



REQUEST FOR APPLICATIONS:

**CLEAN COOKING SOLUTIONS:
GENDER AND LIVELIHOOD
IMPACTS AND OPPORTUNITIES
(RFA 12-5)**

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OVERVIEW OF RFA 12-5 OBJECTIVES: CLEAN COOKING SOLUTIONS: GENDER AND LIVELIHOOD IMPACTS AND OPPORTUNITIES

The Global Alliance for Clean Cookstoves (Alliance) is seeking qualified teams of researchers to fill key gaps in the existing evidence on the impact that clean cooking solutions have on women users and their families, as well as data that provides a better understanding of the impact women entrepreneurs working in the cookstove and fuel value chain have on adoption rates. Each study should have at a focus on at least one of the following impacts:

- Specific and indirect impacts that clean cooking solutions have on women users and their families, including but not limited to: time use, income generation, educational activities, etc.
- The impact that women entrepreneurs employed in the cookstove and/or fuel value chain can have on adoption and sustained use.
- Specific and indirect impacts of opportunity costs for involvement in the cookstove and fuel value chain on women entrepreneurs.

Of particular interest are studies that are based in Alliance priority and potential priority countries/regions^[1]. Confirmed priority countries include: Kenya, Nigeria, Ghana, Bangladesh, Uganda and China. Potential countries/regions include: Rwanda, Tanzania, Ethiopia, Guatemala, Indonesia, Mexico, Peru, and India.

As much as \$250,000 will be available for studies funded under RFA 12-5. The Alliance aims to fund up to four studies, which combined will address all three impact categories. For example, one study may focus on all impact categories in a phased approach, or several studies may focus on one or more impact categories, such as opportunity costs.

The Alliance encourages applications that either look at one or more of the individual impact categories outlined above in a phased approach so that initial findings of at least one impact can be shared more quickly. The Alliance would like to be able to share results in at least one impact area in the next 6-9 months, and will prioritize applications that reflect this objective. Overall, studies should be completed within a 6 month to 18 month timeframe.

Opportunities for cost sharing and leveraging funds are actively encouraged. Studies should specify which technologies and approaches are being utilized in the project focus area. Though they may complement previously-completed baseline studies, studies must generate new data and results. Studies that have only one measure of impact (such as time use only) will be considered nonresponsive.

The deadline for Letters of Intent (encouraged, but not mandatory) is October 26, 2012.

The deadline for submission of proposals is November 19, 2012.

^[1]Potential priority countries have been identified using a data-driven approach to assessing potential impact, scalability, opportunity to test innovative business models, opportunity to leverage other resources, and greatest need.

THE GLOBAL ALLIANCE FOR CLEAN COOKSTOVES

BACKGROUND

Exposure to smoke from traditional cookstoves and open fires – the primary means of cooking and heating for nearly three billion people in the developing world – causes almost two million premature deaths annually, with women and young children the most affected. In sub-Saharan Africa and Asia, the lack of access to clean cookstoves and fuels for cooking is especially acute, with a third of the urban population and the vast majority of the rural poor using solid fuels to cook their daily meals over open fires or inefficient stoves. Cookstove smoke contributes to a range of chronic illnesses and acute health impacts such as pneumonia, lung cancer, chronic obstructive pulmonary disease, cataracts and low birth weight¹. In fact, the World Health Organization states that harmful cookstove smoke is the 5th worst overall health risk factor in developing countries². And the problem continues to grow – the International Energy Agency estimates that by 2030, 100 million more people will use traditional biomass fuels than do so today³. Traditional stoves are also a major risk factor for burns, scalds, and injuries.

Reliance on biomass for cooking and heating also increases pressure on local natural resources (e.g., forests, habitat) and forces women and children to spend many hours each week gathering wood, or spend significant household income purchasing fuel. In addition, harvesting fuels for wood burning cookstoves can cause sustained land degradation.

In conflict-affected settings, though the food distributed by the humanitarian community must be cooked in order to be eaten, fuel for cooking is typically not provided, leaving millions of refugees and internally displaced women and girls at an increased risk for daily attack as they search for firewood miles outside of their camps. Inefficient cookstoves also contribute to global emissions of greenhouse gases such as carbon dioxide and other short-lived climate forcing agents such as methane and black carbon aerosols, major contributors to current global warming.

Despite the severe impacts caused by the global use of 600 million biomass-fueled cookstoves by more than three billion people, efforts to improve this inefficient and often deadly household necessity have received inadequate attention and insufficient funding. While many international and country-specific programs exist to promote the use of cleaner cookstoves, few have reached the level of effectiveness and commercial scale needed to meaningfully address the nature of this global health and climate issue. The Global Alliance for Clean Cookstoves (Alliance) believes that the scope and severity of cookstoves' impacts on the health and environment of nearly half of the world's population – especially girls and women – necessitate an immediate and concerted response from global research, policy, and donor communities.

¹ Fullerton, D. G., N. Bruce, et al. (2008). "Indoor air pollution from biomass fuel smoke is a major health concern in the developing world." *Trans R Soc Trop Med Hyg* 102(9): 843-851.

² Smith K.R., Mehta S., Maeusezahl-Feuz M. Indoor air-pollution from solid fuel use. In: Ezzatti M., Lopez A.D., Rodgers A., Murray C.J.L., editors. *Comparative Quantification of Health Risks: Global and Regional Burden of Disease Attributable to Selected Major Risk Factors*. World Health Organization; Geneva: 2004. pp. 1435–1493.

³ World Energy Outlook 2010. (2010). World Energy Outlook. International Atomic Energy Agency.

ABOUT THE GLOBAL ALLIANCE FOR CLEAN COOKSTOVES

The [Global Alliance for Clean Cookstoves](#) is a public-private partnership hosted by the United Nations Foundation to save lives, improve livelihoods, empower women, and combat climate change by creating a thriving global market for clean and efficient household cooking solutions. The Alliance's '100 by '20' goal calls for 100 million homes to adopt clean and efficient stoves and fuels by 2020. The Alliance is working with public, private, and non-profit partners to help overcome the market barriers that currently impede the production, deployment, and use of clean cookstoves in the developing world.

In November 2011 the Alliance released [Igniting Change: A Strategy for Universal Adoption of Clean Cookstoves and Fuels](#). Building on the unprecedented consultation of more than 350 global cookstove experts from a range of disciplines and organizations, *Igniting Change* identifies the creation of a thriving global market for clean cookstoves and fuels as the most viable way to achieve universal adoption, and provides a three-pronged strategy for creating that market:

- Enhance Demand by understanding and motivating potential users, developing better and more technology, providing consumer finance and creating innovative distribution models to reach remote consumers;
- Strengthen Supply by attracting more finance and investment, accessing carbon finance, enhancing market intelligence and creating inclusive value-chains;
- Foster an enabling environment by engaging national and local stakeholders, building the evidence base for the benefits of stoves, promoting international standards and rigorous testing protocols and enhancing monitoring and evaluation.

As such, *Igniting Change* serves as a blueprint for donors, the private sector, implementers, researchers, the United Nations and policymakers that outlines a combination of policy and actionable programmatic levers to catalyze the sector.

Building on the recommendations from *Igniting Change*, the first phase (2012 – 2014) of the Alliance's strategic plan involves:

- developing and implementing globally-recognized cookstove standards
- beginning market enabling activities in priority countries (early action and longer-term interventions)
- commencing research efforts to clearly quantify the links between improved cookstoves/cleaner fuels and their effects on health and safety, environment, livelihoods and women's empowerment
- increasing the number of investors and resources to support the scale- up and adoption of clean cookstoves and fuels in priority markets
- piloting a variety of last- mile distribution and consumer finance models in priority countries
- increasing the number of organizations engaging in the issue
- establishing a robust monitoring and evaluation system for the sector⁴

For a detailed description of how the Alliance has defined its research priorities, see Appendix 1.

⁴ While there may be opportunities to conduct applied research within the context of program implementation, at this phase, efforts to strengthen the evidence base will be focused on targeted research activities.

INTRODUCTION

Reliance on inefficient cookstoves and fuels leads to enormous burdens that disproportionately impact women and girls, particularly because cooking and the procurement of fuel remains a woman's responsibility in most countries. Exposure to smoke from polluting and inefficient modes of cooking, heating, and lighting creates one of the biggest disease burdens in the world today. It kills 2 million people annually, mostly women and children, and millions more suffer from cancer, pneumonia, heart and lung disease, blindness, and burns. Women and girls can spend hours walking far distances to collect fuel for their families' cooking needs, and face increased vulnerability to gender-based violence and other safety issues in some regions. The time spent collecting fuel and preparing and cooking food can take numerous hours, which leaves less time for the completion of other responsibilities, income-generation opportunities, education, and rest. The use of solid fuels can also inflict high economic costs on families who sometimes pay as much as one-third of their income for fuel.

But women are not only harmed by the status quo; they are also an integral part of the solution. They are innovators and problem-solvers who are already taking the lead in their communities to develop and implement sustainable energy solutions, employing local knowledge to design and deploy new alternatives and protect local ecosystems. Women are at the heart of both impacts and solutions, which provides a powerful opportunity that we must leverage to fulfill the vision of the Alliance. While women are disproportionately impacted by the use of dirty and inefficient cooking practices and reliance on biomass for fuel, women play a crucial role in the adoption and sustained use of clean cooking solutions because of their responsibilities as cooks and managers of household energy. In several case studies, it has been demonstrated that women can catalyze cookstove markets when they are given income-generating opportunities along the value chain, especially in the marketing, distribution, sales, and after-sales servicing of these technologies^{5 6}.

Women can play a unique role within these value chains, as they can leverage their existing networks to promote the adoption of these new technologies, as well as their roles as trusted sources of information to other users with regard to product recommendations.

The Alliance has determined that women have a crucial role to play from developing designs that are user-friendly and user-appropriate to wide-scale marketing and sustained adoption of clean cookstoves and fuels. The Alliance has prioritized women and their role with two specific references in its mission statement: to save lives, *improve livelihoods*, *empower women*, and combat climate change by creating a thriving global market for clean cooking technologies, with the interim target of 100 million households adopting clean and efficient cookstoves and fuels by 2020.

⁵ Karlsson, G., Misana, S. (2001). *Generating opportunities: Case studies on energy and women*. United Nations Development Programme.

⁶ Gill, K., Kantor, P., McGonagle, A., Patel, P. (2012). *Invisible market: Energy and agricultural technologies for women's economic advancement*. International Center for Research on Women.

OVERVIEW OF THE RESEARCH

While anecdotal information exists, the primary data and solid evidence base demonstrating the business case for actively involving women in the value chain needs to be further developed. This anecdotal evidence suggests that women have an important role to play in sustainable energy development⁷, such as in distribution and production chains. There have been significant case studies and surveys demonstrating this, as well as empirical data based on scientific research. Vodafone created an 'Al Johar Initiative' in 2010 that engaged all-female networks to sell Vodafone products and services to women markets in Qatar. In Qatari society women are often restricted in movement and communication with men so it is difficult to access female markets. In this initiative, the women reached 100 percent of their sales targets. A second example is Unilever's Project Shakti in India, which supports women as entrepreneurs by equipping women with business skills to serve as a distribution channel for Unilever products in the global market of low spending consumers. With this initiative, Unilever doubled the number of rural households that it reached, gaining access to new, hard to reach, market segments. At the end of 2010, there were 45,000 women entrepreneurs selling products to approximately 3 million consumers in 100,000 villages⁸.

Further research must be conducted to provide in depth data in a variety of regions that can demonstrate the impact clean cookstoves can have on a woman and her family, as well as the impact women can have on adoption rates when integrated throughout the value chain. There is also a need to collect specific case studies demonstrating best practice and successful solutions that are being utilized to ensure that women are integrated into the design of technologies, overcome barriers to entry to become cookstove and fuel entrepreneurs, and ensure that the sector is capitalizing on the women's networks and the abilities of women to serve the last mile. Lastly, there is a lack of practical tools, guidance, and methods that practitioners and businesses can easily utilize and implement to successfully mainstream gender and increase the number of women in the cookstove value chain.

Through this request for applications, the Alliance is seeking qualified researchers to fill gaps in evidence on the impact of incorporating women in the cookstove value chain. The Alliance will consider one or two studies that look at one or more objectives.

The study should collect data on the impact that women have on adoption rates when integrated into the value chain, as well as explore the relative benefits for the female employees and/or entrepreneurs themselves in engaging in the cookstove value chain, as well as gender benefits and potential challenges.

Through this research or through a separate study, this request for applications will also consider studies that analyze the opportunity costs associated with the use of traditional cookstoves and analyze time saving usage from a reduction in cooking time and fuel collection and preparation, reduction of drudgery, and other impacts. Researchers should explore the ways in which the reduction of opportunity costs associated with the use of inefficient and dirty cookstoves and fuels can have on women and their

⁷Cecelski, Elizabeth. *The Role of Women in Sustainable Energy Development*. Rep. Golden: National Renewable Energy Laboratory, 2000. Print.

⁸ *Women mean business: Empowerment in developing markets*. Corporate Citizenship, 2012.

families. The sector should better understand what women are able to do with the time freed by spending less time collecting fuel and cooking, and the physical toll that walking long distances carrying heavy loads can take, and the increase in household income when less money is spent on fuel, how that money is spent, the allocation of time in the household, etc.

Additionally, the UN defines adolescence between the ages of 10-24, and given that responsibilities in the home disproportionately affect a girl's opportunities to be educated, her access to health services, and her ability to interact with her peers, there exists a unique opportunity cost for adolescent girls. This study should collect and disaggregate data based on gender and age to allow conclusions to be drawn specific to adolescent girls – including both the benefits to inserting them in the cookstove value chain (from manufacturing to distribution to adoption) as well as the impacts of adopting clean cookstoves (on their lives, their families, and their communities).

The researchers should utilize monitoring and evaluation frameworks, indicators, and methodologies to ensure accurate, useful, and cutting edge data is collected and analyzed from all Alliance-funded research studies and pilots, as well as provide standardized M&E tools that the entire sector can apply.

All of these intensive, ongoing research activities will strengthen primary evidence to better make the business case for the private sector, donor community, governments, and other key actors that actively integrating women into cookstove design, production, marketing, and distribution makes sense for the bottom line and leads to increased profits that can be reinvested back into the business as well as the ultimate goal of higher adoption and sustained use rates. This research will also demonstrate the empowerment and gender equality opportunities presented in the cookstove and fuel value chains and help donors understand the importance of funding cookstove and fuel efforts in order to empower women.

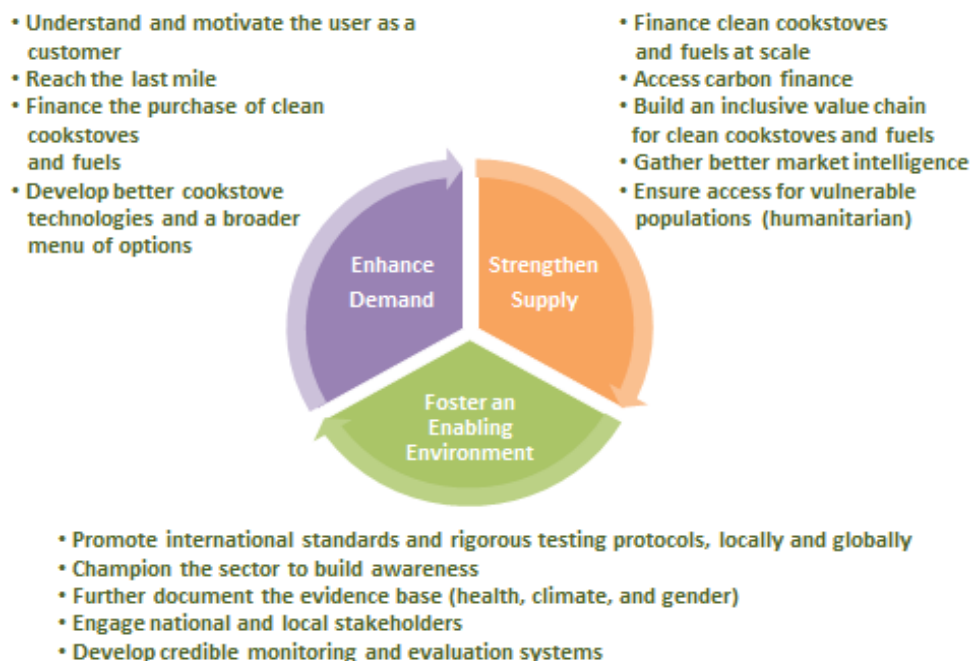
THE ALLIANCE'S APPROACH AND BACKGROUND INFORMATION

The Alliance created a Gender Cross-Cutting Committee through its Working Group process, which led to expert recommendations on reaching scale, as outlined in the Alliance's global strategic report, [Igniting Change](#). The Committee was chaired by U.S. Ambassador-at-Large for Global Women's Issues Melanne Verveer and was comprised of representatives from all nine of the expert Working Groups, as well as gender and empowerment experts from around the globe and from several different sectors. Through an analysis of the Committee's recommendations, the Alliance identified and prioritized key activities that address gender and women's empowerment in cooking solutions in its strategic business plan. This program of activities is meant to not only support and enhance projects on the ground, but also to develop tools and resources that can be utilized by a variety of stakeholders working at different points along the value chain. To build on the recommendations from the Cross-Cutting Committee, the Alliance is working closely with in-country stakeholders during its consultative country action planning process with dedicated discussion and identification of the key gender and empowerment activities that are required to scale up the clean cookstove and fuel market in their countries, and how to best ensure that women are economically empowered through these emerging markets. As a next step, a Gender and Empowerment Expert Steering Committee is being formed to provide ongoing strategic guidance to the Alliance

Secretariat as it develops and implements the gender and empowerment strategy as outlined in this document.

The Alliance’s Strategic Business Plan lays out the three-pronged strategy around strengthening supply, enhancing demand, and fostering an enabling environment for clean cooking solutions. Under each prong, specific activities have been identified that will best position the Alliance Secretariat to deliver on its value propositions:

- Catalyze the Sector and Broker Partnerships – Spur innovation across the sector
- Mobilize Resources - Attract new resources and organizations
- Enable Markets – Make stove and fuel markets more efficient
- Champion the Issue - Push the issue up global and national agendas
- Promote International Standards – Help develop then implement stove standards
- Coordinate Sector Knowledge and Research – Commission, collect and coordinate knowledge



IMPACTS 1 & 2: WOMEN’S IMPACT ON THE COOKSTOVES AND FUEL VALUE CHAIN AND OPPORTUNITIES AND IMPACTS FOR WOMEN ENTREPRENEURS IN THE COOKSTOVE AND FUEL VALUE CHAIN

There is growing recognition in the international development community and the private sector that fully utilizing women’s expertise, innovation, and entrepreneurial spirit can release untapped potential and lead to new approaches to be considered, funded, and scaled when trying to ensure clean cooking solutions for all. Women are uniquely positioned to play a critical role in increasing awareness and creating demand and their involvement may yield higher adoption rates. Women can serve as spokespeople, promoting and

encouraging the use of clean energy products, designing and endorsing marketing messages, and taking advantage of the credibility of women-to-women communication strategies. When women are involved throughout the value chain, they can help ensure that products reflect the priorities and main concerns of women users, which can increase the likelihood of their adoption and long-term use⁹. With appropriate education, training, and investment, women can build businesses around or be employed in the design, production, marketing, sale, and maintenance of new technologies and services. Additionally women are seen as ideal candidates to set up businesses and serve as energy entrepreneurs¹⁰, and may have a particularly significant impact when engaged as distributors¹¹ as there is usually a large gap in the value chain around rural distribution capacity.

A recent International Finance Corporation report¹² found that while there is a \$31 billion potential market for household energy devices and systems, key barriers must be addressed to unleash these markets, such as increasing consumer awareness, designing business models that trigger demand, and increasing customers' willingness to pay – all of which are areas in which women are uniquely positioned to contribute. For example, increasing the number of women participating in the cookstove value chain may help address many of the key challenges faced by the sector, such as access to the market through innovative and deep distribution networks, increased consumer awareness, trust, and demand, creation of sustainable business models that leverage the capacity of local skills and knowledge, and develop crucial, lasting partnerships with influential community organizations. It may also bring new challenges. For example, in some projects women are pushed out of the sector as it grows, and therefore more resources and attention needs to be paid to the role of women in the sector as it develops.

Other industries that serve Base of the Pyramid consumers have found that brand value can be increased when women are involved in marketing and selling products that they themselves use and trust, and that these brand recommendations are particularly important considering women's strong networks and ties to other women. Projects that focus on and encourage the involvement of women in other energy sectors, such as solar lighting and electrification, have found that women are having an impact on adoption rates¹³.

Involving women in market opportunities can have other impacts as well, and the Alliance is interested in research projects that can help quantify these impacts. For example, the Rural Stoves West Kenya Project leveraged a network of women's groups to produce stoves and found that the women not only earned income, but achieved higher status and self-esteem¹⁴. The project also found that women users preferred stoves made by women to those made by men. These types of case studies demonstrate that women's networks and relationships can have real impacts on increasing adoption rates.

⁹ Cecelski, Elizabeth. *The Role of Women in Sustainable Energy Development*. Rep. Golden: National Renewable Energy Laboratory, 2000. Print.

¹⁰ Dutta, Soma. *Energy as a Key Variable in Eradicating Extreme Poverty and Hunger: A Gender and Energy Perspective on Empirical Evidence on MDG #1*. Working paper. District Ghaziabad: DFID/ENERGIA Project on Gender as a Key Variable in Energy Interventions, 2005. Print.

¹¹ IFC (International Finance Corporation). *From Gap to Opportunity: Business Models for Scaling Up Energy Access*. 2012. Rep. Print.

¹² Bardouille, Pepukaye. *From Gap to Opportunity: Business Models for Scaling Up Energy Access*. Rep. Print.

¹³ Rojas, Ana Victoria, Florian Marc Schmitt, and Lorena Aguilar. *Guidelines on Renewable Energy Technologies for Women in Rural and Informal Urban Areas*. Rep. N.p.: IUCN, ENERGIA, Hivos, 2012. Print.

¹⁴ Cecelski, Elizabeth. *The Role of Women in Sustainable Energy Development*. Rep. Golden: National Renewable Energy Laboratory, 2000. Print.

IMPACT 3: IMPACT ON OPPORTUNITY COSTS

While case studies and anecdotal evidence support the opportunity cost reductions for women and their families when they adopt clean cookstoves, there is a lack of empirical evidence that deeply explores the impacts on families and communities when clean cookstoves are adopted. Energy poverty is very clearly a gender issue, as 70% of the 1.3 billion people living in poverty are women¹⁵, but rigorous research studies have not been conducted to clearly demonstrate the data around the impacts on women and their families when this type of poverty and health risk is alleviated.

Women work longer days than men¹⁶, and most of this informal sector labor is uncounted in national energy and labor force statistics. Routinely collected data shows that clean cookstoves and fuels can reduce the amount of time women spend collecting fuel and/or the amount of money spent on fuel. However, there is little concrete data on how women actually reallocate these time savings – for income generation, education, leisure, or increased domestic duties. Additionally, girls and sometimes boys are often involved in fuel collection, and more evidence is needed on the impact this has on their lives, particularly education opportunities.

Although workload reduction seems obvious, at times, interventions aimed at reducing women's drudgery have failed to do so or even worsened women's conditions¹⁷. Overstating gender outcomes and impacts happens as well in project plans and in reporting. Typical customers may not be collecting wood; they either buy it or farm it, which means benefits are more obvious at the level of money savings and not time savings.

The Alliance seeks research proposals that will directly quantify the numerous impacts the adoption of improved cooking technologies can have on women and their families, including any unforeseen consequences or negative impacts.

¹⁵ Rojas, Ana Victoria, Florian Marc Schmitt, and Lorena Aguilar. *Guidelines on Renewable Energy Technologies for Women in Rural and Informal Urban Areas*. Rep. N.p.: IUCN, ENERGIA, Hivos, 2012. Print.

¹⁶ UNICEF calculations based on data derived from United Nations Development Programme, Human Development Report 2006, *Beyond Scarcity: Power, poverty and the global water crisis*, Oxford University Press for UNDP, New York, 2006, page 379.

¹⁷ Cecelski, Elizabeth. *The Role of Women in Sustainable Energy Development*. Rep. Golden: National Renewable Energy Laboratory, 2000. Print.

**REQUEST FOR APPLICATIONS:
IMPACTS ON GENDER AND LIVELIHOOD THROUGH CLEAN COOKING SOLUTIONS**

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The deadline for Letters of Intent (encouraged, but not mandatory) is October 26, 2012.

The deadline for submission of proposals is November 19, 2012.

Investigative Team

Given the interdisciplinary nature of these studies, the Alliance encourages the formation of qualified teams of experts possessing the range of necessary skills and expertise required to execute the proposed research. All qualified individuals and organizations, regardless of location, are encouraged to apply.

Study Duration

The period of performance for studies should not exceed 18 months, excluding 60 days for final report writing, with key deliverables expected as described above.

PROPOSAL PROCESS AND DEADLINES

Development and Dissemination of Requests for Applications and Proposals

^[1]Potential priority countries have been identified using a data-driven approach to assessing potential impact, scalability, opportunity to test innovative business models, opportunity to leverage other resources, and greatest need.

Alliance Requests for Applications and Proposals (RFAs and RFPs) are developed in consultation with external peer review panel members possessing relevant expertise to clearly define the research agenda. To ensure widespread dissemination, funding opportunities will be publicized on the Alliance website and other websites / list serves / household energy networks. They will also be circulated to Alliance partners, Working Group and Steering Committee members, as well as other household energy networks in order to ensure widespread dissemination.

Submission of Proposals

LETTERS OF INTENT

Electronic letters of intent (LOI) are encouraged, but not mandatory. LOIs help the Alliance staff 1) ensure that applications received are responsive to RFAs and 2) plan for the application review process, including the identification of relevant expert reviewers. Applicants are encouraged to submit a LOI (maximum of 3 pages) summarizing their research goals, and briefly describing their proposed research methods.

LOIs should be sent **NO LATER than October 26, 2012, 11:59 EDT** to:

Corinne Hart, Program Manager, Gender and Markets

chart@cleancookstoves.org

FULL APPLICATION

The deadline for submission of applications is November 19, 2012.

Electronic copies of full applications should be sent to:

Corinne Hart, Program Manager, Gender and Markets

chart@cleancookstoves.org

In addition, two hard copies of proposal materials (postmarked by November 19) should be sent to:

Robin Troutman, Operations Manager

Global Alliance for Clean Cookstoves

c/o The United Nations Foundation

1800 Massachusetts Avenue, NW, Suite 400

Washington DC 20036

United States

Evaluation Process

Responses will be reviewed by the Alliance's technical staff and the external peer review panels prior to seeking final funding approval by the Alliance's Advisory Board. The Alliance will convene expert review panels for each funding announcement to technically evaluate and rank proposals. These panels

will be selected by the Alliance programmatic staff in consultation with the Executive Director, Steering Committee members, and other relevant stakeholders. Submissions will be screened internally to flag non-responsive or non-competitive applications. The Alliance will develop a standardized response template to facilitate direct comparisons among proposals during the evaluations process. In addition, when necessary, panel discussions may also be informed by written comments received from additional external peer reviewers to evaluate specific technical aspects of applications received. Panel recommendations will inform final funding decisions made by the Alliance's advisory board. Given the interdisciplinary, inter-sectoral nature of the Alliance and its goals, final funding decisions will be made on the basis of technical merit as well as the relevance for scale up of interventions with demonstrated effectiveness in the field. Priority of geographic areas will also be given consideration as appropriate.

Project Negotiation and Management

In some cases, panels or the Alliance may request modifications in project scope, scale, and/or budget to ensure maximum responsiveness to the sector's needs.

Grants / Contracts Agreement

The mechanism of funding may take the form of a grant or a contract, depending on the scope of the proposed project and /or the nature of proposed deliverables. Agreements will be made between the Grantee/ Contractor and the United Nations Foundation.

Payments received by the Grantee/ Contractor from the United Nations Foundation (UNF) may be expended only for the purposes outlined in the approved scope of work, subject to any special conditions itemized below. No other uses are authorized without the express, written consent of UNF.

The Grantee/ Contractor agrees that none of the funds covered by this Agreement shall be used to participate in, or intervene in any political campaign on behalf of (or in opposition to) any candidate for public office. If the project involves any lobbying activities, as defined by the Internal Revenue Code of 1986 (the Code), the Grantee/ Contractor represents that 1) funding is not earmarked for any lobbying activities and 2) the amount of funding, together with any other funding by UNF for the same project for the same year, does not exceed the amount budgeted (if any) for the year of funding, by the Grantee/ Contractor for non-lobbying activities. If funding is for more than one year, the proceeding sentence applies to each year of funding with the amount of funding measured by the amount actually disbursed by UNF in each year.

Reporting Requirements

TECHNICAL REPORTS

Progress on funded projects and activities will be periodically reviewed by a combination of Alliance staff and expert review panel members, with progress reports required bi-annually for projects under \$50,000 and quarterly for grants over \$50,000. Those projects that have secured multi-year funding must be current on their reporting requirements and have demonstrated acceptable progress in order to ensure subsequent year funding.

Final technical reports should be submitted within 60 days from the end of the grant term. These reports should include a brief summary of the study methods and results written for a nontechnical audience. Final reports will be reviewed by Alliance staff and expert review panel members, along with external peer reviewers, to assess the strengths and limitations of the studies, including study methods and approaches to analyses. In addition, reviewers will evaluate whether reported results / conclusions are

adequately supported by the available evidence. Depending on the reviewer comments received, investigators will be asked to make revisions to their final reports within a reasonable time frame mutually agreed upon by the investigators and the Alliance programmatic staff.

PROGRAMMATIC REPORTS

The Alliance also requires for our records an annual or final report within 60 days from the end of the funding term. This report needs to: i) describe in narrative fashion what was achieved with the funds; and ii) provide a full financial accounting of the funds.

I. Narrative Report

Each narrative report should, in five (5) pages or less, summarize how the grant funds were used and the results that were achieved. The report will be used by Alliance staff to evaluate and provide an overview of your work to the Alliance's advisory board. Reports should include the following:

- a. Description of any notable progress and accomplishments, and describe any relevant activities that contributed substantially to these successes.
- b. Description of challenges or obstacles that were experienced during the reporting phase. Were these challenges outlined in the original grant proposal? Describe how these challenges were addressed and if it is possible to prevent them from reoccurring.
- c. Description of tangible results of the project to date.
- d. Copies of significant publications, including manuscripts, reports, books or media productions that stem from your efforts in connection with this grant.

II. Financial Report

Each financial report should be as detailed as possible and include the following:

- a. A line item comparison of budgeted versus actual expenses as they relate *specifically to this grant/contract*.
- b. A statement certifying that all funds were expended for the purposes of the grant/contract. If the entire funds have not been expended, an explanation of why funds were not spent should be provided. At the end of the project, any unexpended amount should be returned.
- c. An explanation of any variance from the project budget submitted with your original proposal.

OTHER REPORTING REQUIREMENTS

1. **Studies Involving Human Subjects:** Protecting the rights of human subjects is the responsibility of grantees. For all studies involving human subjects, applicants must submit written assurance for compliance with the guidelines established by the appropriate Institutional Review Board (IRB) or equivalent concerning the protection of human subjects.
2. The Grantee/Contractor will cooperate with the Global Alliance for Clean Cookstoves, on behalf of the United Nations Foundation, in supplying any information or complying with any procedures which might be required by any governmental agency in order for the United Nations Foundation to establish the fact that it has observed all requirements of the law with respect to the grant.
3. **Site Visits:** Site visits may also be required to ensure compliance with Alliance goals and objectives. The Alliance, on behalf of the United Nations Foundation, may monitor and conduct

formal evaluations of operations under the grant/contract, which may include a visit from Alliance personnel to observe your projects and programs and to review financial and other records and materials connected with activities supported by the grant/contract. The Grantee/Contractor agrees to keep accurate and complete books and records of receipts and expenditures using funds for at least four (4) years after the completion of use of the project and will make these books and records available to the Alliance and the United Nations Foundation for inspection as reasonably required from the time of the Grantee's/Contractor's acceptance.

Communication of Results

The Alliance is committed to ensuring that results will inform the sector, as well as advance the adoption of cleaner, more efficient cooking technologies. The Alliance will work with funded investigators to ensure that study progress and results are widely disseminated, and profiled at technical meetings as relevant. All materials, reports, and results of Alliance grants will be available for dissemination to the public, i.e. through the Alliance website, newsletters, and webinars. In addition to preparing Alliance reports, investigators are encouraged to publish in open-access, peer-reviewed literature. The Alliance has the right to ensure that study results are made publically available in a timely and transparent process, while ensuring intellectual property rights of investigators, as well as subject and manufacturer confidentiality as required.

DATA ACCESS

The Alliance reserves the right to request access to any data collected as part of Alliance-funded activities as needed in order to ensure data quality.

APPLICATION MATERIALS

Application forms are available online at <http://cleancookstoves.org/funding-opportunities/>

1. Cover Sheet

2. Project Plan

While no specific application form is provided for the project plan, investigators must adhere to the guidelines described below. The project plan should not exceed the page limitations for each section, using 11-point font size or larger, and 1 inch margins. Appendices may be provided for supplementary materials as relevant, but review will be based mainly on the information provided in the project plan.

Section A. Background and Objectives (1-2 pages)

Section B. Significance of Research (1-2 pages)

Section C. Description of Investigative Team (1-2 pages)

Include Organizational Qualifications as Relevant

Section D. Related Previous Studies (1 page)

Section E. Research Plan and Methods (not to exceed 10 pages)

Section F. Literature Cited

3. Biosketch

Fill in one for each proposed team member, as well as key subcontractors / subgrantees / consultants.

4. Budget

Fill in the budget form provided. The narrative budget justification should include descriptions of the specific roles, responsibilities, and compensation for all project investigators and consultants, as well as detailed descriptions of proposed travel, supplies, and equipment to be purchased. Note that indirect cost estimates may not exceed 13%. In addition, sub-contract expenses should not be included in indirect cost calculations.

ADDITIONAL SUBMISSIONS

5. Subcontracts

Letters from each proposed consultant / subcontractor confirming their agreement to collaborate must be provided.

6. Data Provision

All agreements for data provision must be confirmed in writing, on official letterhead, from potential collaborators. Where appropriate, particularly for routinely collected sources of data, applicants are

strongly encouraged to provide sample data (stripped of key identifiers) demonstrating the availability and adequacy of proposed data sources.

7. Protection of Human Subjects

The institution receiving the research award is responsible for protecting the rights and welfare of human subjects. For all studies involving human subjects, applicants must submit written assurance for compliance with the guidelines established by the appropriate Institutional Review Board (IRB) or equivalent concerning the protection of human subjects before the research study begins. The following documentation must be submitted to the United Nations Foundation prior to the start of the study: 1) complete application submitted to IRB or equivalent; 2) consent forms to be used in the study, if applicable; and 3) a signed letter from the IRB or equivalent indicating that the study has been approved or exempted by the IRB.

APPENDIX: DEFINING ALLIANCE RESEARCH PRIORITIES

STRENGTHENING THE EVIDENCE BASE TO QUANTIFY THE BENEFITS OF CLEAN COOKSTOVES

While there is new and compelling research to document the significant health, environmental, gender, and economic benefits of clean cookstoves and fuels, important gaps remain in the evidence base for these outcomes. Fairly reliable information on the size of the population lacking access to clean fuels is generally available at the national level, but much more information is required to identify the types of clean cookstoves and fuels that are currently being used, their availability in the market place, their acceptance by the end-users, and the specific impacts on the health, the environment (including climate), women's empowerment, and livelihoods.

Health

While the link between exposure to cookstove smoke and a wide range of health problems such as pneumonia, chronic obstructive pulmonary disease, and lung cancer is well established¹⁸, the current body of evidence linking cookstoves with other potentially important health effects, such as cataracts and adverse pregnancy outcomes is compelling but somewhat limited. In addition, important gaps and weaknesses in the evidence base for other potentially important health outcomes, including developmental effects, adult pneumonias, cardiovascular disease, and tuberculosis, remain.

The Alliance's Health Working Group (HWG), comprised of academics, clinicians, and practitioners with expertise in epidemiology, exposure assessment, public health, and related fields, was asked to identify areas of research that would strengthen evidence linking cookstove smoke to human health impacts and the potential health benefits of clean cookstove interventions. The HWG identified a set of short- to medium-term research needed to (i) inform the planning, development and implementation of clean stove and fuel options for households over the next 5-10 years, and (ii) maintain and increase donor, government, professional and societal commitments.

In brief, priority areas of research included:

1. Describing relationships between exposure level and risk of critical/high disease burden health outcomes (such as child pneumonia, low birth weight/pre-term birth, etc.), in order to better estimate the health impacts of alternative stove/fuel interventions.
2. Demonstrating impacts on health of interventions with proven acceptability, capacity to substantially reduce exposure in laboratory and field settings, and safety. The focus should be on important disease outcomes which will respond within a relatively short time frame: children's outcomes (e.g. ALRI, adverse pregnancy outcomes, child growth and development, etc.), as well as other important chronic diseases or processes (e.g. COPD, IHD, cataracts, etc.) for which a case can be made for investigation of impacts within this time frame.
3. Strengthening evidence through a range of intervention and non-intervention based research designs, for risks of important/high burden diseases for which there is currently only weak and/or inconsistent evidence (e.g. tuberculosis, adult pneumonia, other cancers, and asthma).
4. Developing concentration-response functions which incorporate the broader group of combustion sources of pollution, including indoor/household, ambient, and cigarette smoke (active and

¹⁸ Smith K.R., Mehta S., Maeusezahl-Feuz M. Indoor air-pollution from solid fuel use. In: Ezzatti M., Lopez A.D., Rodgers A., Murray C.J.L., editors. Comparative Quantification of Health Risks: Global and Regional Burden of Disease Attributable to Selected Major Risk Factors. World Health Organization; Geneva: 2004. pp. 1435–1493.

second-hand smoke) would enable a fuller quantification of the health effects of household air pollution.

5. Obtaining information on the incidence, severity, causes and sequelae of cookstove-related burns, scalds and other injuries (e.g. liquid fuel ingestion), further developing and testing existing safety protocols, and carrying out field evaluation to determine the impacts on these outcomes of cleaner stoves/fuels

For the full set of recommendations made by the HWG, see <http://cleancookstoves.org/wp-content/uploads/2011/11/Working-Group-Recommendations1.pdf>

Nearly all of the existing evidence is based on observational studies that compare groups using open fires and traditional cookstoves with those using cleaner cookstoves and fuels, with very little research being directly obtained from studies that directly measure the effects of interventions. In order to guide intervention strategies, benchmark standards, and to make the most compelling case for large-scale investment in this area, more evidence is needed to demonstrate that the levels of exposure reduction delivered by clean cookstove and fuel interventions will sufficiently result in declines in related illnesses and deaths.

Climate

Large-scale adoption of efficient, low emission cookstoves and fuels can mitigate climate change by reducing carbon dioxide emissions from non-sustainable harvesting of biomass, and by lowering emissions from short-lived greenhouse gases and aerosols such as methane, carbon monoxide, and black carbon. The sector needs to identify and target regions where the climate benefits from cookstoves will be greatest, including areas where environmental degradation is a major concern, and areas with close proximity to glaciers where the emissions of black carbon may have the greatest warming effect. At present, limited knowledge of the climate-cookstove relationship hinders the quantification of the net climate impact of cookstove emissions, in particular for short-lived climate forcing agents.

The Alliance's Climate Research Working Group (CWG), comprised of experts in energy, climate, engineering, environment, and related fields, was asked to identify priority areas needed to move the clean cookstove and fuels agenda forward. The CWG envisioned a set of actions that could inform stove designs, enable robust estimates of the greenhouse gas mitigation and other co-benefits from cookstove programs, and, together with improved methodologies for carbon offset projects, facilitate the development of carbon markets to enable widespread adoption of clean cookstoves.

Short-term research actions identified by the CWG included:

1. Mapping geographical regions where cookstove programs have the highest mitigation potential due to the impact of traditional cooking practices on biomass harvesting and emissions.
2. Conducting a 'census' of cookstove projects, and determining which climate relevant species related to cookstoves should be measured in the field.
3. Linking results of field-testing with statistical and computational model-based results to predict global greenhouse gas emissions. In order to facilitate this, a comprehensive inventory of field tests completed to date is needed to clearly quantify the climate impacts of different cookstove-fuel combinations and identify major gaps in the existing evidence base.
4. Facilitating a regional effort to better understand the impact of cookstove emissions, including black carbon, on climate forcing, regional precipitation, and glacier melting. This could include the development of methods and tools for co-benefit analyses, particularly given the current uncertainties in the quantification of the net climate forcing of cookstove emissions.

Gender, Economic Empowerment, and Livelihoods

Reliance on inefficient cookstoves and fuels leads to enormous burdens that disproportionately impact women and girls, particularly because cooking and the procurement of fuel remains a woman's responsibility in most countries. Cooking remains the least developed energy sector and fuel scarcity, indoor air pollution, and the other negative impacts of reliance on biomass for cooking affect large numbers of women around the world. Women and girls can spend hours walking very far distances to collect fuel for their families' cooking needs, and face increased vulnerability to gender-based violence and other safety issues in some regions. The time spent collecting fuel and preparing and cooking food can take numerous hours, which leaves less time for the completion of other responsibilities, income-generation opportunities, education, and rest. The use of solid fuels can also inflict high economic costs on families who sometimes pay as much as one-third of their income for fuel.

While women are disproportionately impacted, it is understood that women play a crucial role in the adoption and use of clean cooking solutions because of their responsibilities as cooks and managers of household energy. Women can play a unique role within the cookstove and fuel value chains, as they often excel in entrepreneurial activities and can leverage their existing networks for distribution, marketing, and sales. However, there is a lack of research that looks at what roles they are currently playing in the value chain, what opportunities there are for them to further contribute, and how their involvement can increase adoption rates and project effectiveness.

The Alliance's Gender Cross-Cutting Committee, comprised of gender and women's empowerment experts from many different sectors and region, identified intervention options that could address the key gender barriers in the cookstove and fuel sector and innovative ways in which women's economic empowerment could be promoted through these types of solutions. The Committee highlighted several key areas where further research is needed and emphasized the importance of continuing to build the evidence base connecting the ability of women to enhance and further adoption and use of clean cookstoves and fuels. In brief, the research priorities include:

1. Developing a better understanding of the role that women can play in the value chain and the impact their increased involvement in the design and implementation of these solutions can have on success. There is a need to collect and collate best practices around the creation of livelihood opportunities for women and how to overcome key barriers.
2. Exploring the ways in which the reduction of opportunity costs associated with the use of inefficient and dirty cookstoves and fuels can have on women and their families. The sector should better understand what women are able to do with the time freed by spending less time collecting fuel and cooking, the decreased health burden of indoor air pollution and the physical toll that walking long distances carrying heavy loads can take, and the increase in household income when less money is spent on fuel, etc.
3. Improving the understanding of consumer preferences for these technologies and how to incorporate these preferences into the design of technology, fuels, and processes.
4. Utilizing innovative distribution models that leverage women's networks and help reach the last mile, while also building inclusive value chains, and understanding the impacts that these models can have on adoption rates.

ALLIANCE RESEARCH PRIORITIES 2012 – 2014

Over the next 3 years, in response to the [recommendations](#) made by the Alliance’s Working Groups, and in support of the strategy laid out in *Igniting Change*, the Alliance will support a small, strategic portfolio of targeted research needed to strengthen the evidence base necessary to precisely quantify the benefits of clean cookstoves, with an initial focus on the following areas:

HEALTH

The Alliance will commission short-term research studies exploring the association between cookstoves and child survival. Given the considerable resource and time constraints associated with designing and executing a high quality epidemiologic study on household air pollution from scratch, opportunities to leverage ongoing epidemiologic studies with high quality health and covariate data are thus strongly encouraged.

Needed are studies which fill key gaps in the existing evidence on the use of traditional cookstoves and open fires as they relate to child survival, with a focus on the studies exploring 1) the quantitative relationship between exposure to HAP and adverse pregnancy outcomes and 2) studies exploring the quantitative relationship between exposure to HAP and severe respiratory illness, including pneumonia and other acute lower respiratory infections (ALRI). Studies with the ability to assess this relationship across a wide range of exposures, including exposures associated with ‘clean’ or very low emission stoves ideally at concentrations approaching levels observed in ambient air pollution literature, are of particular interest, as are studies which address health outcomes responsible for a major proportion of infant and child mortality on a global scale.

CLIMATE

Major gaps remain in the sector’s understanding of the impact that fuel collection for cooking has on environmental degradation, including deforestation, soil erosion, and other natural resource impacts. More spatially resolved information on the specific areas where collection of firewood could contribute to environmental degradation would help identify areas where scaling up of clean cookstoves could provide the greatest environmental benefits. Global mapping of non-renewable fuel collection would be especially useful in identifying the areas of greatest potential environmental impact.

GENDER, ECONOMIC EMPOWERMENT, AND LIVELIHOODS

While it is evident that women have a central role to play in the adoption and use of clean cooking solutions and that the use of cookstoves can have many varied benefits for women and their families, there is a lack of research that examines these elements of the sector. The Alliance will commission research studies that build the evidence around gender, economic empowerment, and livelihoods with the cookstove and fuel sectors by:

1. Examining the role that women can play in clean cookstove and fuel value chains and the impact that their participation can have on adoption rates. This research should include innovative approaches to involving women in different aspects of the value chain and how best to leverage existing networks and increase the inclusiveness of these efforts.
2. Better understanding the opportunity costs associated with traditional cooking practices and how the adoption and use of cleaner and more efficient solutions can decrease these costs. This research will examine the evidence around linkages with cookstoves and fuels to

increased opportunities for income generation and livelihoods, education, economic empowerment, and other supplementary impacts.

Both of these studies will contribute to an ongoing effort by the Alliance to collect and analyze case studies that highlight best practices on empowering women and girls through clean cooking solutions and mainstreaming gender through cooking projects, leading to the development of a global toolkit for practitioners on why they should prioritize the involvement and empowerment of women in their projects and how to best implement these learnings into their programs.

REFERENCES

1. Bardouille, Pepukaye. *From Gap to Opportunity: Business Models for Scaling Up Energy Access*.
2. Cecelski, Elizabeth. *The Role of Women in Sustainable Energy Development*. Rep. Golden: National Renewable Energy Laboratory, 2000.
3. Dutta, Soma. *Energy as a Key Variable in Eradicating Extreme Poverty and Hunger: A Gender and Energy Perspective on Empirical Evidence on MDG #1*. Working paper. District Ghaziabad: DFID/ENERGIA Project on Gender as a Key Variable in Energy Interventions, 2005.
4. Fullerton, D. G., N. Bruce, et al. (2008). "Indoor air pollution from biomass fuel smoke is a major health concern in the developing world." *Trans R Soc Trop Med Hyg* 102(9): 843-851.
5. Gill, K., Kantor, P., McGonagle, A., Patel, P. (2012). *Invisible market: Energy and agricultural technologies for women's economic advancement*. International Center for Research on Women.
6. IFC (International Finance Corporation). *From Gap to Opportunity: Business Models for Scaling Up Energy Access*. 2012.
7. Karlsson, G., Misana, S. (2001). *Generating opportunities: Case studies on energy and women*. United Nations Development Programme.
8. Rojas, Ana Victoria, Florian Marc Schmitt, and Lorena Aguilar. *Guidelines on Renewable Energy Technologies for Women in Rural and Informal Urban Areas*. Rep. N.p.: IUCN, ENERGIA, Hivos, 2012.
9. Smith K.R., Mehta S., Maeusezahl-Feuz M. Indoor air-pollution from solid fuel use. In: Ezzatti M., Lopez A.D., Rodgers A., Murray C.J.L., editors. *Comparative Quantification of Health Risks: Global and Regional Burden of Disease Attributable to Selected Major Risk Factors*. World Health Organization; Geneva: 2004. pp. 1435–1493.
10. *Women mean business: Empowerment in developing markets*. Corporate Citizenship, 2012.
11. World Energy Outlook 2010. (2010). World Energy Outlook. International Atomic Energy Agency.



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