies will <u>not</u> be accepted. For more information and instructions please refer to Section VI. A.
Program Point of Contact	Dylan Helgeson, CRDF Global, dhelgeson@crdfglobal.org

II. BACKGROUND

CRDF Global is an independent nonprofit organization that promotes international scientific and technical collaboration through grants, technical resources, training, and services. CRDF Global's Research Partnerships (RP) competitions enable cross-border collaboration and the strengthening of international research through the implementation of peer-reviewed research grant competitions. Research partnerships open avenues for new research directions and foster new collaborative opportunities for U.S. and non-U.S. scientists. More information about CRDF Global and the RP competitions can be found at <http://www.crdfglobal.org>.

III. SCOPE AND PURPOSE

The International Energy Outlook 2016, published by the U.S. Energy Information Administration (EIA), projects that world energy consumption will increase by 48% by the year 2040. The EIA projects that this increase in demand for electricity will be driven by a burgeoning global population and rapid economic growth in a number of

emerging economies. Finding alternative, clean, renewable sources of energy and lowering energy consumption will be key components to addressing the depletion of finite shared natural resources, combatting environmental degradation, and ensuring sustainable long-term economic growth as this increase in global demand continues to rise. In recognition of the fact that the quest for diverse and sustainable sources of energy is an international undertaking, CRDF Global is accepting proposals from U.S. researchers who will collaborate with Russian teams in basic research projects addressing alternative energy in one of the following two categories:

1. **Renewable and alternative energy for electricity (solar, wind, wave, geothermal)**
2. **Renewable and alternative energy for fuels (chemical and biofuels)**

Research projects may address any aspect of alternative energy production within these two sub-topics, including improved efficiency, novel approaches to energy production, and/or improvement of energy storage devices.

Proposals must involve research in one of the two acceptable sub-topics in order to be eligible for consideration.

Only proposals involving non-commercial research in any of the above topics will be accepted. Please note that while research may lay the groundwork for future commercialization efforts, this should not be the primary purpose of any proposed research project submitted to this competition. CRDF Global expects research results to be included in peer-reviewed publications and to contribute to the general body of publicly available international scientific knowledge in its respective field(s).

The primary goals of the competition are to:

- Support high-quality, innovative international research by teams of U.S. and Russian researchers in alternative energy.
- Encourage diversity in the international science community, and
- Establish sustainable joint U.S. - Russia university research collaborations.

The strongest proposals will include all of the following (which may be addressed in sections other than the project narrative):

- Clear statement of the problem and its economic, social, and/or environmental implications for the international community
- Research plan and project narrative that describe how the proposed research will contribute to the solution or further understanding of the problem
- Brief discussion of existing scientific literature on the issue and how the proposed research differs from current activities
- Monitoring and evaluation schedule that outlines how the project will be assessed and potential measurable outcomes. How will the research team track progress towards the stated outcomes and evaluate the overall impact of the project?
- Competencies of the U.S. research team, including how they will coordinate individuals aspects of the proposed research project
- Inclusion of female researchers, multiple early career scientists, and students who will make valuable contributions to the project while furthering their own professional development
- Evidence that the activities in the grant will contribute towards sustaining existing or creating new collaborative relationships between Russian, U.S. and other international researchers. For example, U.S. team members may visit their Russian collaborator's laboratory or research sites to exchange ideas, conduct joint research experiments, and/or provide training on cutting edge techniques. Applicants should include a brief discussion on how these activities may facilitate new or strengthen existing collaborations, especially where young researchers or students may be involved.

Grant awards, each **up to \$50,000 USD**, will be made to research teams of U.S. scientists working on a collaborative research project with counterparts located at a Russian University. Grants will be made over one year with the possibility of a no-cost extension.

Duration and start date of the project:

- Upon announcement of award selection, **finalists may not begin any project activities or incur any project expenses** until a grant agreement has been signed by CRDF Global. This process can take 60-90 days from the time of award announcement and should be taken into consideration when preparing the proposal timeline.
- **The duration of the project** shall be 12 months from the date an award agreement enters into force (i.e. is signed with CRDF Global). Up to a one year no-cost extension of the project may be granted with strong justification.
- **CRDF Global recommends that applicants establish a research timeline** by semi-annual segments, per the [Milestone Plan](#).

IV. ELIGIBILITY

All proposals must meet **each** of the following eligibility criteria:

1. **The Research Team** must be comprised of scientists employed at a U.S. academic institution, hereafter referred to as the Primary Institution¹. This research team must be in the process of collaborating or plan to collaborate with a team of scientists employed at a Russian University to conduct the research described in the proposal.

While the expectation is that U.S. teams will work with Russian collaborators, Russian partners must be funded separately. No award funds may be utilized to support the Russian team.

2. **All proposals** must include **one PI**:
 - a) Possessing the degree of Ph.D., M.D., or the equivalent research experience and
 - a) Have at least five (5) scientific publications in peer-reviewed scientific literature² (or show an equivalent measure of scientific capacity)
3. **The PI and participants**, 1) must be legally employed by a U.S. university and 2) must reside in the U.S. during the course of the CRDF Global project. Graduate students on the U.S. team may be foreign nationals, but they must be enrolled full-time in an accredited degree program at the U.S. institution.
4. **All projects** must be oriented toward non-military objectives and must be carried out in a civilian research environment.
5. **All proposals** must include **participation by at least one student/postdoctoral researcher** who will make substantive contributions to the research while receiving practical opportunities for professional development in the natural sciences or engineering. These opportunities should be described in the "Student/Post-Doctoral Researcher Mentorship Plan"
6. **All projects** must focus on basic research targeting the areas of alternative energy research listed in [Section III. Scope and Purpose](#).
7. Investigators from U.S. institutions other than the Primary Institution may be included as collaborators at the discretion of the PI. Collaborators whose institutions are requesting project funds should be designated as Secondary Institutions³.

¹ "Primary Institution" is a corporation, partnership, association, institution or other organization that receives assistance under the award Agreement and is responsible for carrying out the Project as specified in the approved proposal.

² If the applicant has received his or her academic degree in the past six (6) years, three (3) publications are required.

³ Secondary institutions are those other than the Primary Institution that will participate in the proposed project and receive financial support under a CRDF Global award. Secondary Institutions may participate in the form of sub-contracted work and may include any allowable costs described in this program.

8. Each proposal is evaluated independently and therefore should not be part of, nor depend on the success of other proposals submitted to this program.

Renewed Funding and Multi-Project Applications

CRDF Global accepts new proposals that are submitted as a continuation of previous and current awards⁴, as long as the previous/current CRDF Global award is within six months of completion as of the submission deadline. Applicants must also be up-to-date on the submission of all progress reports, including final project reports. All status reports from previous or existing awards will be available to expert reviewers. Proposals that are continuations of previous awards must be submitted according to the “Proposal Elements” as directed in [Section VI.D Proposal Elements](#) of this RFP. Applications should include a summary of achievements from the previous or existing awards in the project narrative. This information related to this grant should also be provided in **Form F** of your proposal.

Principal Investigators and key team members may also apply to CRDF Global for more than one project in the same competition; however, PIs are not eligible to receive funding more than twice: i.e. once as a PI, once as a participant **OR** twice as a participant.

CRDF Global reserves the right to restrict the participation of any individual or institution in its programs.

CRDF Global 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 Global not to conduct any transactions with U.S. restricted entities without appropriate authorization from the U.S. Government.

Applicants unclear about any eligibility criteria are encouraged to contact Dylan Helgeson at CRDF Global (dhelgeson@crdfglobal.org)

V. REVIEW OF PROPOSALS

A. Review Process

All proposals and information contained therein will remain confidential prior to the award and will be screened for eligibility and completeness upon receipt by CRDF Global. All eligible proposals will be subjected to a technical review process by U.S. scientific experts in the appropriate fields. The experts will use the criteria described below to evaluate the scientific merit of each proposal, and make funding recommendations. A decision on the selection of finalists will be made by CRDF Global based on the proposal’s overall rating, and these funding recommendations. CRDF Global will announce results via e-mail and all decisions are final. All awards are subject to the availability of funding.

CRDF Global will notify PIs of award results via e-mail. All awards are subject to the availability of funding from program sponsors. All decisions by CRDF Global are final.

B. Evaluation Criteria

Primary Criteria:

- **Technical Merit.** Whether the project proposes innovative methods and how well the individual elements of the research plan fit with the overall project goals.
- **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.

⁴ “CRDF Global Awards” does NOT include funding received through CRDF Solutions.

- **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. Have the investigators included a schedule for monitoring and evaluation? Are proposed outcomes reasonable and measurable in the context of the project plan?
- **Personnel Capacity and Collaborative Benefits.** 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.
- **Benefit to Education and Infrastructure:** Appraisal of the project's provision of opportunities for personnel (participation of early-career and/or 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.

Secondary Criteria: The primary evaluation factor that will determine a proposal's fundability is scientific merit followed by the other criteria laid out above. However, in cases where two or more proposals are deemed to be of equal scientific merit, special consideration will be given to:

- Projects that incorporate female investigators or early-career scientists⁵,
- Projects that incorporate students or post-doctoral researchers in excess of the minimum required for eligibility.
- Projects that budget for travel to their Russian counterpart's institution.
- Principal Investigators who have not previously received funding from CRDF Global.

VI. PROPOSAL PREPARATION AND SUBMISSION

Only proposals submitted according to the instructions and which follow the formatting and include all of the required elements listed below will be considered responsive and reviewed.

A. Proposal Submission

All proposals must be submitted electronically through CRDF Global's Electronic Proposal Submission (EPS) website, no later than **Thursday, April 20th 2017 (23:59) U.S. Eastern Standard Time (EST)**

<https://eps.crdfglobal.org/USRussia2017>
(EPS website will be active by March 3rd)

Note: Submission through this website **does not** require previous registration.

PI should develop the proposal and obtain the concurrence of the Institute Leadership Representative. Once the proposal has been finalized, the PI should submit the proposal through the EPS website. Proposals should be submitted only one time.

At the conclusion of the electronic submission process, the PI will receive a confirmation message from CRDF Global. A copy of this message will also be sent to the U.S. Institute Leadership Representatives identified in the proposal. Further instructions on electronic proposal submission are available at the above website.

Proposal application materials submitted to CRDF Global must be prepared in English and compiled in the following separate document files for submission to the EPS. Acceptable file formats are MS Word (.doc) or Adobe Acrobat (.pdf).

⁵ An Early-Career Scientist is defined as a scientist/researcher who has completed his/her Ph.D. (or equivalent) in the within the last five (5) years from the competition deadline.

Required:

1. Completed proposal document (all applicable elements under [Section VI.D Proposal Elements](#)) combined into a SINGLE PDF, Word, or Zip file.
2. Abstract
3. Project Budget (uses Budget Template; submitted as an Excel document (.xls)).
4. PI and participant Curricula Vitae (CV) documents, including the Russian PI.

For questions about the proposal submission process, please contact Dylan Helgeson at: dhelgeson@crdfglobal.org.

B. CRDF Global Policies and Applicant Resources

Before Writing a Proposal applicants should review all documents and policies on the [CRDF Global Applicant Resources page](#).

Anti-Plagiarism: CRDF Global will not provide funding to an application in which plagiarism exists. All applications for funding submitted to CRDF Global will be thoroughly screened for plagiarism against a large number of sources including published research papers, books, conference abstracts, and websites. When plagiarism is detected, the program within CRDF Global that is overseeing the funding opportunity will determine the specific action to be taken. Action taken may include, but is not limited to a) informing the applicant that plagiarism has been discovered; b) excluding the applicant from the funding opportunity; c) informing the applicant's institution; d) informing reviewers; e) informing organizations collaborating with CRDF Global on the funding opportunity; f) barring the applicant from participation in future funding opportunities.

Confidentiality of Proposals and Applicant Information: CRDF Global assures confidentiality of all proposals' 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. Such passages will be withheld from public distribution if the proposal is successful. For more information please refer to [Section VI.D.4](#).

[Resources for Competitions Applicants](#) (includes sample forms and suggestions on how to avoid common mistakes in proposal preparation. Click to view the documents.)

- Grant Writing Tips
- Competition Application FAQs
- Cost-Sharing and Participation of For-Profit Companies
- CRDF Global Research Areas
- Resource Guides and Templates for Writing a Curriculum Vitae (CV)
- Plagiarism Policy and Standards

C. Proposal Formatting

- Typed
- Single-spaced
- One-inch margins on ALL sides
- Font size of no less than Arial 10pt (Times New Roman 10pt font is not acceptable)*

**A font size of less than 10 points may be used for mathematical formulas or equations, figure, table or diagram captions and when using a Symbol font to insert Greek letters or special characters. Pls are cautioned, however, that the text must still be readable.*

D. Proposal Elements (required unless otherwise noted)

Applicants are required to follow instructions and use the electronic forms and templates downloadable in a fillable format here: <http://www.crdfglobal.org/funding-opportunities/USRussiaEnergy2017>

Detailed information for all necessary elements of a proposal is listed below. Appendices may not be included. Any proposal submitted without ALL required information, including signatures and forms, may be disqualified and removed from the competition. Applicants are encouraged to carefully review proposals prior to submission to ensure accuracy and completeness.

The following sections should be compiled into one proposal document.

- 1. Principal Investigator Letter and Terms Agreement:** The PI must provide a signed statement on institutional letterhead certifying her or his agreement to the collaborative research project. Use the example Cover Letter in [APPENDIX A](#) and include a scanned copy in the proposal document.
- 2. Cover Sheet:** Project title and basic information about the project. Information about the PI and Institutional Leadership Representatives (individuals who would be responsible for negotiating contractual and financial terms in the event of an award).

This information must also be entered during the electronic proposal submission process.

- 3. Project Abstract:** In one concise paragraph, summarize all relevant aspects of the project, with special attention to its goals and objectives, methods, and anticipated results.
- 4. Project Narrative:** Ten (10) pages maximum, including any graphs, diagrams, and photos. PIs are cautioned that the Project Narrative must be self-contained, and that URLs providing information related to the proposal should not be used.

The following should be described in the Project Narrative:

- The approach, objectives, milestones, and measurements of success that will be used;
- A clearly defined project timeline, noting all project tasks and goals to be accomplished on a quarterly basis. It is recommended that applicants prepare a research timeline in terms of quarters (e.g. Quarter 1, Quarter 2, etc.) Applicants should also include a brief monitoring and evaluation plan, as described in [Section V.B](#);
- How the individual and combined competencies of the Russian 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 Global awards must also be described;
- The anticipated results of the project and how they address the CRDF Global evaluation criteria listed in [Section V.B](#);
- How the project compares to current research conducted in the topic area;
- Facilities, equipment, and other resources available at the U.S. and Russian institutes directly applicable to the project including those from secondary institutions. This should address the adequacy of the resources available to perform the effort proposed. The description should be written narratively and not include any financial information;
- Requested equipment to be utilized in the project, with special focus on justifying any equipment requested from CRDF Global; and

- How the PI will coordinate project implementation and assess progress at regular intervals. Each project must involve significant and substantive cooperation between the Russian and U.S. teams. All proposed international travel to be funded under the project must be described in terms of its purpose and duration.
- If applicable, project narratives should include a summary of achievements from related previous CRDF Global awards. Information related to this grant should also be provided in ‘**Previous CRDF Global Awards Form**’ of the proposal.
- Patentable ideas, trade secrets, privileged or confidential commercial or financial information, disclosure of which may harm the proposer, should be included in the proposals only when such information is necessary to convey an understanding of the proposed project. Such information must be clearly marked in the proposal and appropriately labeled as:

"The following is (proprietary or confidential) information that (name of proposing organization) requests not be released to persons outside of CRDF Global, except for purposes of review and evaluation."

CRDF Global expects strict adherence to the rules of proper scholarship and attribution. The responsibility for proper scholarship and attribution rests with the authors of a proposal; all parts of the proposal should be prepared with equal care for this concern. **All contributing authors, including any PIs and team participants, should be named and acknowledged at the bottom of the Project Narrative section.**

EXAMPLE:

Contributing Authors: NAME (Russian PI), NAME (U.S. team-researcher)

5. **References Cited:** Reference information for the Project Narrative is required. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Identify the website address if the document is available electronically. While there is no page limitation for the References Cited, this section must only include bibliographic citations and not be used to provide parenthetical information outside of the Project Narrative.
6. **Student/Post-Doctoral Researcher Mentoring Plan:** As part of CRDF Global’s efforts to provide opportunities for students/postdoctoral researchers, the team must include at least one student or early-career scientist⁶ who will have substantive involvement in the research project. To that end, each proposal must include a description of the mentoring activities provided for students/postdoctoral researchers. In no more than one page, describe the mentoring plan for all students and postdoctoral researchers from the team including any from secondary institutions. The Mentoring Plan may not be used to circumvent the Project Narrative page limitation.
7. **Key Participant Data Form:** A Key Participant Data Form must be completed for each additional participant on the project, including researchers/engineers, technical/scientific support staff, any graduate and undergraduate students, and participants from secondary institutions.

Note:

- For additional team participants only, PIs do not need to complete a form with their own information
- Each form should not exceed one page
- For planned students not yet identified, complete a form as “Planned Student” indicating, at a minimum, the anticipated institution, level of education, and role
- Each form should be accompanied by the CV for the team participant. All CVs are to be compiled and submitted in a separate document

⁶ An “Early Career Scientist” is defined as a scientist/researcher who has completed his/her Ph.D. (or equivalent) within the last five (5) years from the competition deadline.

- 8. Project Milestone Plan:** A milestone plan must be submitted, describing specific milestones to be accomplished by the team during project implementation.

Please note the following when preparing the milestone plan:

- Milestones are discrete activities that allow the awardee to achieve the overall objectives described in the project narrative. Milestones should reflect realistic accomplishments that can be verified by CRDF Global. Examples of such milestones include, but are not limited to: sample collection, sample sharing, data collection, data sharing, data analysis, trainings, or travel for a specific task under the proposed project.
- Milestones must be verifiable through submission of documentation or other deliverables (e.g. photos, purchase orders, training materials, reports, or other tangible proof that the activities occurred).
- Each milestone should be clearly described and include a corresponding deliverable.
- The amount of funding requested (on a semi-annual basis) should be included in the milestone plan.

- 9. Budget Narrative.** Complete a budget narrative for the Primary Institution and any Secondary Institution(s). (Should correspond to each separate Budget 'sheet' in the template). An explanation of all budget items must be included in the Budget Narrative Form.

Applicants should specifically: 1) Itemize all equipment, supplies and services with per unit costs; 2) Justify in detail, requested equipment items with a value over \$1,000; 3) Describe all travel costs, including which team participants are traveling and the purpose for travel; 4) Calculate and list per diem rates, lodging costs, estimated airfare and other travel expense.

- 10. Statement of Other Support Form:** The PI must list 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 this proposal has also been submitted to another organization, please indicate this information clearly on the form. **Should a PI have no other sources of support, check the box marked "None" at the top of the form, and include this page with the proposal.**

- 11. Previous CRDF Global Awards – if applicable:** The PI must **complete this form** for **each** previously held CRDF Global award, if it is **directly** related to the research objectives outlined in the current proposal. Individual forms should not exceed one page.

- 12. List of Suggested Reviewers or Reviewers Not to Include (optional):**

If applicants would like to suggest experts they believe to be well qualified to review their proposal or designate persons that they prefer not complete review, these suggestions should be indicated on this form. Justification must be provided for persons not preferred to review.

Note:

- This form will only be used for CRDF Global's review process – please limit suggestions to only U.S. experts
- No more than 10 suggestions are permitted for each list
- No suggested reviewers that have a conflict of interest with the proposal will be considered
- Identities of reviewers will not be disclosed nor will the decision to use these suggestions
- These suggestions are optional, and the decision on whether or not to use the suggestions remains with CRDF Global

- 13. Russian PI Letter of Commitment:** The Russian **PI** must draft a letter, written on institutional letterhead, stating that if the U.S. PI's proposal is selected, that they will participate in the collaborative research project described in the proposal.

The following documents should be prepared and uploaded separately from the main proposal file:

1. **Project Budget:** Prepare ONE Project Budget using the Budget Template with a separate budget sheet completed for each Primary Institution and Secondary Institution. The budget should cover the entire award period. Each line item should be calculated based on actual costs – you should include receipts, quotes, or website links to support calculations for equipment, supplies, and services in the budget narrative. Applicants should refer to [Section VII. Allowable Costs](#) for information required in the budget.

Download Budget Template here: <http://www.crdfglobal.org/funding-opportunities/USRussiaEnergy2017>

2. **Team Participant Curricula Vitae (CV) in one file:** Applicants must provide copies of all team participants' CV, **including the Russian PI**, in a file separate from the main proposal file.

Each CV should include the individual's name, title, educational background, current and previous institutional affiliations with dates, area of expertise, and his or her scientific publications of relevance to the project. Please visit the [Resource guides and templates for writing a Curriculum Vitae \(CV\)](#) page on the CRDF Global website for assistance.

- PI CVs should be no more than five (5) pages. The PI must list at least five publications of relevance (if the PI has received his or her Ph.D. in the past six years, three publications are required)
- Team participant CVs should be no more than two (2) pages.

* Please ensure a full CV corresponds to each Key Participant Form in the main proposal file.

CRDF Global reserves the right to require greater detail if necessary to proceed with award selection.

VII. ALLOWABLE COSTS

Note: While this program intends to support research collaborations between scientists employed at U.S. and Russian Universities, only costs incurred by the U.S. side of the collaboration will be supported.

The maximum total award is up to \$50,000 USD disbursed over one year. Awardees may be eligible for up to a one-year no-cost extension, which may be requested within the final quarter of the one-year award period. Funds will be administered directly to the institutions involved.

Secondary institutions may participate in the form of sub-contracted work and request funds in accordance with the allowable costs of the team. A separate budget justification for each secondary institution must be included in the Budget Narrative.

In the case of an award, a project budget may be subject to revision by CRDF Global staff.

CRDF Global will distribute support as a fixed obligation grant (FOG). Teams should refer to the instructions below for submitting all documentation necessary to execute fixed obligation grants:

1. **Milestone Plan.** The [Project Milestone Plan](#) should identify and describe specific milestones to be accomplished by the team during project implementation. CRDF Global staff and external peer reviewers will evaluate the plan to ensure that milestones are directly relevant to the overall research project, can be delivered in accordance with the timeline, and can be supported by appropriate documentation.
2. **Budget.** Teams must also submit a line-item project budget using the Budget Template Excel File available for download at the following address: <http://www.crdfglobal.org/funding-opportunities/USRussiaEnergy2017>. If selected for an award, CRDF Global staff may request additional information or supporting documentation before finalizing an award agreement.

Project budgets should be calculated in accordance with the following guidelines:

Funding may be requested for the following expenses:

- 1) **Individual Financial Support/Labor Costs (IFS):** “IFS” is defined as payments made to individual team participants for work performed on the project (i.e., labor costs). Include all benefits and fringe costs within the labor rate. They may not exceed the applicant institute’s rates and must be documented in the proposal’s budget narrative.

Student stipends are permissible and may include fringe benefits or tuition remission. For planned students not yet identified, clearly indicate their participation and request for support in the Budget Narrative.

- 2) **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 supplies/materials to be used in the research. In general, materials and supplies are defined as tangible personal property, other than equipment, costing less than \$1,000 USD, or other lower threshold consistent with the policy established by the proposing institute. Any item of requested equipment valued at more than \$1,000 USD must be specifically described and justified in the Budget Narrative.

Budget items should be listed individually – items listed generally as “supplies” or “services” will NOT be accepted. Each line item should be calculated based on actual costs.

- 3) **Travel:** Meals and incidentals (M&IE) and lodging per diem rates **at no more than** U.S. government rates. For travel in the U.S.; <http://www.gsa.gov/portal/category/21287>; For non-U.S. travel; https://aoprals.state.gov/content.asp?content_id=184&menu_id=78
- 4) **Indirect Costs (IDCs).** Applicants (Primary Institutions and Secondary Institutions) may request indirect costs/ overhead expenses on all direct costs except for equipment (over \$5,000), capital expenditures, rent, student tuition, participant support costs⁷ and sub-awardees expenses (after the first \$25,000). Total direct costs minus these items is considered the “modified total direct cost” (MTDC) amount for which the IDC rate should be applied. IDCs combined with the total direct costs cannot exceed the funding total allowed to request. Below are helpful calculations:

- **IDC \$ = IDC% x MTDC \$**
- **Maximum Total Sub-Team budget = total direct costs \$ (including MTDC) + IDCs \$**

Institutions with a Negotiated Indirect Cost Rates Agreement (NICRA) may request up to their approved NICRA rate. If an institute requests IDCs at their NICRA rate, documentation for these rates should be provided in the budget narrative.

Institutions without a NICRA and who wish to request IDCs should request **10%** of MTDC.

⁷ Participant Support costs include stipends or subsistence allowances, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with meetings, conferences, symposia or training projects, scholarships/fellowships.

VIII. CRDF GLOBAL EXPECTATIONS OF AWARDEES

Awardees from this competition will be expected to:

- Publish research results directly related to the awarded project in a minimum of one (1) international peer-reviewed publication before the submission of the project's final report.
- Submit two (2) semi-annual progress reports (including deliverables) and one (1) final project report.

IX. ADDITIONAL INFORMATION AND SUPPORT

For further information about this program, please contact the program staff below. **Inquiries by e-mail are strongly encouraged and will result in prompt response.**

Dylan Helgeson

Program Assistant

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Phone: 703-526-4788

E-mail: dhelgeson@crdfglobal.org

X. CHECKLIST OF ITEMS REQUIRED FOR PROPOSAL SUBMISSION

BEFORE submitting through CRDF Global's Electronic Proposal Submission (EPS) site, please ensure you have the following documents/information prepared as specified and ready to upload from your computer.

A. Proposal Document Checklist

1. Documents/Information combined into a SINGLE PDF, Word, or Rich Text file:

- General**
 - Proposal topic and project plan are responsive to the RFP
 - Proposed work is appropriate for funding by CRDF Global
- Letter and Terms Agreement**
 - Signed by both PI and Institute Representative
 - On Institutional Letterhead
- Cover Sheet**
 - All fields are completed
- Project Abstract**
 - Does not exceed 350 words
- Project Narrative**
 - All project criteria are addressed
 - Text is within ten (10) page limit
 - Formatted properly (typed, single spaced, one inch margins, page numbers, font no smaller than Arial 10 pt)
 - Authors names are included at end of section
- References Cited**
- Student/Early-Career Scientist Mentoring Plan**
 - Includes at least one student or early-career scientist
 - Written with specific information regarding mentoring activities
 - No more than one page
- Key Participant Information Forms**
 - One for each team participant (other than PI) and does not exceed one (1) page each
- Project Milestone Plan**
 - Written based on the instructions provided and sample.
 - Should include clear, discrete, verifiable milestones; deliverables must be associated with each milestone
- Budget Narrative Forms**
 - One for the Primary Institution and each Secondary Institution (if applicable) with a corresponding 'sheet' in the Project Budget (Budget Template submitted as a separate document).
 - All expenses listed in the Project Budget are described.
 - Any equipment valued over \$1,000 includes an additional detailed justification.
 - For travel expenses, all trips are justified with description of who is traveling, to where and for how long. Airfare, lodging, visa, and per diem costs for each trip are clearly stated.
 - Cost share is described in detail.
- Statement of Other Support Form**
 - If there is no other support reported, the form is completed with the PI's name and the "none" box checked at the top of the page
- Previous CRDF Global Awards (if applicable)**
 - Does not exceed one (1) page per award
- Russian PI Letter of Support**
 - Letter written on institutional letterhead
 - Acknowledges that the Russian PI will undertake this collaborative project with the U.S. PI if the proposal is selected for funding.
- List of Suggested Reviewers or Reviewers Not to Include (optional)**
 - No more than 10 suggestions are permitted for each list

2. Additional Documents to be uploaded to website as SEPARATE files from the main proposal file:

- Proposal Budget (Use Excel Budget template)**
 - One Project Budget with a separate budget sheet for the Primary Institution and each Secondary Institution (if applicable)
 - Follows allowable cost guidelines, as outlined in Section VII above
 - Cost-shares are reported as a monetary value. Mandatory cost-share is included.

- **CV for PIs and all team participants**
 - Russian U.S. PI CVs. No more than five (5) pages.
 - Team participant CVs are not more than two (2) pages.
 - Each Key Participant Data Form has a corresponding detailed CV compiled as a separate document which is submitted separately from the proposal

C. Submission Requirements

- **CRDF Global Submission Requirements:** All documents submitted to CRDF Global MUST be entered through the program' specific Electronic Proposal Submission (EPS) website; proposals sent as e-mail attachments will NOT be accepted.
- The following documents to be uploaded to website as SEPARATE files (total of three files):
 - Proposal combined into a SINGLE PDF or Word file
 - Project Budget on a SINGLE Excel budget Template
 - CV for all participants combined into a SINGLE PDF or Word file

APPENDIX A
Application Forms

PRINCIPAL INVESTIGATOR COVER LETTER AND TERMS AGREEMENT

Please complete using this Template/Sample.

[INSTITUTE LETTER HEAD]

Re: [Full Proposal Title]

I, [Principal Investigator (PI) Name], hereby acknowledge that I have submitted a proposal to *U.S.-Russia, 2017 RFP*. I will be collaborating with [collaborating PI Name(s)] of [collaborating PI 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.

I attest that the information contained in this proposal is truthful and that it has been prepared with the full knowledge and consent of [Institutional Leadership Representative Name], leadership representative of [Institution].

I affirm that I have read and understand CRDF Global's policies and standards outlined within the *U.S.-Russia, 2017 RFP*, including CRDF Global's Plagiarism Policy⁸. I agree to adhere to CRDF Global's Plagiarism Policy, and understand that CRDF Global will not provide funding to an application in which plagiarism exists. If plagiarism is detected, penalties may be imposed up to and including my exclusion from this funding opportunity and barring my participation in future funding opportunities.

Principal Investigator Signature

Date

Institution Leadership Representative Signature

Date

⁸ [For more information, please see CRDF Global's Plagiarism Policy](#)

COVER SHEET

GENERAL PROJECT INFORMATION			
Project Title <i>(not to exceed 25 words)</i>	Title		
Amount Requested <i>(excludes cost-shares)</i>	Total	Cost-Share Amount	Total
	\$Amount.		\$Amount.
Research Categorization ⁹	Research Area	Sub-Research Area	Research Focus
	Research Area	Sub-Research Area	Research Focus
Duration of Project	Months		

U.S. TEAM INFORMATION ONLY						
INSTITUTION INFORMATION						
Institute Name	Institute Name			Institution Type	Choose a type...	
Mailing Address	Building # and Street Name			Institution Congressional District ¹⁰	##	
	City	State	Postal Code			
PRINCIPAL INVESTIGATOR INFORMATION						
Last Name (surname)	Last	First Name (Given)	First	Middle	Middle	
Position/Title	Full Title		Telephone #	Phone Number		
PI E-mail	Email 1		Alternative E-mail <i>(optional)</i>	Email 2		
Highest Degree	Degree Type		Field/ Discipline		Year Awarded	
US Residency Status	Choose an option....		Gender	Choose an option...		
INSTITUTION LEADERSHIP REPRESENTATIVE INFORMATION						
Name	Last	First	Middle	Title	Full Title	
E-mail	Email		Telephone #	Country code + number		
Have you received a grant under a previous CRDF Global program or been a participant in a CRDF Global-funded workshop?				Choose an option...		
If yes, please list program and grant number or workshop title in the following text box			Enter Text....			
Total number of U.S. team members, including PI, students, and secondary collaborators					#	

⁹ Please reference the CRDF Global Research Areas document found here: http://www.crdfglobal.org/sites/default/files/crdf-global-research-areas_updated-june-2015.pdf

¹⁰ If you do not know your congressional district, please click on this [link](#) and search for your representative using your Institution's zip code.

PROJECT ABSTRACT
Should not exceed 350 words

PROJECT NARRATIVE

Should not exceed ten (10) pages. Text should be Arial font size 10 within 1-inch margins

REFERENCES CITED

This section must only include bibliographic citations and not be used to provide parenthetical information outside of the Project Narrative

STUDENT/POST-DOCTORAL RESEARCHER MENTORING PLAN
This should not be used to circumvent the Project Narrative page limit

KEY PARTICIPANT INFORMATION FORM

Complete *ONE* for each participant involved

Please copy this page as necessary.

TEAM MEMBER INFORMATION					
Last Name (surname)	Last	First Name (Given)	First	Middle	Middle
Current Position	Full Title		Classification on Project		Choose Role...
Institute Name	<input type="text" value="Institute Name"/>				
Complete Mailing Address	Building # and Street Name		City/State	Postal Code	Country
E-mail Address	Email		Telephone #		Country code + number
Highest Degree/ Year Awarded	Degree Type		Field/ Discipline		Year
Gender	Choose an option...				
Description of project role (responsibilities, expertise, level of effort on project):					
Enter description					

BUDGET NARRATIVE FORM

(Complete one for EACH Primary Institution and Secondary Institution)

Describe and justify the expenses included in each budget line item. If a category doesn't apply to your budget, please insert N/A for "not applicable" in the space provided.

Institution Name:	Name.	Applicant type:	Choose an item.
Individual Financial Support (IFS)			
Describe the level of effort projected for the PI and other team participants. Provide justification for pay rate and any fringe benefits included.			
<i>Example: Sally Student will work as a graduate research assistant for this project and will commit 5 calendar months and dedicate 30% of her time during the 2 months of the academic year and 50% of her time during the 3 months to this research</i>			
Equipment, Supplies and Services (ESS)			
Justify the purpose and cost rationale of each ESS line item included in the budget. General or non-descript line items such as "supplies" or "services" are not acceptable. Please itemize.			
<i>Example: We request the amount of \$400 to publish results of our study. The amount of \$400 per year will cover journal page costs and production posters for research meetings.</i>			
Travel			
Explain the need for travel - how the travel will benefit the project's aims - and your calculations of travel costs for domestic and foreign travel. Break down by airfare, hotel, per diem, etc.			
<i>Example: Foreign Travel - \$ Amount Support is requested for Dr. PI and Dr. Co-PI to attend the American Society for Cell Biology Association conference to share results. This estimate is based on \$Amount airfare per person, \$Amount hotel per night per person for four nights, \$Amount visa fee per person, \$Amount health insurance per person, and per diem rates based on the U.S. Government allowances in effect at the time of travel.</i>			
Indirect Costs (IDCs)			
Justify indirect costs % of the total sub-team direct expenses requested. Indicate if a NICRA or other institutional IDC certification is applicable.			
<i>Example: Indirect cost rates are based on the applicable federally negotiated rates published at LINK</i>			
Cost Share			
Describe the cost share that is being undertaken. Describe what items the cost-share will be applied to. At least a 30% cost-share is mandatory.			
<i>Example: A 30% cost-share will be undertaken by INSTITUTE, totaling \$Amount. This amount will be used to purchase _____ (specific items necessary to complete the project).</i>			

PROJECT MILESTONE PLAN (TEMPLATE/ SAMPLE)

Copy template to complete. *Text in red is an example.* Information should match the proposal Project Narrative and Project Budget

Reporting Period (Complete for each semi-annual segment applicable to project duration.)		
First Semi-Annual Reporting Period		
Milestone:	Description:	Associated Deliverable(s):
<i>Travel to Russian Institution</i>	<i>Members of the U.S. team will visit their counterparts in Russia. The main objective is face-to-face interaction to discuss research plan, preliminary data that needs to be collected, experiments and publications</i>	<i>Trip Report Travel documents (copies of boarding passes, visa, other receipts) Photos</i>
<i>Training for 20 participants</i>	<i>U.S. team will conduct analysis on data collected by the Russian team</i>	<i>Report</i>
Total Amount Requested for this Reporting Period:		\$ 15000
Second Semi-Annual Reporting Period		
Milestone:	Description:	Associated Deliverable(s)
<i>Analysis of Experimental Data</i>	<i>The team will analyze the experimental data</i>	<i>Report</i>
<i>Completion of manuscript to be submitted for publication</i>	<i>The team will work to prepare a final manuscript to be submitted for publication in the peer-reviewed journal _____</i>	<i>Copy of the manuscript</i>
Total Amount Requested for this Reporting Period:		\$ 35000
Total Amount Requested:		\$ 50000

PI OTHER SOURCES OF SUPPORT FORM

PI Name	Last, First		
If no other sources of support, check "None." Otherwise, complete table below for each source (duplicate as needed).			<input type="checkbox"/> "None"
Project/Proposal Title	Title	Location of Research	Region/Country
Support	<input type="checkbox"/> Current <input type="checkbox"/> Pending Submission Planned in Near Future		
Source of Support	Name	Level of Effort (%)	%
Award Amount	\$ USD	Period Covered	MM/YY – MM/YY
Project/Proposal Title	Title	Location of Research	Region/Country
Support	<input type="checkbox"/> Current <input type="checkbox"/> Pending Submission Planned in Near Future		
Source of Support	Name	Level of Effort (%)	%
Award Amount	\$ USD	Period Covered	MM/YY – MM/YY
Project/Proposal Title	Title	Location of Research	Region/Country
Support	<input type="checkbox"/> Current <input type="checkbox"/> Pending Submission Planned in Near Future		
Source of Support	Name	Level of Effort (%)	%
Award Amount	\$ USD	Period Covered	MM/YY – MM/YY
Project/Proposal Title	Title	Location of Research	Region/Country
Support	<input type="checkbox"/> Current <input type="checkbox"/> Pending Submission Planned in Near Future		
Source of Support	Name	Level of Effort (%)	%
Award Amount	\$ USD	Period Covered	MM/YY – MM/YY

PREVIOUS CRDF GLOBAL AWARD FORM

Please copy the form as necessary for each award. Individual forms should not exceed one page.

CRDF Global Award Number:	#####		
Title of Previous Project:	Title		
Start Date	MM/YY.	End Date	MM/YY.
Please briefly describe the previous research project. Be sure to provide specific information regarding results and objectives. Were all objectives of the research plan achieved? If not, what prevented you from doing so? Please list scientific publications and conference reports that were published as a result of CRDF Global award.			
Enter Text....			
How will the work accomplished during this project contribute to the proposed research? Please address specific project results (data, models, methods) that the proposed project will further develop and/or build upon.			
Enter Text....			

SUGGESTED REVIEWERS AND REVIEWERS NOT TO INCLUDE
(Optional)

No more than ten names may be included for each list.

Suggested Reviewers				
#	Name	Affiliation	Email	Brief Justification
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Suggested Reviewers Not to Review				
#	Name	Affiliation	Email	Brief Justification
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

RUSSIAN PI LETTER OF SUPPORT

Include one letter on Institutional/Organizational Letterhead.