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# **IMPROVED COOKING TECHNOLOGY PROGRAM**

**ANNUAL WORK PLAN: YEAR 1**

Version 3  
15 July 2012

# **IMPROVED COOKING TECHNOLOGY PROGRAM**

## **ANNUAL WORK PLAN: YEAR 1**

**Contract No. AID-521-C-12-00003**

This publication was produced for review by the United States Agency for International Development by Chemonics International Inc.

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## ACRONYMS

|          |   |
|----------|---|
| BME      | <i>Bureau des mines et de l'énergie</i>                         |
| CCT      | Controlled cooking test   |
| CDM      | Clean Development Mechanism                                     |
| CERs     | Certified emissions reductions                                  |
| CQC      | C Quest Capital   |
| CME      | Coordinating or managing entity                                 |
| CPA      | CDM program Activity  |
| DINASA   | <i>Distributeurs nationaux S.A.</i>                             |
| DNA      | Designated national authority                                   |
| DOE      | Designated operational entity                                   |
| GOH      | GOVERNMENT OF HAITI   |
| IDEO     | Consulting company name   |
| IFC      | International Finance Corporation                               |
| IR       | Intermediate Result   |
| LEAD     | Leveraging Effective Application of Direct Investments          |
| LPG      | Liquefied Petroleum Gas   |
| MFI      | Microfinance Institution  |
| MOU      | Memorandum of understanding                                     |
| MTPTEC   | <i>Ministere du Travaux Public, Transport et Communications</i> |
| NGO      | Non-governmental organization                                   |
| OPIC     | Overseas private investment corporation                         |
| PMU      | Project Management Unit   |
| PADF     | Pan American Development Fund                                   |
| PEMS     | Portable emissions monitoring system                            |
| PNUE     | <i>Programme des nations unies pour l'environnement</i>         |
| PoA      | Program of activities (under the CDM)                           |
| PoA-DD   | Program of activities-design document                           |
| PPP      | Public Private Partnership                                      |
| SAPF     | Special activity program fund                                   |
| SODIGAZ  | Brand name of DINASA LPG distribution system                    |
| SOFIDHES | Haitian MFI   |
| SONAPI   | <i>Société nationale du parc industriel</i>                     |
| TBD      | To be determined  |
| UGSE     | <i>Unité de gestion du secteur de l'énergie</i>                 |
| UNFCCC   | UN Framework Convention on Climate Change                       |
| USAID    | U.S. Agency for International Development                       |
| USG      | U.S. Government   |
| WBT      | Water boiling test  |
| WINNER   | Watershed Initiative for National Natural Environment Resources |

## SECTION I. INTRODUCTION AND BACKGROUND

The Improved Cooking Technology Program aims to set Haiti on a path towards long-term sustainable cooking solutions through expanding the market for improved biomass cook stoves and cleaner fuels, developing clean energy businesses engaged in supplying the market with cleaner fuels and improved biomass cook stoves, educating consumers and generating market demand, and addressing regulatory issues that are limiting the expansion of Liquefied Petroleum Gas (LPG) in the household market. By promoting efficient stoves that produce lower greenhouse gas emissions, the program will earn additional revenues through global carbon markets.

Approximately 90 percent of Haitian households meet their energy needs through the use of firewood and charcoal while more than 30 percent of middle class family income is spent on charcoal for cooking in Port-au-Prince. Because of this economic dependency, charcoal production has had a devastating environmental impact that has led to significant deforestation and soil erosion. Cooking with firewood and charcoal is also exposing thousands of women and young children to ‘indoor air pollution’ which is now the second largest cause of child mortality under the age of five in Haiti. Despite these negative impacts, charcoal production and distribution is an important source of income in both rural and urban parts of Haiti.

Historically, urban households have been the largest consumers of firewood and charcoal. Over the past decade, wealthier urban households have begun to shift away from the exclusive use of charcoal and firewood for cooking and have begun to use cleaner liquid fuels, including kerosene and Liquefied Petroleum Gas (LPG). However, Haiti has no legislation or regulations governing the LPG sector. The lack of technical or commercial standards has created safety issues and allowed predatory business practices that have impeded the market’s development. Yet with the inclusion of improved biomass cook stoves programs in the Clean Development Mechanism (CDM)—the mechanism through which carbon emissions are sold on a global market—private investors can lower the price of improved stoves close to that of traditional stoves in exchange for carbon offsets sold on the global compliance and voluntary carbon markets, providing a unique opportunity to stimulate and support the development of the carbon finance market in Haiti.

In response to these challenges and opportunities, the Improved Cooking Technology Program aims to establish the near-term and long-term foundation for a sustainable market for clean, efficient, affordable cooking solutions in Haiti. Its successful implementation will reduce pressure on Haiti’s forests, encourage local and sustainable solutions, and create cooking options for Haiti that are clean, efficient, affordable, and able to meet local cooking needs. These accomplishments will be achieved through the program’s four primary components:

1. *Establishing a thriving local market and industry for household improved biomass cook stoves:* The strategy to this component is multi-faceted. The program will support development of a range of stoves to create a true market by targeting both supply- and demand-side constraints to long-term market growth.
2. *Reducing charcoal consumption by large users, particularly food vendors, schools and orphanages:* The program will enable more than 10,000 street vendors, orphanages, and

schools to switch from charcoal to LPG by increasing access to quality cooking equipment, fuel and, as relevant, financing.

3. *Building a legal and regulatory framework for Liquefied Petroleum Gas (LPG):* The Improved Cooking Technology program will work closely with the Government of Haiti, LPG companies and distributors, and others to provide needed expertise and to help bring stakeholders to a consensus on LPG regulations, standards, and pricing.
4. *Devising Carbon Finance and Financial Incentives for Scale-up:* Our strategy to establish local carbon assets that generate long-term revenue streams contributing to the sustainability of the market for improved cook stoves is predicated on development of a program of activities—a set of activities that can be registered as a program with the CDM—for these technologies.

## SECTION II. GENERAL APPROACH

### A. Purpose

*The purpose of this Program is to establish the near-term and long-term foundations for a sustainable market for clean, efficient, and affordable cooking solutions in Haiti.*

This Program targets the Port-au-Prince Metropolitan area<sup>1</sup>, with a view to generate appropriate results for expansion in other regions of the country.

### B. Vision and Key Principles

The Improved Cooking Technology program seeks “*to set Haiti on a path towards long-term sustainable cooking solutions, and to achieve a significant reduction in charcoal consumption in Port-au-Prince by large users and households*”. It aims to expand the market for improved biomass cook stoves and cleaner fuels in the target area, develop clean energy businesses engaged in supplying the market with cleaner fuels and improved biomass cook stoves, educate consumers and generating market demand, and address regulatory issues that are limiting the expansion of LPG in the household market.

The following principles, which infuse international best practices of improved Cookstove initiatives, will guide the program of activity:

1. *Haitian leadership and ownership.* Haitians stakeholders are driving the process, and are extensively and intensively involved throughout, as any approach that is not driven and owned by them will not be sustainable.
2. *Coordination, collaboration, and communication.* Given the multitude of actors in the focus areas, the program has initiated and will continue the efforts to coordinate closely with key stakeholder groups to create synergies with ongoing cook stoves programs, and support relevant Government of Haiti (GOH) national strategies and plans. The full collaboration from all relevant national and international stakeholders and players is critical to the success of a long-term market driven approach. In order to establish a value for the stoves it is important that the program work with other actors to try to guarantee that stoves are not distributed for free but instead find mechanisms where all Haitians households can have access to improved stoves and understand their full value. It will also coordinate with programs and initiatives targeting rural areas with high levels and concentration of charcoal producers with a view to promote new alternative livelihoods.
3. *Proven and practical approaches to building sustainable markets.* The strategy to build sustainable markets for improved cooking technologies rests on international best practices and interventions successfully used in similar programs, targeting demand-side constraints to market growth, such as consumers’ motivations and access to financing.

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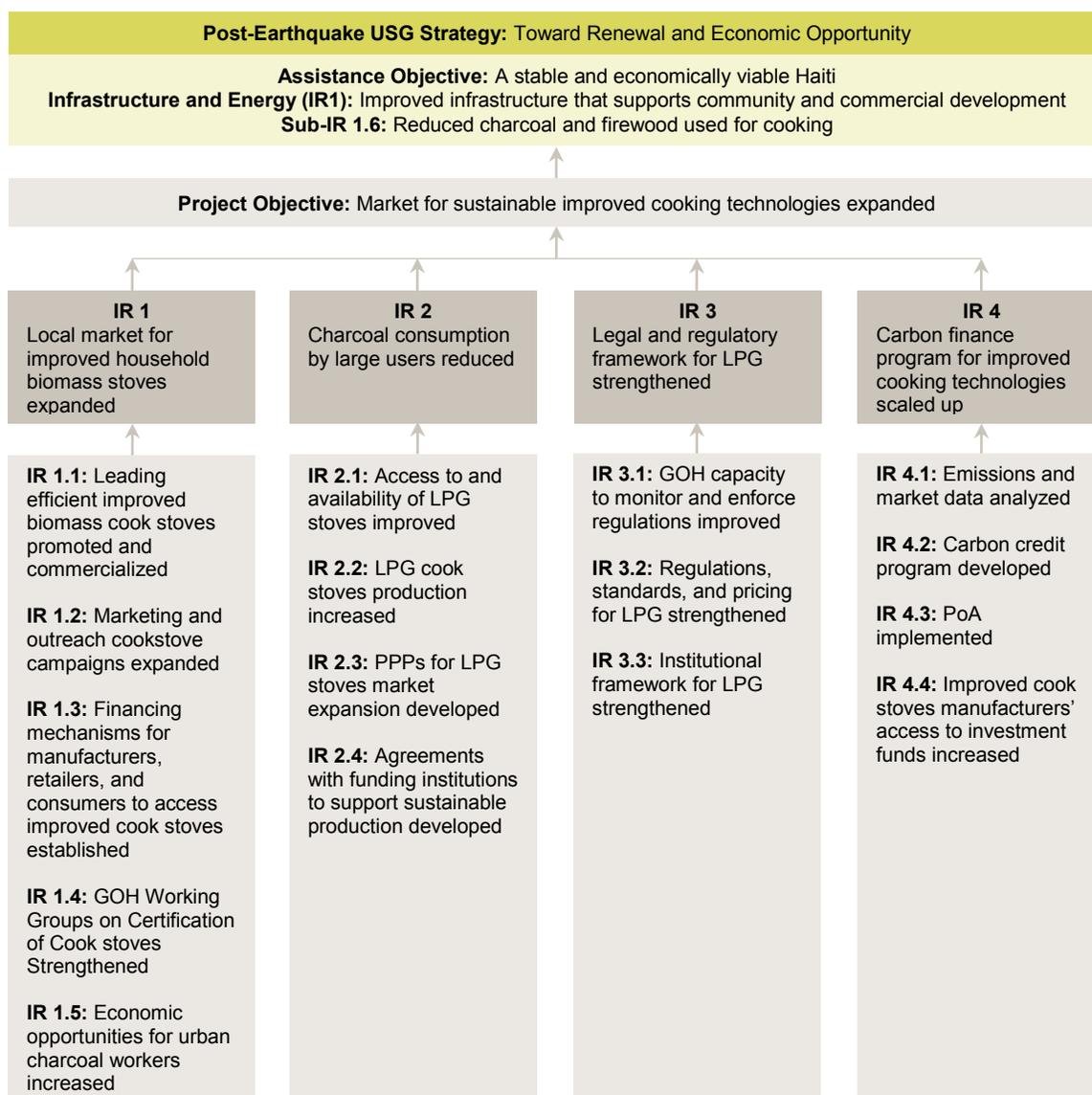
<sup>1</sup> This includes the communes of Port-au-Prince, Delmas, Petion-ville, Kenscoff, Tabarre, Carrefour and Croix des Bouquets.

## C. Results Framework

This Program contributes to fulfill the Post-Earthquake USG strategy for Haiti, namely the Pillar “Toward Renewal and Economic Opportunity”, under the Assistance Objective “A stable and economic viable Haiti” IR 1 Infrastructure and Energy “*Improved infrastructure that supports community and commercial development*”.

The following results framework illustrates the Program’s strategy to achieve the overarching project objective and guide the technical approach, program planning, and performance management and evaluation..

**Exhibit 1. Program Results Framework**



Each component Intermediate Result (IR) presents a critical element to building a sustainable market for clean cooking technologies expanding the market for improved biomass cook stoves, reducing charcoal consumption by large users, establishing a legal and regulatory framework for cleaner fuel market growth, and institutionalizing sustainable financing for that market growth. The realization of each of these IRs will contribute to the achievement of the project objective and the attainment of USAID's development objectives in energy and infrastructure. It will also support the energy priorities of the Government of Haiti (GOH) and the goals of the Global Alliance for Clean Cook stoves

#### **D. Program Organization**

The program is managed and implemented by Chemonics International as prime contractor leading a consortium composed of Mercy Corps, C-Quest Capital and IDEO.org:

- Chemonics is responsible for oversight and management of all programmatic areas, public-private partnership development, and project monitoring and evaluation. It also directly leads IRs 1, 2 and 3;
- Mercy Corps provides technical assistance in the development and implementation of activities aiming at improved biomass cook stoves market growth (IR 1);
- C-Quest Capital leads the carbon financing activities (IR 4), which include serving as the coordinating or managing entity (CME) for clean development mechanism (CDM) program of activities (PoA); and
- IDEO.org provides technical assistance in design and development of marketing and awareness strategies and activities.

#### **D1. Organizational Structure**

Exhibit 2, on the following page, reflects the most up-to-date configuration of the anticipated organizational structure of the program.

## Exhibit 2. Organizational Structure



Key Personnel \* Expatriate Staff

### D2. Management Plan

The Program Director, [REDACTED], is responsible for overall program implementation, working closely with USAID and the GOH to ensure their support, integration, and participation in all activities. Day-to-day authority and responsibility for implementing the project is delegated to [REDACTED] who supervises country-level staff and relationships. Technical leaders [REDACTED] (components 1 and 4) and [REDACTED] (components 2 and 3) report to [REDACTED]. Each technical leader is directly supported by the SME/microfinance specialist, [REDACTED]. [REDACTED] is supported by a technical assistant and a short term legal framework/policy specialist, [REDACTED].

Complementing the technical team is the polytechnical unit and the operations support team. The polytechnical unit consists of an M&E specialist and Communications/Public Awareness specialist. Their work will support appropriate activities in all project components, and they will be under the direct supervision of [REDACTED]. Similarly, the operations support team, composed of specialists in contracts/grants management, accounting, and operations, will also report to [REDACTED].

[REDACTED] is responsible for the timeliness and quality of all deliverables and reporting under the contract and work plan. He provides direct supervision, oversight and strategic guidance to the project team and has the authority, in coordination with the Chemonics Home Office Director, and with USAID concurrence in the case of Key Personnel, to implement staffing changes if and when

necessary. The technical team identifies, designs, and supervises the delivery of technical and financial assistance. Long-term team members will provide technical assistance on a strategic basis, utilizing the services of local partners and individuals who will provide most of the technical assistance, funded by our pool of short-term level of effort and our Special Activity Program Fund (SAPF). We are committed to using the wealth of local talent to deliver program activities and results that promote capacity building, professional development, and long-term sustainability. It is part of our exit strategy and plan for sustainability.

In the third year of the project [REDACTED] will phase out and [REDACTED] will be elevated to the position of Program Director. [REDACTED] will work with [REDACTED] and other Haitian experts in Years 1 and 2 to train and recommend her replacement as component one technical lead. This transition will allow the project to elevate more Haitians into leadership positions and build Haitian expertise in improved cook stoves technology. In addition, after two years [REDACTED] [REDACTED] will have the additional management experience and understanding of the Haitian stoves market needed to successfully lead the project through its final year.

Our consortium members have been provided their general scopes of work as part of their subcontract documents. These scopes of work will be refined and revised with specific activities and tasks after USAID's approval of the work plan. They have actively participated in the development of this draft work plan. All subcontractor staff deployed to the project on short term technical assistance assignments are considered as integral members of the program team

*Program management support:* [REDACTED] reports to a Chemonics home-office director who oversees the provision of home office support, provides trouble-shooting assistance, and assures Chemonics fiduciary responsibilities for this Program. To ensure contract compliance and achievement, Chemonics provides a Washington-based three-tier Project Management Unit (PMU) (director, manager and associate), trained in all aspects of project management, which guarantees full-time, high-quality support and backstop to our field office project teams. The PMU also coordinates with other Chemonics support units and consortium partners to deliver timely assistance, help identify best practices quickly, and share lessons from similar programs around the world.

## SECTION III. WORKPLAN – FIRST YEAR AND PROJECT LIFE

### A. Work Planning Process

The work planning process occurred in three steps:

1. A series of planning meetings and consultations with the key partners and selected stakeholders to review the program scope of work, discuss new opportunities and challenges, define or redefine roles and responsibilities, and identify priority actions. These meetings and consultations also established the action plan, program and agenda for the work-planning workshop.
2. A work-planning workshop was held in Port-au-Prince on February 29 and March 1 to capture and record inputs from the key stakeholders' groups, discuss Program's goal, objectives and approaches, identify the priority actions, cement partnerships, and foster program appropriation. The workshop specific objectives were to:
  - a. Guide the Program implementation strategy, review the expected project outputs to ensure success and sustainability;
  - b. Identify key challenges and opportunities for effective Program implementation;;
  - c. Establish potential partnerships for Program validation and implementation; and
  - d. Identify key project milestones and performance indicators for effective program monitoring and evaluation.

Toward the end of the workshop, in a lively and fun-filled session, the participants selected a Creole name for the Program from a list of over 20 proposed names: "Recho Pa'w".

The participants were also given the opportunity to evaluate the workshop's organization. As appropriate, the evaluation report will be taken into consideration when planning future workshops and consultations.

3. In the weeks immediately following the workshop, the team continued the consultations and discussions with key partners and stakeholders for additional inputs.

### B. Program Activities

The Program activities are grouped under four Intermediate Results (IRs):

1. IR 1: Local market for improved household biomass cook stoves expanded
2. IR 2: Charcoal consumption by large users reduced
3. IR 3: Legal and regulatory framework for LPG strengthened
4. IR 4: Carbon finance program for improved cooking technologies scaled up

### **C. Key Year 1 Results<sup>2</sup>**

- Charcoal consumption is reduced by 17,000 tons as a result of the promotion and uptake of improved cooking technologies in the Port-au-Prince metropolitan area
- An additional 6,900 households and businesses are using improved cooking technologies
- The amount of LPG sold in the Port-au-Prince metropolitan area increases by 10 percent

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<sup>2</sup> In this revised version of the workplan, Year 1 refers to the period ending on 30 September 2012. The results and targets given here and shown throughout the report are defined with respect to this time period. Several expected results and planned targets are therefore reduced pro rata with respect to the targets shown in earlier draft versions of this workplan where the calendar year was the basis of the reporting period.

## **INTERMEDIATE RESULT 1**

### **Local Market For Improved Household Biomass Cook Stoves Expanded**

#### **1.1 Leading Efficient Improved Biomass Cook stoves Promoted and Commercialized**

##### **1.1.1 Develop a Manufacturing Base To Expand the Availability of Improved Biomass Cook stoves in Port-Au-Prince for a Reduction of Wood Charcoal Consumption**

The initial task will be in-country thermal efficiency testing of all cook stoves (traditional and improved) currently available on the Haitian market. This testing is required to allow for the project to re-examine all of the variety of stoves on the Haitian market. The majority of improved charcoal cook stoves available on the market (internationally and locally) have been created after the Nexant report was written in 2010. As a result they have not been compared (tested) to traditional models that exist in Haiti. After in-country testing, those improved cook stoves that have demonstrated efficiencies higher than the traditional models will be tested by an independent third party. The thermal efficiency testing will include imported stoves currently available in Haiti, and which can be produced and/or assembled locally as well as stoves that are candidates for introduction into the Haiti market. The top two to four most efficient stove models from the independent party's results will be included as contenders for final participation in the carbon credit component. In addition to their thermal efficiency, these stoves must demonstrate their real capacity to reduce fuel at the household level and not only within a laboratory. Final stove selection will also include criteria like consumer preference and adaptability (user friendliness), stove lifespan, potential for increasing production and manufacturers' willingness to participate in standardization and quality control. The Market Analysis will help identify leading LPG and biomass stoves on the basis of eight criteria: the ability for local production, performance, affordability, popularity with cooks, current and future market size, growth trends, profitability and distribution channels.

The program will also undertake a participatory needs assessment of manufacturers. It will work with them to identify specific knowledge gaps and pinpoint problems that hinder scaling up production and distribution. Based on this assessment we will develop and implement a technical assistance program for the selected stove manufacturers to boost their technical and management capacity. This will also include a component on marketing and networking to reinforce their ability to develop strong relationships with retailers and consumers. These trainings, like the International Finance Corporation's (IFC) Business Edge range of works, are necessary to help manufacturers build a solid corporate structure, including a trained management team, which will ensure that they can successfully respond to increased demand for their stoves. Upon completion of their training program, manufacturers, with program support, will develop individualized business plans and budgets. The program will then support scaling up production by connecting these manufacturers to micro finance institutions (MFIs) and organizations providing financing (see IR 1.3 below).

#### **Year One (March 2012 – February 2013)**

##### *Specific Tasks:*

1. Identify in-country available cook stoves for independent thermal efficiency testing

2. Conduct stove thermal efficiency testing using a Water Boiling Test and Controlled Cooking Test that meet Clean Development Mechanism standards
3. Assess consumers' preference and stoves' likeability and usability, including capacity of a household to use correctly without prior training
4. Assess manufacturers' business management and production capacity
5. Assess manufacturers' production costs, tooling and current distribution channels
6. Implement controlled cooking tests and price point testing to assess consumer appreciation of selected stoves and realistic prices
7. Assess manufacturers' willingness to participate in carbon credit program and to produce stoves at the required quality and standard
8. Train and provide technical assistance to selected manufacturers in improved stove design, business management, and financing

*Timing:* March 2012-January 2013

*Key Partners:* Mercy Corps, SOFIDHES

### **Expected Results in 2012**

- 3 new sales points for improved charcoal stoves established across Port-au-Prince
- At least one cookstove manufacturer meets requirements for certification of improved biomass cookstoves

Stove sales and their widespread distribution should ideally occur after the launch and widespread recognition of the eco-label which is the symbol to the public that the stoves available for purchase are recognized and certified cook stoves. This will commence at the beginning of the second year of the program after the certification program has been established and the public has been made aware of and understands the meaning of the eco-labeling system.

### **Years Two and Three (March 2013 – February 2015)**

*General tasks:*

1. Continue to train and provide technical assistance to selected manufacturers in improved stove design, business management and financing
2. Continue to train and provide technical assistance in quality control, manufacturing scale up, inventory control and other technical areas as identified in the needs assessment

#### **1.1.2 Mapping of Improved Stoves Distribution Channels and Identification of Distribution Networks**

The program will host several meetings to conduct Participatory Market Mapping with manufacturers and retailers (small and large) to analyze obstacles encountered in distribution, sales and marketing. These discussions will help the program and stakeholders to identify mutually

acceptable solutions. By identifying the market gaps we can address the supply side of the distribution problem and find solutions to increase household access to improved stoves. The program will facilitate meetings or workshops between retailers, who tend to be women and youth, and manufacturers, who tend to be men, to establish strong working relationships. It will also facilitate partnership between these manufacturers and retailers as well as with larger distributors like Valerio Canez for well-targeted awareness and marketing campaigns.

The program will benefit from Internally Displaced Persons (IDPs) knowledge of improved cook stoves and recruit IDP women with both stove and past experience as merchants to conduct initial stove demonstrations and test their sales capacity as stove retailers. A number of women in IDP camps like Camp Corail have received a number of improved Cookstove types and have not only noted their fuel reductions but feel confident that they can convince others that these stoves hold value. The program will introduce some of these women to the stove manufacturers whose stove they preferred.

These retailers will become a trained sales force that can inform consumers on the appropriate use of the improved stoves for maximum efficiency. Based on consultations with the manufacturers and their selected retailers, the program will provide training on inventory management, service and warranty systems, and appropriate marketing techniques.

In addition to improving both manufacturers' and retailers' customer service and management skills, training will be accompanied by an educational toolkit specifically designed for carbon credits requirements. This will include customers' registration with stoves serial numbers to facilitate customers' follow up and carbon credit monitoring and evaluation. It will also contribute to reinforcing a customer service mentality focused on product quality, use, warranty, and after sales maintenance and repair.

### **Year One (March 2012 – January 2013)**

#### *Specific tasks:*

1. Collaborate with manufacturers to map distribution points, and identify possible distribution networks and gaps
2. Design and propagate educational toolkits for manufacturers to use with retailers and distributors
3. Provide technical training to retailers and distributors, and build manufacturers' capacity to deliver future training programs
4. Train stove vendors in maintaining sales information, basic accounting, and small business development
5. Train retailers to document improved cookstoves sales and track serial numbers

*Timing:* May 2012-January 2013

*Key Partners:* Mercy Corps, manufacturers, retailers

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Continue to provide technical training to retailers and distributors, and build manufacturers' capacity to deliver future training programs

## **1.2 Marketing and Outreach Cookstove Campaigns Expanded**

### **1.2.1 Create Widespread Public Awareness Regarding the Benefits of Improved Cook stoves**

The selected marketing partners will conduct an assessment of ways to motivate consumers to switch from their traditional stoves to more efficient ones. This will include reviewing past marketing and awareness efforts for improved cook stoves and alternative fuels and analyzing the successes and failures. The assessment will gather information from core partners, families currently using improved stoves, and feedback and ideas from key stakeholders such as manufacturers and retailers. The results will be used to shape the program marketing strategy and activities, and to establish price points in order to reduce price-based consumer resistance to product purchase.

Public awareness and marketing campaigns will be pursued at various levels and throughout the programs' life. As the project intends to promote a market driven approach, rather than distributing stoves for free, it will develop comprehensive awareness and marketing campaigns using different types of media such as billboards, radio, television, street plays, music contests, etc. in close collaboration with the Haitian Government and other key partners. The campaigns will educate the public about the benefits of improved cook stoves, identification of certified and tested improved cook stoves, characteristics and efficiencies of various stoves, as well as health, fuel and costs issues associated with them.

The program will work with a variety of society at all economics levels to test message delivery. Hot dog street vendors may receive special deals to promote stoves and to demonstrate stove versatility. Youth (young men) who currently tend to walk through the quartiers selling traditional stoves, will be offered the opportunity to pilot selling improved cook stoves in a similar way or with bicycles (to increase visibility).

While the youth tend to roam as mobile sales units and thus will be suitable for marketing the stoves at the same time, women traditionally tend to stay at fixed access points. Using this same system, the female retailers can benefit by working with these youth to advertise their fixed access points.

In close collaboration with USAID, the program will seek to enlist the services of famous/ well known Haitian figures, especially women, willing to contribute their time and fame to promote improved cook stoves. A certified cookstove eco-label will be promoted, highlighting the key

characteristics and efficiencies a consumer should identify with improved stoves. It will also take advantage of important Haitian holidays, such as Mother's Day and Agricultural Day and other events such as International Women's Day to conduct public demonstrations for both improved biomass cook stoves and LPG in collaboration with key stakeholders. The Program will encourage manufacturers and their associated retailers to also conduct public demonstrations after church services and town squares to reach consumers across all socioeconomic levels.

The overall goal for the marketing activities beyond increasing visibility is to:

- Build consumer confidence that these stoves work well and hold value (should be paid for at a decent price)
- Inform the consumers that the stoves should work at a certain quality and thus if they do not work will have some sort of guarantee
- Increase consumer understanding and retailers understanding of customer service

### **Year One (March 2012 – February 2013)**

#### *Specific tasks:*

1. Assess consumer motivations and previous improved Cookstove marketing and awareness efforts
2. Identify optimal price points for market penetration of improved cook stoves
3. Identify appropriate and culturally effective marketing techniques through focus groups consultations and interviews
4. Develop and implement well targeted awareness campaigns and marketing strategies e.g. public demonstrations during holidays
5. Periodically evaluate the marketing campaigns, and adjust them as necessary

*Timing:* April 2012 – December 2015

*Key Partners:* Mercy Corps, GOH, local communications firms

### **Expected Results in 2012**

- Four specific media campaigns conducted in and covering the metropolitan area of Port-au-Prince focusing on quality recognition, access points, payback period and stove benefits for household, and customer service (stove warranty).
- Culturally appropriate marketing strategy completed with optimal price points included, among other relevant information.

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Promote consumer recognition of the eco-label certification
2. Continue the implementation of targeted awareness campaigns and marketing strategies

### **1.3 Financing Mechanisms for Manufacturers, Retailers and Consumers To Access Improved Cook stoves Established**

#### **1.3.1 Facilitate Access to Financing for Manufacturers and Consumers**

This activity is closely tied to Component 4. The project will meet with manufacturers of leading stoves to assess their financial needs for improving stove quality and scaling up manufacturing. The results will be used to ready manufacturers for the requirements of the financing and large scale loans and to prepare them for any potential carbon financing mechanism and the increased demand for improved cook stoves. Within the life of the project, C-Quest Capital (CQC) will work with one selected manufacturer to support production of an improved cook stove using carbon credit driven pre-financing to reduce its retail price and facilitate its market penetration. The stove will be selected by CQC.

As C-Quest financing is not sufficient or applicable within the life of the project, we will introduce manufacturers to private equity funds, commercial banks and other sources of credit to allow scaling of improved Cookstove production. We will work to facilitate the purchase of improved cook stoves through existing financing streams e.g. remittances. At present there are a number of programs and initiatives developing and managing remittance programs, including the USAID-funded LEAD program implemented by PADF, Arc Finance, which is working with SOGE Express, a goods-based remittance company. We will foster the incorporation of energy product options in their remittance program, specifically improved cook stoves as a purchase option for the Haitian Diaspora.

The program will work with microfinance institutions (MFIs) to provide access to credit to smaller stove retailers. The current system of charcoal and traditional stove sales demonstrates that it is likely to be women and young men (youth) who will be the smaller retailers and who will need access to credit through MFI's. Credit schemes will be established where these small retailers can purchase between 12-15 stoves and after selling all stoves, will reimburse the MFI and be eligible for another round of credit. The program will work with all parties to ensure that retailers will receive a reduced price on the stoves that they purchase from the manufacturer and thus can re-sell the stove at a reasonable price, without too much mark up to consumers, but still have enough to reimburse their credit.

Though consumers are unlikely to require credit to purchase a stove promoted through the program, they will still benefit from this system by having increased access to stoves at reasonable prices. The one possible exception where consumers may need access to credit for a stove, is with the Prakti model, currently selling around \$50 USD. Entrepreneurs du Monde is working with both retailers and consumers to have access to credit for Prakti Stoves.

## **Year One (March 2012 – February 2013)**

### *Specific tasks:*

1. Assess manufacturers financing needs through a consultative process
2. Provide business development services and facilitate links to sources of finance for production scale-up
3. Work with manufacturers to ensure wide accessibility of promoted improved cook stoves by providing financial support from different sources including CQC
4. Identify opportunities to link consumers to remittance services for purchasing improved cook stoves

*Timing:* April – January 2012

*Key Partners:* Manufacturers, Mercy Corps, C-Quest Capital, Arc Finance, Le Levier, PADF-LEAD

### **Expected Results in 2012**

- Two manufacturers and retailers will access the financial products developed by the program

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Link consumers to remittance services for purchasing improved cook stoves
2. Continue to assist manufacturers in scaling-up and improving the production of improved cook stoves according to promoted standards

### **1.4 GOH Working Groups on Certification of Cook stoves Strengthened**

#### **1.4.1 GOH Working Groups on Improved Biomass Cook stoves Re-Launched And Strengthened**

The program will encourage stakeholders linked to improved stoves to participate in the improved Cookstove working group. In collaboration with the GOH and in particular with the Secretary of Energy, the program will help develop or revise the definition and overall mandate of the working group. Based on the GOH National Stove Strategy document, the working group will assist in the development of improved Cookstove standards. It will contribute to keeping the various stakeholders informed on Cookstove test results, as well as progress and challenges. It will also serve as a forum for the development of a national certification (regulatory) system and a logo for improved biomass cook stoves. The working group will be an important venue to promote a Cookstove market-led approach to all the relevant players, and develop sustainable and economically sound expansion strategies.

## **Year One (March 2012 – February 2013)**

### *Specific tasks:*

1. Foster the participation of key actors in the improved Cookstove working group
2. Guide the development of the working group mandate
3. Support the development of sound protocols for the GOH improved Cookstove Certification process
4. Initiate a Cookstove Certification Program with the GOH

*Timing:* March – January 2013

*Key Partners:* GOH, manufacturers, NGOs working with stoves, stove design labs, distributors and retailers

### **Expected Results in 2012**

- A detailed finalized and publicly available protocol established and promulgated by the Working Group that sets standards for cookstove design, durability, and customer service

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Promote the Cookstove Certification Program among manufacturers
2. Train stove manufacturers on the requirements of the Certification Program
3. Facilitate the Certification audit process

### **1.4.2 Certification Process Strengthened and Logo Recognized by Consumers**

The Certification process will be eventually managed by the GOH or a similar neutral body to ensure continuation beyond the life of this program. We will work with the Bureau des Mines et de l'Énergie (BME) and/or other relevant government institutions currently running labs to train local technicians in the installation and use of Portable Emissions Monitoring Systems (PEMS) to test stove quality and guarantee that they maintain the standards established by the certification body. The technicians will be fully trained to monitor indoor air pollution, assess stove performance, and perform accelerated life analysis. Other training opportunities will be made available to relevant local technicians, such as internships with established design labs.

This certification system will establish the standard for stoves marketed as 'improved' on the Haitian market. One of the expected end products is the creation of a traceable national Eco-Label that will be presented in the programs general marketing campaigns. This will likely use either a "traffic light rating" system of red, amber and green with green being the best stoves – a star system, one, two or three stars (three being the highest efficiency/stove) or another culturally appropriate system based on the market research carried out under IR 1.2. The quality of the stoves will be recognized by the eco-label but those stoves that are part of the carbon credit component will also have serial numbers branded or pressed into their frames (like LPG tanks).

The rating will be based on fuel savings, durability, usability scores from focus groups and value for money (based on price compared to life span). This will achieve three purposes:

- Help inform consumers using a highly visible, simple method of rating that can also be used for branding and marketing campaigns;
- Provide incentives to designers and manufacturers to continue to strive for excellence and product improvement; and
- Avoid bias and perception of favoritism, as the program will promote a range of models.

### **Year One (March 2012 – February 2013)**

#### *Specific Tasks:*

1. Work with the GOH to establish appropriate cook stoves testing labs
2. Train lab employees on thermal efficiency stove testing
3. Work with marketing companies to develop and test logo with consumers
4. Launch logo in marketing campaign to educate public to recognize certified stoves

*Timing:* March 2012-December 2012

*Key Partners:* Mercy Corps, CQC

### **Expected Results in 2012**

- Logo launched
- One testing lab established with the GOH
- 10 GOH/BME employees trained on stove thermal efficiency testing
- Five percent of the population of Port-au-Prince recognizes the national eco-label and logo and understands how to identify “certified” improved cook stoves from other stoves available on market

### **Years Two and Three (March 2013 – February 2015)**

#### *General tasks:*

1. Implement awareness campaigns on certified cook stoves

#### **1.5 Economic Opportunities for Urban Charcoal Workers Increased**

##### **1.5.1 Promoting Alternative Livelihood Opportunities for Workers in the Charcoal Value Chain**

This activity will focus mainly on Port-au-Prince charcoal sellers. Within the life of the program, charcoal reductions are not likely to significantly impact the livelihoods of charcoal sellers. Like any business, most Cookstove projects take at least 4-5 years to build momentum and really increase sales and thus generate revenue. During the life of the project, population growth and movements from the rural areas to Port-au-Prince are likely to offset any project induced charcoal

reductions during the project first two years. Nonetheless, the program will start working with charcoal retailers in Port-au-Prince to diversify their livelihood activities, and increase their income by becoming improved stove vendors. The program will work with male retailers near some of the ports, where charcoal enters the city by boat from Isle de la Gonave and other coastal areas. Stoves can be stored at the same depots and sold for bulk prices to the merchants who come for large quantities of charcoal. A focus will also be placed on the small charcoal retailers, who tend to be women. They will be able to access a smaller number of improved cook stoves to display and sell where the average household consumer will come and purchase charcoal. Thus the consumers will be able to purchase combustibles and the improved Cookstove in the same location promoting both the distribution and availability of improved cook stoves to a wider audience.

### **Year One (March 2012 – February 2013)**

#### *Specific tasks:*

1. Conduct a rapid assessment of urban charcoal workers' income levels to be used as baseline data
2. Work with improved stoves manufacturers and distributors to promote charcoal sellers' entry into the improved cookstove and alternative fuel value chains
3. Help charcoal sellers identify potential alternative livelihoods activities for PAP charcoal workers
4. Train charcoal sellers in the marketing of improved stoves and promoting stove benefits to consumers

*Timing:* March – January 2013

*Key Partners:* Mercy Corps

### **Expected Results in 2012**

- 50 charcoal workers participating in the pilot program are identified and selected for training in the marketing and sales of improved cook stoves

### **Years Two and Three (March 2013 – February 2015)**

#### *General tasks:*

1. Promote the inclusion of charcoal sellers in the sale of improved stoves
2. Train ex-charcoal sellers in skills that will provide alternative livelihoods
3. Identify opportunities for charcoal producers in rural areas and renewable energy projects like tree lots and agroforestry (not fruit trees)

## **INTERMEDIATE RESULT 2**

### **Charcoal Consumption by Large Users Reduced**

#### **2.1 Access to and Availability of LPG Stoves Improved**

LPG stoves and their uptake face many of the same issues that prevent wide scale dissemination of improved biomass cook stoves. Street food vendors (predominantly women) and clientele that would be interested but do not fall into the category of regular customers of supermarkets and home good supply stores, do not have easy access to LPG stoves, even when interested. Street food vendors can have their traditional charcoal stoves tailor made, and can negotiate the price, which generally range from \$35 USD to \$65 USD, depending on the metal quality and number of burners. Access to LPG stoves is more complicated. There is very little LPG marketing, and street food vendors are not in a familiar environment in terms of quality, types and prices. Not being able to negotiate the price of a stove is demotivating for most of these potential customers.

The program will work with local manufacturers<sup>3</sup> to standardize their LPG stoves, set fair prices and increase their access to potential customers. It will work also with women street food vendors to increase their knowledge on LPG stoves quality, types, price structures, operation, safety and maintenance. The program will also improve their access to repair services and parts. These efforts, in addition to the awareness and marketing campaigns will contribute to increase the overall demand for LPG stoves and increase customers' access to stoves at affordable prices.

##### **2.1.1 Facilitate Street Food Vendors' Conversion from Charcoal to LPG Cook stoves**

LPG cook stoves marketing does not exist in the country, nor is there marketing on access to replacement parts. The Program's marketing strategy for LPG cook stoves will focus on street food vendors, starting with an assessment of their options and willingness for conversion to LPG, and building on the assessment conducted by WINNER in 2010. The first targets will be vendors at the Industrial Park (SONAPI), who serve food to more than 12,000 workers a day. Public demonstrations will be held at the industrial park and then eventually other markets, where already vetted LPG stove manufacturers will be presented to the food vendors directly—allowing them to order the type of stove (one, two or three burners) that meets their specific needs. The demonstrations will be conducted by street food vendors who previously participated in the WINNER pilot program on LPG stoves. Prices and information about access to replacement parts will be communicated to the street food vendors during these demonstrations. The revenue of women food vendors will increase, and air quality will also improve in the immediate vicinity of the LPG stoves.

Year 1 activities will focus more on areas and markets with larger concentrations of street food vendors. Street corner and neighborhood street vendors will be targeted starting in Year 2.

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<sup>3</sup> Note that many of these local manufacturers are essentially metal workers and welders, who have been trained to build LPG stoves.

## **Year One (March 2012 – February 2013)**

### *Specific tasks:*

1. Assess street food vendors' willingness to convert to LPG cook stoves
2. Assess street food vendors' training needs
3. Train street food vendors on LPG stove operations and maintenance
4. Train technicians for LPG stoves repair
5. Organize the first groups of street food vendors' conversion to LPG

*Timing:* April to December 2012

*Key Partners:* LPG stove manufacturers, street food vendors

### **Expected Results in 2012**

- Four manufacturers of certified LPG stoves will be established in the metropolitan Port-au-Prince area
- 450 large users of charcoal (street vendors and schools) switch to LPG
- 30 technicians from certified manufacturers will be trained on the repair of LPG stoves
- At least 17,000 tonnes of charcoal saved in the first year of the project

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Continue to train street food vendors on LPG stove operation and maintenance
2. Continue to train technicians for LPG stove repair

### **2.1.2 Development and Implementation of LPG Cook stoves Marketing and Awareness Campaigns**

The program will develop awareness and marketing campaigns targeting street food vendors. The campaigns will be implemented throughout the project life using different types of media such as billboards, radio, television, street plays, music contests, etc. in close collaboration with the Haitian Government and other key partners. The program will take advantage of important Haitian holidays, such as mother's day and Agricultural day (May 1) and other events such as international women day to conduct public demonstrations for both improved biomass cook stoves and LPG in collaboration with vendors working in the Metropolitan area of Port au Prince. Among other aspects, the campaign will inform customers about LPG prices, sales points, specific need-based choices, operation, safety, and the lower cost of LPG compared to charcoal. Care will be taken to ensure that the messages promoting LPG and the messages promoting improved charcoal stoves are complementary and focused on different target groups. In addition, the program may pilot a charcoal stove that can also be adapted to an LPG tank, thus reducing LPG stove costs and allowing new consumers to build their confidence and habituation to LPG without incurring too many additional costs.

## **Year One (March 2012 – February 2013)**

### *Specific tasks:*

1. Assess street food vendors motivations and previous improved Cookstove marketing and awareness efforts
2. Design and develop well-targeted awareness campaigns and marketing strategies
3. Initiate targeted awareness campaigns and marketing strategies
4. Organize public demonstrations during holidays, at churches, public squares and markets
5. Periodically evaluate the marketing campaigns, and adjust as needed

*Timing:* April to December 2012

*Key Partners:* Chemonics and local marketing companies

### **Expected Results in 2012**

- Marketing strategy completed
- One awareness and marketing campaign for certified LPG stoves conducted in the Port-au-Prince area
- At least 8 public demonstrations of certified commercial LPG stoves are organized
- The quantity of LPG sold in metro Port-au-Prince increases by over 1,000 tons compared to 2011 sales

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Organize targeted awareness campaigns and marketing strategies
2. Expand public demonstrations during holidays, and at churches, public squares and markets

## **2.2 LPG Cook stoves Production Increased**

### **2.2.1 Ensure Availability of and Access to LPG Cook stoves at Affordable Price**

Currently, there are only a few models of commercial LPG cook stoves available. The project will conduct a rapid market analysis to determine which models are most suitable for potential scale-up of production and supply. In addition, local manufacturers often consist of one or two blacksmiths or metal welders who have been trained on LPG stove production but do not have the capacity to produce at scale and at a standardized quality. The Program will assess the LPG Cookstove manufacturers needs (technical and managerial capacities), and main short term constraints to expand their production. That will lead also to the selection of a limited number of manufacturers who will be trained or upgraded to manufacture the most efficient cook stoves at the most affordable price. The program will also work with manufacturers and GOH to establish a certification process and support regulations for investing in and scaling up LPG stoves production. We will assist manufacturers in working together in associations in order to purchase parts and materials in bulk, adopt and work on similar models, and use serial numbers for tracking

stoves and monitoring performance. Increased availability of LPG stoves at affordable prices will potentially have a significant positive impact on women who now use charcoal as a commercial fuel.

### **Year One (March 2012 – February 2013)**

#### *Specific Tasks*

1. Identify commercial Cookstove models best positioned for scaled production considering durability, efficiency and customer preference
2. Work with LPG stove manufacturers to establish specifications and standards for LPG stoves
3. Help organize the formation of associations of manufacturers, and the negotiation and development of MOUs among selected manufacturers
4. Initiate a certification program with the GOH for LPG cook stoves and Cookstove replacement parts
5. Provide technical assistance to selected Cookstove manufacturers for scaling up production, leveraging financing (linked to IR 2.4)

*Timing:* March 2012-through life of project

*Key Partners:* GOH, LPG suppliers and retailers, LPG stove manufacturers

### **Expected Results in 2012**

- Completed quick market analysis
- 900 commercial LPG stoves are sold in the Port-au-Prince area
- 6,000 household stoves are sold in the Port-au-Prince area

### **Years Two and Three (March 2013 – February 2015)**

#### *General tasks:*

1. Train LPG cook stoves manufacturers on the requirements and implementation of the certification program
2. Continue to provide technical assistance to selected Cookstove manufacturers for scaling up production, and leveraging financing

#### **2.2.2 Improve Availability of and Access to Replacement Parts and Services at Affordable Price**

With relevant data and information on the increased demand, manufacturers will more accurately estimate the need for replacement parts. Part of the project's due diligence will be to work with the manufacturers and repairmen to ensure that imported parts and burners respond to the increase of market demand. We will work with the private sector to increase availability of and access to replacement parts and burners at reasonable prices to satisfy market demand.

## **Year One (March 2012 – February 2013)**

### *Specific tasks:*

1. Work with manufacturers to help ensure increased availability of LPG stoves parts at affordable prices.
2. Support at least four manufacturers in the production of LPG Cookstove parts

*Timing:* April 2012 – December 2015

*Key Partners:* Chemonics, LPG Importers and Manufacturers, street food vendors, schools

### **Expected Results in 2012**

- At least four manufacturers in the Port-au-Prince area stock spare parts for commercial LPG stoves

## **2.3 Public-Private Partnerships for LPG Stoves Market Expansion Developed**

### **2.3.1 Develop Agreements Between Importers and Large-Scale Consumers To Ensure Continuity of Project Objectives**

The program will facilitate contacts and communication between the government and the private sector to expand the LPG market. We will assess with the GOH the feasibility of tax waivers on imported LPG tanks, burners and accessories (tubing, flare nuts, copper adaptors, etc) to increase materials and parts imports, and support price reduction. The project will help negotiate Memoranda of Understanding (MOU) between public and private sector stakeholders for bulk prices to food street vendors.

## **Year One (March 2012 – February 2013)**

### *Specific tasks:*

1. Negotiate with the Ministry of Education for the use of LPG cook stoves by the school feeding program
2. Negotiate with the GOH tax waivers on the importation of LPG products and parts
3. Negotiate MOUs between LPG suppliers and street food vendors

*Timing:* April 2012 – December 2012

*Key Partners:* Chemonics, GOH, LPG Importers and Manufacturers, street food vendors, schools

### **Expected Results in 2012**

- At least one PPP agreement signed between the GOH and the private sector that expands the market for LPG

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Promote Public-Private Partnerships that foster and facilitate the expansion of the LPG stoves market

## **2.4 Agreements with Funding Institutions To Support Sustained Production Developed**

### **2.4.1 Facilitate Negotiations Between Micro Financing Institutions and Grant Foundations with Food Street Vendors, Schools, and Other Stakeholders**

The program will help arrange negotiations with microfinance institutions to develop financing schemes for street food vendors at affordable rates and suitable conditions. It will explore other possible funding opportunities for food street vendors.

## **Year One (March 2012 – February 2013)**

### *Specific tasks:*

1. Help organize negotiations of funding schemes between street food vendors and microfinance institutions
2. Assist in leveraging funds from grant foundations to provide funding to schools, orphanages and street vendors to purchase LPG stoves
3. Encourage agreements between microfinance institutions (MFIs) and street vendors to lend funds for the purchase of LPG cook stoves

*Timing:* April 2012 – December 2012

*Key Partners:* Chemonics, MFIs, Grant Foundations, street food vendors, schools

### **Expected results in 2012**

- At least three agreements signed between manufacturers and funding institutions in support of the sustainable production of LPG stoves
- 100 loans from funding institutions made to large charcoal users to purchase stoves from manufacturers

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Work with MFIs to develop new financial products aimed at facilitating the purchase of LPG stoves

## **INTERMEDIATE RESULT 3**

### **Legal and Regulatory Framework for LPG Strengthened**

#### **3.1 GOH Capacity to Monitor and Enforce Regulations Improved**

##### **3.1.1 Work with GOH To Reconvene the LPG Working Group**

Contact will be made with the various stakeholders: GOH, private sector, non-governmental organizations, and other donors to reconvene the LPG working group in order to finalize the revision of the latest draft LPG Law and Regulations. The LPG working group will advise the GOH on defining technical and commercial specifications for LPG importation and distribution.

#### **Year One (March 2012 – February 2013)**

##### *Specific tasks:*

1. Identify the working groups members
2. Collaborate with the Secretary of Energy and reconvene the LPG working group
3. Support the organization of the LPG working group meetings
4. Assist the working group with the enactment of the LPG law and regulations

*Timing:* April 2012 – December 2012

*Key Partners:* Chemonics, GOH, MTPTEC, UGSE, SODIGAZ, DINASA, TOTAL, PNUE, USAID/WINNER, and World Bank

#### **Expected results in 2012**

- Three meetings of the LPG Working Group take place and minutes with action items and timelines are reported
- The final draft of the LPG laws and regulations is approved by the Working Group
- Two GOH staff are trained in regulation and enforcement of LPG distribution

#### **Years Two and Three (March 2013 – February 2015)**

##### *General tasks:*

1. Ensure the LPG working group is a sustainable entity with long-term donor support

#### **3.2 Regulations, Standards, and Pricing for LPG Strengthened**

##### **3.2.1 LPG Laws and Regulations Published and Released**

In 2011, the GOH completed a near final draft of the LPG law. The Program will work with the *Secrétaire d'Etat a l'Energie* of the Ministry of Public Works, and with LPG suppliers to finalize the LPG law for submission to the Cabinet of Ministers, and onward submission to the Parliament.

The program will assist in ensuring the inclusion of international best practice related to LPG supply and domestic use. It will assist the GOH to monitor OPIS<sup>4</sup> prices that addresses terms and conditions on LPG marketing, importing, cost structures. It will facilitate stakeholders meetings to achieve a consensus with the LPG industry on LPG regulations and transport. The GOH in agreement with LPG importers will release agreed upon market prices that are transparent for regular disclosure to the public. The rules and regulations that will be discussed when finalizing the regulatory framework will include:

1. Liability and ownership of the tank
2. Specification of the imported LPG parts and accessories
3. Import licenses
4. Stocking the LPG
5. Refilling the LPG bottles at filling stations
6. The problem of cross filling
7. Domestic transportation of LPG

### **Year One (March 2012 – February 2013)**

#### *Specific tasks:*

1. Define international best practice in LPG management – adjusted for Haitian context
2. Conduct workshop to establish consensus on regulatory and institutional framework, including GOH and LPG importers to design manufacturing and marketing structure
3. Encourage GOH to release LPG price structure to public

*Timing:* September 2012<sup>5</sup>

*Key Partners:* Chemonics, GOH, MTPTE, UGSE, SODIGAZ, DINASA, TOTAL, PNUE, USAID/WINNER, and World Bank

### **Expected Results in 2012**

- Legislation regulating the LPG sector is enacted by the Government
- At least two articles or statements are published by the Government or by the LPG companies informing the public about LPG prices

### **Years Two and Three (March 2013 – February 2015)**

#### *General tasks:*

1. Ensure that the LPG regulations are widely known and understood
2. Ensure that the LPG regulations are adhered to

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<sup>4</sup> Oil Price Information Service

<sup>5</sup> This can only be accomplished once the law is passed by the GOH

### **3.3 Institutional Framework for LPG Strengthened**

#### **3.3.1 Strengthen the Institutional Framework for LPG Through Transparency**

The project will work with GOH and LPG actors to ensure that LPG suppliers and commercial users abide by the rules and regulations established through the efforts of the LPG working group and the *Secrétaire d'Etat à l'Energie*. An important element of the program will be to work with the government to promote information sharing, transparency and good governance in LPG management.

#### **Year One (March 2012 – February 2013)**

##### *Specific tasks:*

1. Regularly release information pertaining to LPG use and distribution
2. Regularly assess consumers' knowledge of LPG institutional and legal framework
3. Spot check LPG suppliers to ensure they adhere to the regulations

*Timing:* September 2012 – December 2012

*Key Partners:* GOH, Chemonics, LPG suppliers and LPG consumers

#### **Expected Results in 2012**

- GOH has officially designated via appointment letter an outreach/enforcement unit to monitor LPG suppliers and commercial users

#### **Years Two and Three (March 2013 – February 2015)**

##### *General tasks:*

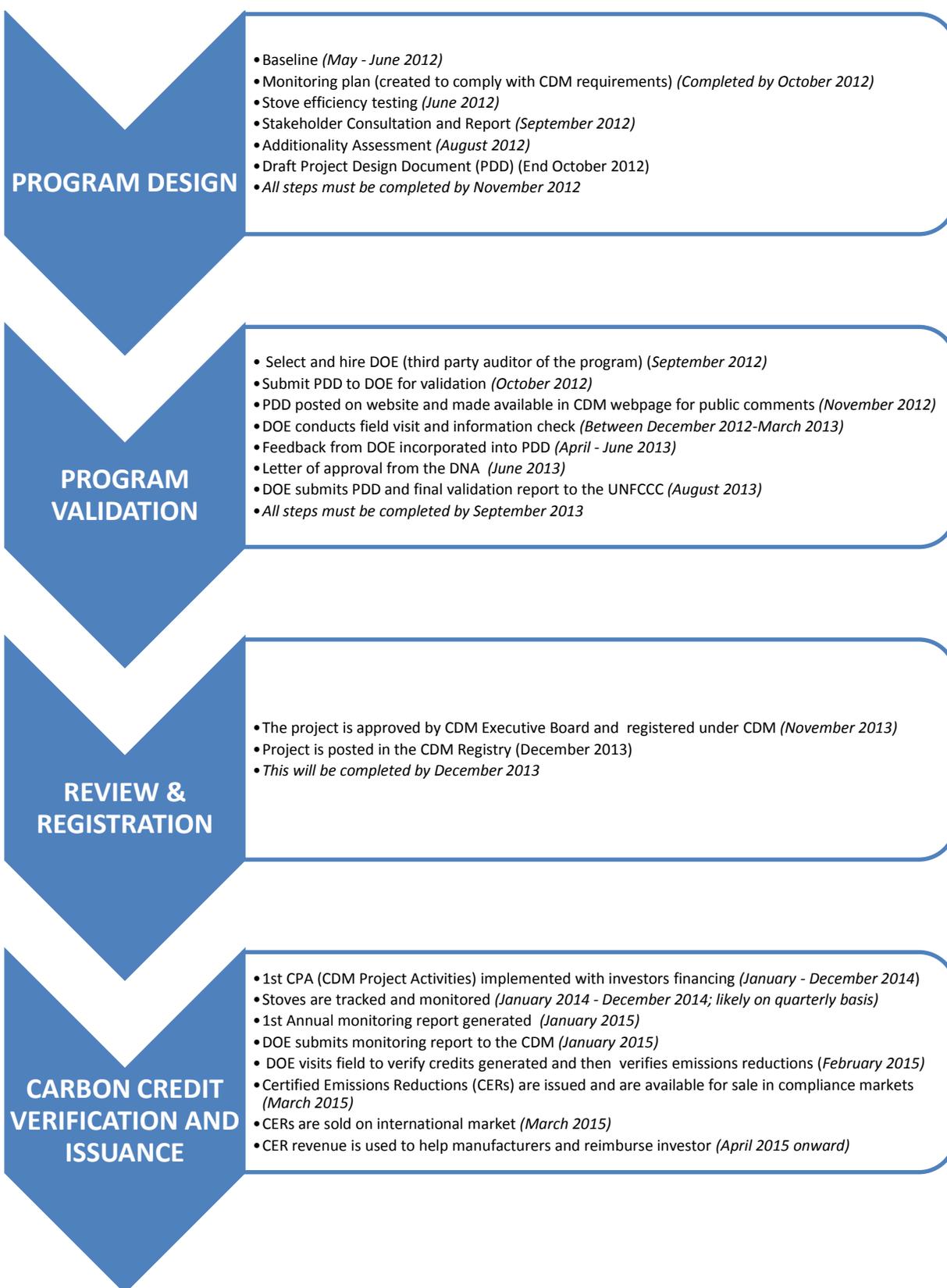
1. Ensure that the working group meetings are reported in the media and that the population is aware of the group's meetings, their discussions and decisions, and the government's pro-LPG policies

## **INTERMEDIATE RESULT 4:**

### **Carbon Finance Program for Improved Cooking Technologies Scaled Up**

Exhibit 3, on the following page, shows the four principal stages of the process that leads to the availability of Certified Emissions Reductions.

### Exhibit 3. Process for Attaining Certified Emissions Reductions



## **4.1 Emissions and Market Data Analyzed**

### **4.1.1 Conduct Market Analysis**

A complete market analysis will be undertaken to understand the supply and potential demand for improved stoves in Haiti, as well as the current forces that shape the existing stove and cooking fuel industries in order to develop strategies to enhance the penetration of improved cook stoves in Haiti. This exercise will explore the following points:

- Assessment of household cooking fuel and stoves market size and trends in commercial, residential and institutional sectors, and peri-urban and urban areas
- An analysis of population and household dynamics, including growth rates, household composition, income, remittances, literacy, etc.
- Analysis of other recent longitudinal studies with improved stoves and other relevant studies
- An assessment of cooking habits and fuel needs across population segments
- An assessment of fuel and stove purchasing behavior, habits, and embedded beliefs
- A market segmentation analysis to understand which groups are more likely to switch fuels and cooking technologies
- An analysis of improved stove supply, including current production capacities of manufacturers, and competitive environment
- An analysis of players (including NGOs) developing complementary projects to stoves that may affect cooking fuel and stove supply and demand
- An analysis of household cooking fuel prices (biomass fuels, LPG)

### **Year One (March 2012 – February 2013)**

#### *Specific tasks:*

1. Develop secondary market research with known sources of information such as previous studies and databases
2. Design a primary market study based on information from the secondary research to corroborate the information of the secondary analysis and cover knowledge gaps
3. Conduct direct structured interviews with households, institutions, commercial establishments, and other relevant local players such as stove manufacturers, vendors, NGOs, and fuel supply chain participants as needed

*Timing:* April – December 2012

*Key Partners:* C-Quest Capital, Mercy Corps, Chemonics

### **Expected Results in 2012**

- The market analysis is completed and the report available

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Review trends as necessary and their implication for the market

### **4.1.2 Conduct a Longitudinal Study To Understand Stove Durability and Consumer Preferences**

This activity consists of disseminating a sample<sup>6</sup> of different stove designs among Haitian households and institutions simulating potential market conditions in order to study and understand fuel usage patterns, levels of satisfaction, and cooking-equipment use characteristics. These parameters will be analyzed along other variables to better understand the market, and guide decisions on resource allocation, carbon finance potential and key marketing considerations.

## **Year One (March 2012 – February 2013)**

### *Specific tasks:*

1. Design longitudinal experiment to understand impact of different variables on stove and fuel usage
2. Disseminate a relevant number of stove samples across potential markets
3. Collect and analyze data from experiments

*Timing:* May – December 2012

*Key Partners:* C-Quest, Mercy Corps, stove manufacturers

### **Expected Results in 2012**

- 1<sup>st</sup> report from the longitudinal study completed and the report available
- Four stove types are available in the target area that meet carbon emission reduction standards

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Identify and assess new stoves entering the market and make adjustments to promotion as necessary
2. Survey customer satisfaction regularly to ensure users are satisfied with stoves' performance

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<sup>6</sup> Sample could potentially consists of around ten stoves per model, depending on costs and manufacturer willingness to participate through stove donations

#### **4.1.3 Use Baseline Studies to Determine Current Fuel Consumption and Non-Renewable Biomass Fraction**

In order to validate a Program of Activities-Program Design Document (PoA-DD) for a clean and efficient cook stoves project under the United Nations Clean Development Mechanism (CDM), a project developer needs to provide baseline information regarding energy use and current cooking technology in the proposed host country. The difference between fuel consumed by traditional stoves and improved stoves translates into emission reductions. Therefore, the accurate description of the program's impact on greenhouse gas emissions requires, as a first step, knowing current fuel consumption levels and patterns. The baseline will be developed under the CDM's Executive Board (EB) 65 Report and will include samples that portray accurate estimates for the whole country.

The fuel use baseline study will have two components. The first is a survey to establish baseline cooking fuel use in the Haitian environment, and the second concerns the pattern of use of one or more stoves. These surveys require statistically valid samples of the target end-user population by sector. The baseline will most likely be conducted over domestic, commercial, and institutional end-use clusters.

CQC will guide project partners through the development of this background research. In most cases, CQC has draft versions of the relevant surveys and can help project partners to modify the surveys as needed for local conditions.

In addition to the fuel consumption baseline, a non-renewable biomass baseline must be established. The non-renewable biomass baseline refers to the amount of wood or charcoal that is being extracted to fulfill cooking needs that is extracted from unmanaged forests and that is therefore contributing to forest degradation or deforestation. The fraction of non-renewable biomass used by households can be translated to actual greenhouse gas emissions to the atmosphere.

#### **Year One (March 2012 – February 2013)**

##### *Specific tasks:*

1. Develop survey instruments and implement them under Haitian local conditions
2. Gather field data to estimate traditional cooking systems carbon emissions
3. Develop baseline metrics among different fuel use clusters
4. Research forestry data and overall fuel wood and charcoal consumption to estimate fraction of non-renewable biomass.

*Timing:* May – October 2012

*Key Partners:* C-Quest, Chemonics, CQC contractors

#### **Expected Results in 2012**

- The baseline study is completed and the report available

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Update baseline information on a regular basis identifying and analyzing trends.

## **4.2 Carbon Credit Program Developed**

### **4.2.1 Design a Carbon Credit Program (Pre-Validation)**

In addition to the estimation of emission reductions and market characteristics, the development of CDM-PoA carbon credits requires due diligence across a complex process. The PoA operational elements must be carefully designed and validated by UNFCCC accredited auditors (Designated Operational Entities, DOE) before they can be properly registered. There are several steps required that involve a number of actors, in addition to project developers, to complete this activity.

First, CQC will design an implementation structure for the Program of Activities (PoA). The plan will outline in detail a set of roles and responsibilities for CQC, the Managing Entity<sup>7</sup> of the PoA, and all other partners involved in the generation of the carbon credits. These roles may include fiduciary duties for the Managing Entity and implementing partners, as well as agreements with improved Cookstove users to transfer the carbon offset rights to the Managing Entity, who would use the credits to subsidize the program.

CQC will also assist in developing an operational plan that will include, but is not limited to, stove distribution methods, data collection and data transfer, transport and storage logistics, and specific marketing plans. During the implementation phase, these activities may be executed by implementing agencies—which could be Haiti stove manufacturers and other parties involved in marketing and operations.

The design and execution of monitoring plans is a key element of the PoA. CQC will create repositories and data collection methods to capture information on the sales and use of stoves. The program is looking into ways to monitor the stoves and maintain contacts with stove users through cellular technology. Emission reductions will be quantified over the number and usage of improved stoves. The data collected will be audited and will conform to strict standards and to avoid double counting of emission reductions. Information on location and other specificities of each improved stoves will be captured to ensure accurate accounting of emission reductions according to CDM standards. The information related to the PoA design, methods, and emissions accounting will be captured in a Design Document (PoA-DD) which will be submitted for review and validation to a DOE.

The program will also build on the work initiated by the WINNER project to strengthen the Designated National Authority (DNA)--which is based in the Ministry of Environment. The cook stoves program is likely to be the first to pragmatically address the CDM with the DNA in Haiti. The program will provide training and, if necessary, short-term technical assistance to the DNA to

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<sup>7</sup> The Managing Entity provides the framework and rules for others to participate in the PoA. This Entity is also responsible for the integrity of the emission reductions and the coordination of processes that lead to the issuance of Certified Emission Reductions (CERs).

ensure that this essential CDM function operates effectively. The Program will provide support to the DNA in public workshops in an entirely transparent and impartial manner so as to avoid any perception of a possible conflict of interest.

### **Year One (March 2012 – February 2013)**

#### *Specific tasks:*

1. Design of implementation and operational plan of the PoA
2. Develop monitoring methodologies and data repository
3. Draft PoA Design Documents
4. Coordinate with DOE validation of PoA and make necessary changes to program design
5. Provide technical assistance to the DNA to enable this Authority to become fully operational

*Timing:* April – October 2012

*Key Partners:* C-Quest Capital, DOE

### **Expected Results in 2012**

- Operational and monitoring plans produced and shared with relevant parties

### **Years Two and Three (March 2013 – February 2015)**

#### *General tasks:*

1. Ensure continued validation of the PoA

#### **4.2.2 Prepare the Program of Activities-Design Document**

The PoA-DD will be reviewed by the DOE and modified accordingly. The review process will end with the submission of the PoA for DOE validation under the CDM. Finally, the Executive Board of the CDM will review and register the program.

### **Year One (March 2012 – February 2013)**

#### *Specific tasks:*

1. Submit PoA-DD and other design documents for review by DOE
2. Modify program design and documents according to DOE review
3. Submit documentation for validation

*Timing:* November 2012 – July 2013

*Key Partners:* C-Quest Capital, DOE, CDM Executive Board

## Expected Results in 2012

- The PoA Design Document will be submitted for review by the DOE

## Years Two and Three (March 2013 – February 2015)

### *General tasks:*

1. Ensure continued validation and execution of the PoA

### **4.3 Implement the PoA**

Multiple stove dissemination programs can be added throughout the life of the approved PoA. These are referred to as CDM Program Activities (CPAs). Each CPA will include the dissemination of a specific stove technology in an amount that does not exceed a quantity of energy savings defined by the CDM<sup>8</sup>. As an open access PoA, stove manufacturers and distributors will be able to incorporate CPAs as long as they meet certain conditions specified by the Managing Entity.

#### **4.3.1 Conduct a Market Pilot Test**

After validation, CQC will launch a commercial pilot program for target markets. The objective of this test is to understand market responses, emission reductions, and needed adjustments to the proposed marketing strategies. The test would likely consist in disseminating hundreds or even thousands of stoves under the same marketing conditions as the planned future implementation. The provision of carbon subsidies would be granted during this test and for the future stove sales under the PoA.

### **Year One (March 2012 – February 2013)**

#### *Specific tasks:*

1. Develop experiment plan and methods for data capture
2. Develop a CPA Design Document (CPA-DD) to create Certified Emission Reductions (CERs) from pilot tests
3. Disseminate stoves
4. Assess consumer responses to marketing and new stove technology
5. Develop best practices for stove dissemination

*Timing:* August – October 2013 (contingent upon validation)

*Key Partners:* C-Quest Capital, stove manufacturers

## Expected Results in 2012

- Market Pilot test launched to assess needed program adjustments

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<sup>8</sup> The amount of maximum energy savings per CPA is currently set at 180 GWh per annum, which will likely include several thousand stoves.

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Continue to promote improved stoves and the extension of the PoA

### **4.3.2 Implement the CPA**

CPA implementation will occur after validation and registration of the PoA under the CDM. The cycle of CPA implementation includes a review process of the implementing entities (e.g. stove manufacturers), a revision of the CPA documentation by the DOE, and the registration of the CPA under CDM. These activities will be coordinated by CQC, the Managing Entity. The PoA will be open access, meaning that all improved stove market players are encouraged to participate. It is in the best interest of CQC to enhance stove dissemination through the incorporation of as many qualified implementing partners as possible.

Participation of women in the program will be highly encouraged among implementing parties. Women are foreseen to be active participants in marketing efforts and improved stove tracking.

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Invite market players to participate in the PoA and inform them about the rules and guidelines to participate.
2. Assess implementing parties, which includes women as active participants in the project
3. Promote inclusion of new implementing parties into the PoA
4. Create new CPAs as needed

### **4.3.3 Execute Monitoring and Verification**

Monitoring and verification will be conducted on an annual basis. The process consists of an audit of the Managing Entity data, and a field verification of a sample size of stoves that leads to a desired accuracy of emission reductions. Emission reductions are accounted based on fuel savings with respect to the baseline and the finding of stoves that are part of the PoA based on serial number or other identifiers. The proportion of stoves that cannot be found in the field would be reduced from the annual emission reductions claimed from the Managing Entity. Those emissions that can be verified based on stove presence and usage will be registered as CERs. CQC will develop gender inclusive and innovative business models to aggressively find PoA stoves.

## **Years Two and Three (March 2013 – February 2015)**

### *General tasks:*

1. Hire auditor to verify integrity of data

2. Conduct field surveys to locate the stoves
3. Account for emission reductions that were verifiable

*Timing:* Early 2013

*Key Partners:* C-Quest Capital, stove manufacturers, other implementing parties

#### **4.4 Improved Cook stoves Manufacturers' Access to Investment Funds Increased**

##### **4.4.1 Investments Made To Generate Carbon Credits Through the Production and Sale of Improved Cook stoves**

Pre financing will be provided to 1 selected manufacturer within the life of the project so that it can lower their overall production costs and transition to mechanized machinery where possible. Additional financial resources from the Overseas Private Investment Corporation (OPIC) will supplement pre-financing from potential future carbon revenue to ensure that participating manufacturers can access funds to build professional business that will provide stoves at scale, quality and prices attractive to consumers. The rapid assessment on production costs will help guide project implementers in advising and working with producers to lower their general production costs. This coupled with new business development skills will allow for manufacturers to generate enough profits and allocate funds to their own internal investment to ensure sustainable production beyond the life of the project and the carbon credit component.

#### **Year One (March 2012 – February 2013)**

*Specific tasks:*

1. Ensure availability of pre-financing to selected stove manufacturer participating in carbon credit component
2. Provide technical assistance to manufacturers in accessing private equity, grant funds and investor opportunities.
3. Submit CPAs for inclusion under the PoA

*Timing:* Mid May 2012-Feb 2013

*Key Partners:* C-Quest Capital

#### **Expected Results in 2012**

- Pre-financing for 1 stove manufacturer will be available from CQC

#### **Years Two and Three (March 2013 – February 2015)**

*General tasks:*

1. Continue to identify and leverage investments in the improved stove manufacturing business

#### **4.4.2 Facilitate Other Investors Access to PoAs To Support Improved Cook stoves**

This activity will start toward the end of Year Two. C-Quest is likely to be the first CDM PoA in Haiti for improved cook stoves. As this is a high-risk activity, interested investors may wait until the project is validated prior to launching their own activities. Nevertheless, CQC will try to facilitate investment to scale the operations of project implementers.

#### **Years Two and Three (March 2013 – February 2015)**

*General tasks:*

1. Encourage other investors to enter the Haitian carbon credit market (Carbon Credits generated by improved cook stoves)

*Timing:* After November 2013

*Key Partners:* C-Quest Capital, CPA Implementers

## ANNEX 1. PLANNING WORKSHOP AGENDA

### IMPROVED COOKING TECHNOLOGY PROGRAM PREPARATION PREMIER PLAN DE TRAVAIL ANNUEL ATELIER DE TRAVAIL 29 Février & 1 MARS 2012

Karibe Hotel, Juvénat Pétion-ville

**But:** Développement du premier plan annuel de travail du program

- Déterminer l'approche d'exécution du Programme, les résultats espérés et identifier les moyens et stratégies à mettre en œuvre pour assurer sa réussite et sa pérennité;
- Identifier les contraintes et perspectives;
- Déterminer les partenariats à établir pour son exécution et adoption; et
- Identifier les critères de performance pour faciliter les activités de suivi et d'évaluation.

## AGENDA

### Mercredi 29 février 2012

08:30 – 09:00 *Arrivée des participants, enregistrement – café et thé*

09:00 – 09:30 *Bienvenue, Remerciements et Introduction – Michelet Fontaine, Directeur intérimaire du Programme (10 minutes):*

- Description générale et contexte du programme « Improved Cooking Technology »
- Présentation des membres du consortium d'exécution (Chemonics International, Mercy Corps, C-Quest Capital et IDEO)
- Présentation du facilitateur Jean Palème Mathurin

*Introduction de l'atelier de travail – Jean Palème Mathurin, Facilitateur (20 minutes):*

- Objectifs et attentes
- Règles du jeu
- Evaluation
- Présentation des partenaires d'exécution et des participants

09:30 – 09:45 *Discours d'ouverture*

Anthony Chan, Directeur Adjoint USAID/Haïti  
René Jean-Jumeau, Secrétaire d'Etat à l'Energie

09:45 – 10:00 *Pause café*

10:00 – 10:20 Présentation générale des quatre composantes du Programme, orientation des débats, marche à suivre et résultats escomptes pour la journée – *Jean Palème Mathurin*

10:20 – 11:40 **Composante 1: Expansion du marché des réchauds améliorés** – Description (présentation de 15minutes d’Elizabeth Sipple de Mercy Corps)

Discussions sur les contraintes et opportunités (production, distribution et commercialisation), identification des acteurs et institutions engagés dans ce domaine et de leurs aires d’action ; détermination des actions, activités et résultats espérés, et identification de partenariats possibles et/ou à rechercher

11:40 – 13:00 **Composante 2: Conversion des grands consommateurs de produits ligneux (restaurants, marchandes de manjé kuit, écoles, orphelinats et autres) au gaz propane liquéfié (LPG)** – Description (présentation de 15minutes de Michel Simon de Chemonics International)

Discussions sur les contraintes et opportunités (production, distribution et commercialisation des réchauds au GPL, disponibilités de GPL, etc.), identification des acteurs engagés dans cet aspect, les interactions ; détermination des actions, activités et résultats espérés, et identification de partenariats possibles et/ou à rechercher

*13:00 – 14:00 Déjeuner*

14:00 – 15:15 **Composante 3: Développement d’un cadre légal et réglementaire pour le gaz propane liquéfié (LPG)** – Description et contexte (présentation de 15minutes de Carlo Lafond, Unité de Gestion du secteur de l’Energie, Ministère des TPTC),

Discussions sur les contraintes et opportunités; identification des acteurs et de leurs aires d’action; détermination des actions et prochaines étapes; activités et résultats espérés; et identification de partenariats possibles et/ou à rechercher

15:15 – 16:30 **Composante 4: Développement d’un programme de Crédit Carbone pour supporter le financement et l’adoption de la technologie** – Description (présentation de 15 minutes de Ken Newcombe de C Quest Capital), discussions sur les contraintes et opportunités, identification des acteurs et institutions engagées dans ce domaine et de leurs aires d’action, détermination des actions, activités et résultats espérés, et identification de partenariats possibles et/ou à rechercher

*16 :30 Clôture de la session*

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## **Jeudi 1 mars 2012**

*08:30 – 08:45 Arrivée des participants*

08:45 – 09:15 Résumé des actions, activités, résultats espérés et partenariats identifiés pour les quatre composantes du Programme; points de clarification – Michelet Fontaine

09:15 – 10:00 Identification des points et questions transversaux; discussions – Jean Palème Mathurin

*10:00 – 10:15 Pause café*

### ***10:15– 13:00 Identification des critères et indicateurs de réussite et de succès***

10:15 – 10:30 Instructions – Jean Palème Mathurin

10:30 – 11:00 Expansion du marché des réchauds améliorés – Leader: Elizabeth Sipple

11:00 – 11:30 Conversion des grands consommateurs de produits ligneux au gaz propane liquéfié (LPG) – Leader: Michel Simon

11:30 – 12:00 Développement d'un cadre légal et réglementaire pour le gaz propane liquéfié (LPG) – Leader: Carlo Lafond

12:00 – 12:30 Développement d'un programme de Crédit Carbone pour supporter le financement et l'adoption de la technologie – Leader: Elisha Moore-Delate

12:30 – 13:00 Discussions générales et points transversaux – Jean Palème Mathurin

*13:00 – 14:00 Déjeuner*

14:00 – 15:00 Révision du Cadre Logique du Programme, et planification du système de suivi et d'évaluation – Jean Palème Mathurin

15:00 – 15:15 Choix d'un nom pour le programme – Michelet Fontaine

15:15 – 15:30 Evaluation de l'atelier de travail – Jean Palème Mathurin

15:30 – 15:50 Conclusions et remerciements – Michelet Fontaine

- Un participant
- Un représentant de l'USAID
- Un représentant du gouvernement Haïtien

***16:00 Clôture Officielle de l'atelier de travail***

## ANNEX 2. LIST OF PARTICIPANTS ATTENDING THE PLANNING WORKSHOP

### IMPROVED COOKING TECHNOLOGY PROGRAM PREPARATION PREMIER PLAN DE TRAVAIL ANNUEL

ATELIER DE TRAVAIL 29 février & 1 mars 2012

Karibe Hotel, Juvénat, Pétion-ville

#### Liste des Participants

| Nom                                | Titre                                 | Organisation   | Telephone                        | Email                |
|------------------------------------|---------------------------------------|--|----------------------------------|----------------------|
| <b>Micro-Finances</b>              |                                       |  |                                  |                      |
| Helene MAUCHIT                     | Responsable Programme                 | ENTREPRENEURS DU MONDE                                 | ████████                         | ████████████████████ |
| Jocelyn SAINT-JEAN                 | Directeur Général                     | FEDERATION DES CAISSES POPULAIRES HAITIENNES LE LEVIER | ████████<br>████████<br>████████ | ████████████████████ |
| Ansy Claude SAINTERVIL             |                                       | FEDERATION DES CAISSES POPULAIRES HAITIENNES LE LEVIER | ████████                         | ████████████████████ |
| Carine ROENEN                      | Directrice                            | FONKOZE  | ████████<br>████████             | ████████████████████ |
| Evans BAPTISTE                     | Directeur de Développement Commercial | SOGESOL  | ████████                         | ████████████████████ |
| <b>Fournisseurs</b>                |                                       |  |                                  |                      |
| Luciano PHADRON                    |                                       | ECOGAZ   | ████████                         |                      |
| Dana RUDY                          |                                       | ECOGAZ   | ████████                         | ████████████████████ |
| Adrien HILAIRE                     |                                       | NATIONAL   | ████████                         | ████████████████████ |
| David BAZILE                       |                                       | PETROGAZ-HAITI   | ████████                         | ████████████████████ |
| Kerline ELUSMA                     |                                       | PETROGAZ-HAITI   | ████████                         | ████████████████████ |
| Pierre-Yvon BEAUBOEUF              |                                       | PETROGAZ-HAITI   | ████████                         | ████████████████████ |
| Chéry Jean-Alex                    |                                       | SODIGAZ  | ████████                         | ████████████████████ |
| <b>Fabricants et Distributeurs</b> |                                       |  |                                  |                      |
| Marcel VILLEDROUIN                 | Manager                               | TICODAIE   | ████████                         | ████████████████████ |

| Nom                    | Titre                            | Organisation                                      | Telephone                        | Email                                |
|------------------------|----------------------------------|---|----------------------------------|--------------------------------------|
| Duquesne FEDNARD       |                                  | D&E Green   | ████████                         | ████████████████                     |
| Rene DUROCHER          |                                  | EKO AYITI   | ████████                         |                                      |
| Isaac DUCLEON          |                                  | EKO AYITI   | ████████                         | ████████████████                     |
| Antji Daniel OUACHEE   | Président, Fondateur             | FONDATION ECOSOPHIQUE<br>CAONABO/TERRE DES JEUNES | ████████<br>████████             | ████████████████                     |
| Ralph Henri BARON      |                                  | GAZ VERT  | ████████                         |                                      |
| Jean Hector S. GUIRAND | Directeur Général                | HAITI METAL                                       | ████████                         | ████████████████                     |
| Ligali -A-SAKARIYAWU   |                                  | KINGSWAY STORE                                    | ████████                         | ████████████████                     |
| PHARAON                |                                  | LUTE S.A.   | ████████                         | ████████████████                     |
| Mishta TALUY           | Directrice                       | MATELEC   | ████████                         | ████████████████                     |
| Tom ADAMSON            |                                  | MICAMA Soley                                      | ████████                         | ████████████████                     |
| Bertrand BERTHOUMIEUX  | Directeur Général                | OMNIGAS   | ████████<br>████████<br>████████ | ████████████████<br>████████████████ |
| Kara GRANT             |                                  | PRAKTI-HAITI                                      | ████████                         | ████████████████                     |
| Mouhsine SERRAR        |                                  | PRAKTII DESIGN LAB                                | ████████                         | ████████████████                     |
| Rene Max AUGUSTE       | Directeur                        | VALERIO CANEZ                                     | ████████                         | ████████████████                     |
| <b>Gouvernement</b>    |                                  |   |                                  |                                      |
| Bétonus PIERRE         |                                  | ESMAP/BM  | ████████                         | ████████████████                     |
| Dorine JN-PAUL         | Coordinator ADN                  | Ministere de l'Environnement                      | ████████                         | ████████████████                     |
| Rene JEAN-JUMEAU       | Secrétaire d'Etat à<br>l'Energie | MTPTC   | ████████<br>████████             | ████████████████                     |
| Daniel GREGORY         | Electricity Advisor              | MTPTC   | ████████                         | ████████████████                     |
| Daniel LEMONS          | Electricity                      | MTPTC   | ████████                         |                                      |
| Carlo LAFOND           |                                  | MTPTC/UGSE  | ████████                         | ████████████████                     |
| <b>Projets/Agences</b> |                                  |   |                                  |                                      |
| Jean Pierre MANGONES   |                                  | HRI CHEMONICS                                     |                                  |                                      |
| Christine ROY          |                                  | INTERNATIONAL LIFELINE FUND                       | ████████                         | ████████████████                     |
| Elizabeth SIPPLE       |                                  | MERCY CORPS                                       |                                  | ████████████████                     |
| Denise ROCKS           |                                  | MERCY CORPS                                       | ████████                         | ████████████████                     |
| Elizabeth Toder        |                                  | MERCY CORPS                                       | ████████                         | ████████████████                     |
| Danielle DE KNOCHE     |                                  | MERCY CORPS                                       |                                  | ████████████████                     |
| Karl Luvener SAINTIL   |                                  | PROJET COOK STOVES                                | ████████                         | ████████████████                     |

| Nom                               | Titre                | Organisation                  | Telephone | Email                |
|-----------------------------------|----------------------|-------------------------------|-----------|----------------------|
| Ms. Marie Martin Natalie ALCINDOR |                      | PROJET COOK STOVES            | ████████  | ████████████████████ |
| Jean-Marie GABRIEL                |                      | TWP – TREES WATER PEOPLE      | ████████  | ████████████████████ |
| Kerline P. ROCK                   | Directrice           | PADF -PRODEPUR                | ████████  | ████████████████     |
| C. Ross CROULET                   | Directeur            | PADF/LEAD                     | ████████  | ████████████████     |
| Benoit MAZY                       |                      | WORLD FOOD PROGRAM            |           | ████████████████     |
| Kénel DELUSCA                     | Consultant           |                               | ████████  | ████████████████     |
| Alix JEAN WILNER                  | Director             | CHEMONICS/FEWS NET            | ████████  | ████████████████     |
| Nathalie ALCINDOR                 |                      | CHEMONICS                     | ████████  | ████████████████     |
| Elusha MORE-DELATE                | COOSTOVES            | CHEMONICS                     |           | ████████████████     |
| Michel SIMON                      | COOSTOVES            | CHEMONICS                     | ████████  | ████████████████     |
| Schettini LOUIS                   | COOSTOVES            | CHEMONICS                     | ████████  | ████████████████     |
| Claudia PANTO                     | COOSTOVES            | CHEMONICS                     |           | ████████████████     |
| Mathurin JEAN PALEME              |                      | ERICE AZ                      | ████████  | ████████████████     |
| Paul DURET                        |                      | ERICE AZ                      | ████████  | ████████████████     |
| Félix ULRICK                      |                      | ERICE AZ                      | ████████  | ████████████████     |
| <b>USAID/HAITI</b>                |                      |                               |           |                      |
| Tina BALIN                        | COTR for Cook stoves | USAID/Haiti                   |           | ████████████████     |
| Anthony S. CHAN                   | Deputy Director      | USAID/Haiti                   | ████████  | ████████████████     |
| <b>Autres</b>                     |                      |                               |           |                      |
| Michèle BAYARD GEHY               |                      | PDG COMMUNICATIONS            | ████████  | ████████████████     |
| TU TRAN                           |                      | UNIVERSITE CALIFORNIE BERKLEY | ████████  | ████████████████     |
| <b>Other Donors</b>               |                      |                               |           |                      |
| Lucine LOMINY                     |                      | BANQUE MONDIALE               | ████████  | ████████████████     |

## ANNEX 3. WORK PLAN FOR YEAR 1

| Improved Cooking Technology Program — Work Plan for Year 1 |  | 2012  |   |   |   |   |   |   |   |   |    |    |    | Lead Partner |                     |
|--|--|---|---|---|---|---|---|---|---|---|----|----|----|--------------|---------------------|
|  |  | F   | M | A | M | J | J | A | S | O | N  | D  | J  |              |                     |
|  |  | 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |              |                     |
| <b>1</b>   | <b>Component 1: Local Market for Improved Household Biomass Cook Stoves Expanded</b> |   |   |   |   |   |   |   |   |   |    |    |    |              |                     |
| <b>1.1</b>   | <b>Leading Efficient Improved Biomass Cook Stoves Promoted and Commercialized</b>    |   |   |   |   |   |   |   |   |   |    |    |    |              |                     |
|  | 1.1.1  | Develop a manufacturing base to expand the availability of improved biomass cookstoves in Port au Prince for a reduction of wood charcoal consumption |   |   |   |   |   |   |   |   |    |    |    |              |                     |
|  | 1  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC                  |
|  | 2  |   |   |   |   |   |   |   |   |   |    |    |    |              | Consulting firm     |
|  | 3  |   |   |   |   |   |   |   |   |   |    |    |    |              | ICTP - EMD          |
|  | 4  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC                  |
|  | 5  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC                  |
|  | 6  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC                  |
|  | 7  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC                  |
|  | 8  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC                  |
|  | 1.1.2  | Mapping of improved stoves distribution channels and identification of distribution networks  |   |   |   |   |   |   |   |   |    |    |    |              |                     |
|  | 1  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC + Marketing Firm |
|  | 2  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC + Marketing Firm |
|  | 3  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC                  |
|  | 4  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC                  |
|  | 5  |   |   |   |   |   |   |   |   |   |    |    |    |              | MC + Marketing Firm |

| Improved Cooking Technology Program — Work Plan for Year 1 |  | 2012 |   |   |   |   |   |   |   |   |    |    |    | Lead Partner   |
|--|--|------|---|---|---|---|---|---|---|---|----|----|----|----------------|
|  |  | F    | M | A | M | J | J | A | S | O | N  | D  | J  |                |
|  |  | 1    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |                |
| <b>1.2</b>   | <b>Marketing and Outreach Cook Stove Campaigns Expanded</b>  |      |   |   |   |   |   |   |   |   |    |    |    |                |
| 1.2.1  | Create widespread public awareness regarding the benefits of improved cookstoves   |      |   |   |   |   |   |   |   |   |    |    |    |                |
| 1  | Assess consumer motivations and previous improved cookstove marketing and awareness efforts                                |      |   |   |   |   |   |   |   |   |    |    |    | Marketing Firm |
| 2  | Identify appropriate and culturally effective marketing techniques through focus groups consultations and interviews       |      |   |   |   |   |   |   |   |   |    |    |    | Marketing Firm |
| 3  | Develop and implement well targeted awareness campaigns and marketing strategies e.g. public demonstration during holidays |      |   |   |   |   |   |   |   |   |    |    |    | Marketing Firm |
| 4  | Periodically evaluate the marketing campaigns and adjust them as necessary   |      |   |   |   |   |   |   |   |   |    |    |    | Marketing Firm |
| <b>1.3</b>   | <b>Financing Mechanisms for Manufacturers, Retailers and Consumers To Purchase Improved Cook Stoves Established</b>        |      |   |   |   |   |   |   |   |   |    |    |    |                |
| 1.3.1  | Facilitate access to financing for manufacturers and consumers   |      |   |   |   |   |   |   |   |   |    |    |    |                |
| 1  | Assess manufacturers financing needs through a consultative process  |      |   |   |   |   |   |   |   |   |    |    |    | MC             |
| 2  | Provide business development services and facilitate links to sources of finance for production scale up                   |      |   |   |   |   |   |   |   |   |    |    |    | MC             |
| 3  | Identify opportunities to link consumers to remittance services for purchasing improved cook stoves                        |      |   |   |   |   |   |   |   |   |    |    |    | MC             |
| <b>1.4</b>   | <b>GOH Working Groups on and Certification ff Cook Stoves Strengthened</b>   |      |   |   |   |   |   |   |   |   |    |    |    |                |
| 1.4.1  | GOH working groups on improved biomass stoves re-launched and strengthened   |      |   |   |   |   |   |   |   |   |    |    |    |                |
| 1  | Foster the participation of key actors in the improved stove working group   |      |   |   |   |   |   |   |   |   |    |    |    | ICTP           |
| 2  | Guide the development of the working group mandate   |      |   |   |   |   |   |   |   |   |    |    |    | MC             |
| 3  | Support the development of sound protocols for the GOH improved cookstove Certification process                            |      |   |   |   |   |   |   |   |   |    |    |    | ICTP           |
| 4  | Initiate a cook stove Certification Program with the GOH   |      |   |   |   |   |   |   |   |   |    |    |    | MC             |
| 1.4.2  | Certification process strengthened and logo recognized by consumers  |      |   |   |   |   |   |   |   |   |    |    |    |                |
| 1  | Work with GOH to establish appropriate cook stoves testing labs  |      |   |   |   |   |   |   |   |   |    |    |    | MC             |
| 2  | Train lab employees on thermal efficiency stove testing  |      |   |   |   |   |   |   |   |   |    |    |    | MC             |
| 3  | Work with marketing companies to develop and test logo with consumers  |      |   |   |   |   |   |   |   |   |    |    |    | Marketing Firm |
| 4  | Launch logo in marketing campaigns to educate public to recognize certified stoves   |      |   |   |   |   |   |   |   |   |    |    |    | Marketing Firm |

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|--|--|------|---|---|---|---|---|---|---|---|----|----|----|-----------------|
|  |  | F    | M | A | M | J | J | A | S | O | N  | D  | J  |                 |
|  |  | 1    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |                 |
| <b>1.5</b>   | <b>Economic Opportunities for Urban Charcoal Workers Increased</b>   |      |   |   |   |   |   |   |   |   |    |    |    |                 |
| 1.5.1  | Promoting alternative livelihood opportunities for workers in the charcoal value chain   |      |   |   |   |   |   |   |   |   |    |    |    |                 |
| 1  | Conduct a rapid assessment of urban charcoal workers income levels to be used as baseline data   |      |   |   |   |   |   |   |   |   |    |    |    | Consulting Firm |
| 2  | Work with improved stoves manufacturers and distributors to promote charcoal sellers entry into the improved stove and alternative fuel value chains |      |   |   |   |   |   |   |   |   |    |    |    | ICTP - EMD      |
| 3  | Help charcoal sellers identify potential alternative livelihoods activities for PAP charcoal workers   |      |   |   |   |   |   |   |   |   |    |    |    | MC              |
| 4  | Train charcoal sellers in the marketing of improved stoves and promoting stove benefits to consumers   |      |   |   |   |   |   |   |   |   |    |    |    | MC              |
| <b>2</b>   | <b>Component 2: Charcoal Consumption by Large Users Reduced</b>  |      |   |   |   |   |   |   |   |   |    |    |    |                 |
| <b>2.1</b>   | <b>Access to and availability of LPG stoves improved</b>   |      |   |   |   |   |   |   |   |   |    |    |    |                 |
| 2.1.1  | Facilitate street vendors conversion from charcoal to LPG stoves   |      |   |   |   |   |   |   |   |   |    |    |    |                 |
| 1  | Assess street food vendors willingness to convert to LPG cookstoves  |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| 2  | Assess street food vendors training needs  |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| 3  | Train street food vendors on LPG stove operations and maintenance  |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| 4  | Train technicians for LPG stove repair   |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| 5  | Organize the first groups of food vendors conversion to LPG  |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| 2.1.2  | Development and implementation of LPG cook stoves marketing and awareness campaigns  |      |   |   |   |   |   |   |   |   |    |    |    |                 |
| 1  | Assess street food vendors motivations and previous improved cook stove marketing and awareness efforts  |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| 2  | Design and develop well-targeted awareness campaigns and marketing strategies  |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| 3  | Initiate targeted awareness campaigns and marketing strategies   |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| 4  | Organize public demonstrations during holidays, at church services public squares and markets  |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| 5  | Periodically evaluate the marketing campaigns and adjust as needed   |      |   |   |   |   |   |   |   |   |    |    |    | ICTP-MS         |
| <b>2.2</b>   | <b>LPG Cook Stoves Production Increased</b>  |      |   |   |   |   |   |   |   |   |    |    |    |                 |
| 2.2.1  | Ensure availability of and access to LPG cook stoves at affordable prices  |      |   |   |   |   |   |   |   |   |    |    |    |                 |
| 1  | Identify commercial cook stove models best positioned for scaled production considering durability, efficiency and customer preference               |      |   |   |   |   |   |   |   |   |    |    |    | ICPT-MS         |

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|--|---|--|------|---|---|---|---|---|---|---|---|----|----|----|--------------|--|---------|
|  |   |  | F    | M | A | M | J | J | A | S | O | N  | D  | J  |              |  |         |
|  |   |  | 1    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |              |  |         |
|  | 2   | Work with LPG stove manufacturers to establish specifications and standards for LPG stoves   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICPT-MS |
|  | 3   | Help organize the formation of associations of manufacturers and development of MOUs among selected manufacturers                    |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |
|  | 4   | Initiate certification program with the GOH for LPG cook stoves and cook stove replacement parts                                     |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |
|  | 5   | Provide technical assistance to selected cook stove manufacturers for scaling up production and leveraging financing                 |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |
|  | 2.2.2   | Improve availability of and access to replacement parts and services at affordable prices  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |         |
|  | 1   | Work with manufacturers to help ensure increased availability of LPG cook stove parts at affordable prices                           |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |
|  | 2   | Support at least four manufacturers in the production of LPG cook stove parts  |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |
| <b>2.3</b>   | <b>Private Public Partnerships for LPG Stoves Market Expansion Developed</b>          |  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |         |
|  | 2.3.1   | Develop agreements between importers and large scale consumers to ensure continuity of project objectives                            |      |   |   |   |   |   |   |   |   |    |    |    |              |  |         |
|  | 1   | Negotiate with the GOH Ministry of Education the use of LPG cook stoves by the school feeding program                                |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |
|  | 2   | Negotiate with the GOH tax waivers on import of LPG products and parts   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |
|  | 3   | Initiate MPUs between LPG suppliers and street food vendors  |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |
| <b>2.4</b>   | <b>Agreements with Funding Institutions To Support Sustained Production Developed</b> |  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |         |
|  | 2.4.1   | Facilitate negotiations between MFIs and grant foundations with food vendors, schools and other stakeholders                         |      |   |   |   |   |   |   |   |   |    |    |    |              |  |         |
|  | 1   | Help organize negotiations of funding schemes between street food vendors and microfinance institutions                              |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-KL |
|  | 2   | Assist in leveraging funds from grant foundations to provide funding to schools, orphanages and street vendors t purchase LPG stoves |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-KL |
|  | 3   | Encourage agreements between MFIs and street vendors to lend funds for the purchase of LPG cook stoves                               |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-KL |
| <b>3</b>   | <b>Component 3: Legal and Regulatory Framework for LPG Strengthened</b>               |  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |         |
| <b>3.1</b>   | <b>GOH Capacity To Monitor and Enforce Regulations Improved</b>                       |  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |         |
|  | 3.1.1   | Work with GOH to reconvene the LPG working group   |      |   |   |   |   |   |   |   |   |    |    |    |              |  |         |
|  | 1   | Identify the working groups members  |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |
|  | 2   | Collaborate with the Secretary for Energy and reconvene the LPG working group  |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS |

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|--|--|--|------|---|---|---|---|---|---|---|---|----|----|----|--------------|--|-----------------|
|  |  |  | F    | M | A | M | J | J | A | S | O | N  | D  | J  |              |  |                 |
|  |  |  | 1    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |              |  |                 |
|  | 3  | Support the organization of the LPG working group meetings   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS         |
|  | 4  | Assist the working group for the enactment of the LPG law and regulations  |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS         |
| <b>3.2</b>   | <b>Regulations, Standards and Pricing for LPG Strengthened</b>                         |  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |                 |
|  | 3.2.1  | LPG laws and regulations published and released  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |                 |
|  | 1  | Define international best practice in LPG management - adjusted for the Haitian context  |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS         |
|  | 2  | Conduct workshops to establish consensus on regulatory and institutional framework including GOH and LPG importers to design manufacturing and marketing structure   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS         |
|  | 3  | Encourage GOH to release price structure to public   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS         |
| <b>3.3</b>   | <b>Institutional Framework for LPG Strengthened</b>                                    |  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |                 |
|  | 3.3.1  | Institutional framework for LPG strengthened through transparency  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |                 |
|  | 1  | Regularly release information pertaining to LPG use and distribution   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP-MS         |
|  | 2  | Regularly assess consumer's knowledge of LPG institutional and legal framework   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICPT-MS         |
|  | 3  | Spot check LPG suppliers to ensure they adhere to regulations  |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICPT-MS         |
| <b>4</b>   | <b>Component 4: Carbon Finance Program for Improved Cooking Technologies Scaled Up</b> |  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |                 |
| <b>4.1</b>   | <b>Emissions and Market Data Analyzed</b>  |  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |                 |
|  | 4.1.1  | Market analysis  |      |   |   |   |   |   |   |   |   |    |    |    |              |  |                 |
|  | 1  | Develop secondary market research with known sources of information such as previous studies and databases   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP+Partners   |
|  | 2  | Design primary market study based on information from the secondary research to corroborate the information of the secondary analysis and cover knowledge gaps   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | ICTP+Partners   |
|  | 3  | Conduct direct structured interviews with households, institutions, commercial establishments, and other relevant local players such as stove manufacturers, vendors, NGOs, and fuel supply chain participants as needed |      |   |   |   |   |   |   |   |   |    |    |    |              |  | Consulting Firm |
|  | 4.1.2  | Conduct longitudinal study to understand stove durability and consumer preferences   |      |   |   |   |   |   |   |   |   |    |    |    |              |  |                 |
|  | 1  | Design longitudinal experiment to understand impact of different variables on stove and fuel usage   |      |   |   |   |   |   |   |   |   |    |    |    |              |  | CQC             |
|  | 2  | Disseminate a relevant number of stove samples across potential markets  |      |   |   |   |   |   |   |   |   |    |    |    |              |  | CQC             |

| Improved Cooking Technology Program — Work Plan for Year 1 |  | 2012   |   |   |   |   |   |   |   |   |    |    |    | Lead Partner |  |  |      |
|--|--|--|---|---|---|---|---|---|---|---|----|----|----|--------------|--|--|------|
|  |  | F  | M | A | M | J | J | A | S | O | N  | D  | J  |              |  |  |      |
|  |  | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |              |  |  |      |
|  | 3  | Collect and analyze data from experiment   |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |
| 4.1.3  | Use baseline studies to determine current fuel consumption and nonrenewable biomass fraction |  |   |   |   |   |   |   |   |   |    |    |    |              |  |  |      |
|  | 1  | Develop fuel survey instrument   |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |
|  | 2  | Implement fuel survey  |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |
|  | 3  | Analyze results  |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |
|  | 4  | Research forestry data and overall fuel wood and charcoal consumption to estimate fraction of non renewable biomass    |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |
| <b>4.2</b>   | <b>Carbon Credit Program Developed</b>   |  |   |   |   |   |   |   |   |   |    |    |    |              |  |  |      |
| 4.2.1  | Design a carbon credit program (pre-validation)  |  |   |   |   |   |   |   |   |   |    |    |    |              |  |  |      |
|  | 1  | Design of implementation and operational plan of the PoA   |   |   |   |   |   |   |   |   |    |    |    |              |  |  |      |
|  | 2  | Develop monitoring methodologies   |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |
|  | 3  | Draft PoA and CPA Design Documents   |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |
|  | 4  | Coordinate with DOE validation of PoA and CPA and make necessary changes to program design                             |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |
|  | 5  | Provide technical assistance to the Designated National Authority to enable this Authority to become fully operational |   |   |   |   |   |   |   |   |    |    |    |              |  |  | ICTP |
| 4.2.2  | Prepare the Program of Activities - Design Document  |  |   |   |   |   |   |   |   |   |    |    |    |              |  |  |      |
|  | 1  | Submit PoA Design Document and CPA design documents for review   |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |
|  | 2  | Modify program design and documents according to the DOE review  |   |   |   |   |   |   |   |   |    |    |    |              |  |  | CQC  |

- MC**    **Mercy Corps**
- ICTP**    **Improved cooking technology program**
- EMD**    **Elisha Moore-Delate**
- KL**    **Karl Luvener**
- MS**    **Michel Simon**
- CQC**    **C-Quest Capital**

## ANNEX 4. YEAR 1 MILESTONES

| Improved Cooking Technology Program — Year 1 Milestones |   | 2012  |   |   |   |   |   |   |   |   |    |    |    |
|---|---|---|---|---|---|---|---|---|---|---|----|----|----|
|   |   | F   | M | A | M | J | J | A | S | O | N  | D  | J  |
|   |   | 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| <b>1</b>  | <b>Component 1: Local Market For Improved Household Biomass Cook Stoves Expanded</b>                                |   |   |   |   |   |   |   |   |   |    |    |    |
| <b>1.1</b>  | <b>Leading Efficient Improved Biomass Cook Stoves Promoted and Commercialized</b>                                   |   |   |   |   |   |   |   |   |   |    |    |    |
|   | 1.1.1   | Develop a manufacturing base to expand the availability of improved biomass cookstoves in Port au Prince for a reduction of wood charcoal consumption |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone : 2-3 Manufacturers are identified and have the capacity for scaling up production  |   |   |   |   |   |   |   |   |    |    |    |
|   | 1.1.2   | Mapping of improved stoves distribution channels and identification of distribution networks  |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone: 4-5 retailers are selected, trained and ready for sales in order to increase availability of improved biomass stoves                       |   |   |   |   |   |   |   |   |    |    |    |
| <b>1.2</b>  | <b>Marketing And Outreach Cook Stove Campaigns Expanded</b>   |   |   |   |   |   |   |   |   |   |    |    |    |
|   | 1.2.1   | Create widespread public awareness regarding the benefits of improved cookstoves  |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone: At least 1 radio or TV ad, and 2 billboards in each commune has been launched and tested for consumer awareness                            |   |   |   |   |   |   |   |   |    |    |    |
| <b>1.3</b>  | <b>Financing Mechanisms For Manufacturers, Retailers And Consumers To Purchase Improved Cook Stoves Established</b> |   |   |   |   |   |   |   |   |   |    |    |    |
|   | 1.3.1   | Facilitate access to financing for manufacturers and consumers  |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone: 2-3 manufacturers have received grants or access to finance to expand businesses   |   |   |   |   |   |   |   |   |    |    |    |
| <b>1.4</b>  | <b>GOH Working Groups On And Certification Of Cookstoves Strengthened</b>   |   |   |   |   |   |   |   |   |   |    |    |    |
|   | 1.4.1   | GOH working groups on improved biomass stoves re-launched and strengthened  |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone: Working group participants identify 3 principle issues to address like, standardizing improved stoves, stove sales and distribution        |   |   |   |   |   |   |   |   |    |    |    |
|   | 1.4.2   | Certification process strengthened and logo recognized by consumers   |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone: Logo developed and tested for recognition in each commune of Port au Prince  |   |   |   |   |   |   |   |   |    |    |    |
| <b>1.5</b>  | <b>Economic Opportunities For Urban Charcoal Workers Increased</b>  |   |   |   |   |   |   |   |   |   |    |    |    |
|   | 1.5.1   | Promoting alternative livelihood opportunities for workers in the charcoal value chain  |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone: 3-4 Charcoal vendors have accepted to try all in one approach (selling charcoal and improved cook stoves together)                         |   |   |   |   |   |   |   |   |    |    |    |
| <b>2</b>  | <b>Component 2: Charcoal Consumption By Large Users Reduced</b>   |   |   |   |   |   |   |   |   |   |    |    |    |
| <b>2.1</b>  | <b>Access To And Availability Of LPG Stoves Improved</b>  |   |   |   |   |   |   |   |   |   |    |    |    |
|   | 2.1.1   | Facilitate street vendors conversion from charcoal to LPG stoves  |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone: 50% of food vendors at the industrial park and Portail Leogane have switched from charcoal to LPG stoves                                   |   |   |   |   |   |   |   |   |    |    |    |
|   | 2.1.2   | Development and implementation of LPG cook stoves marketing and awareness campaigns   |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone : Marketing and awareness campaigns on LPG access points and price launched in 2 of 6 communes of Port au Prince                            |   |   |   |   |   |   |   |   |    |    |    |
| <b>2.2</b>  | <b>LPG Cook Stoves Production Increased</b>   |   |   |   |   |   |   |   |   |   |    |    |    |
|   | 2.2.1   | Ensure availability of and access to LPG cook stoves at affordable prices   |   |   |   |   |   |   |   |   |    |    |    |
|   |   | Milestone: At least 3 manufacturers expand production and offer affordable stoves to street food vendors  |   |   |   |   |   |   |   |   |    |    |    |

## ANNEX 4. YEAR 1 MILESTONES

| Improved Cooking Technology Program — Year 1 Milestones |  | 2012 |   |   |   |   |   |   |   |   |    |    |    |
|---|--|------|---|---|---|---|---|---|---|---|----|----|----|
|   |  | F    | M | A | M | J | J | A | S | O | N  | D  | J  |
|   |  | 1    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2.2.2   | Improve availability of and access to replacement parts and services at affordable prices  |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : Training of technicians is completed and parts available at affordable price for the retailers                         |      |   |   |   |   |   |   |   |   |    |    |    |
| <b>2.3</b>  | <b>Private Public Partnerships For LPG Stoves Market Expansion Developed</b>   |      |   |   |   |   |   |   |   |   |    |    |    |
| 2.3.1   | Develop agreements between importers and large scale consumers to ensure continuity of project objectives                          |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : MOU with all LPGs suppliers completed  |      |   |   |   |   |   |   |   |   |    |    |    |
| <b>2.4</b>  | <b>Agreements With Funding Institutions To Support Sustained Production Developed</b>  |      |   |   |   |   |   |   |   |   |    |    |    |
| 2.4.1   | Facilitate negotiations between micro finance institutions and grant foundations with food vendors, schools and other stakeholders |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : Financing schemes for large charcoal user established  |      |   |   |   |   |   |   |   |   |    |    |    |
| <b>3</b>  | <b>Component 3: Legal And Regulatory Framework For LPG Strengthened</b>  |      |   |   |   |   |   |   |   |   |    |    |    |
| <b>3.1</b>  | <b>GOH Capacity To Monitor And Enforce Regulations Improved</b>  |      |   |   |   |   |   |   |   |   |    |    |    |
| 3.1.1   | Work with GOH to reconvene the LPG working group   |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : Technical assistance to policies, legislation and regulation provided to GOH launched and first meeting held           |      |   |   |   |   |   |   |   |   |    |    |    |
| <b>3.2</b>  | <b>Regulations, Standards And Pricing For LPG Strengthened</b>   |      |   |   |   |   |   |   |   |   |    |    |    |
| 3.2.1   | LPG laws and regulations published and released  |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : Legal and regulatory framework for LPG finalized and shared to public and LPG importers adhere to rules                |      |   |   |   |   |   |   |   |   |    |    |    |
| <b>3.3</b>  | <b>Institutional Framework For LPG Strengthened</b>  |      |   |   |   |   |   |   |   |   |    |    |    |
| 3.3.1   | Institutional framework for LPG strengthened through transparency  |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : LPG stakeholders (including consumer groups) trained on legal regulatory and institutional framework                   |      |   |   |   |   |   |   |   |   |    |    |    |
| <b>4</b>  | <b>Component 4: Carbon Finance Program For Improved Cooking Technologies Scaled Up</b>   |      |   |   |   |   |   |   |   |   |    |    |    |
| <b>4.1</b>  | <b>Emissions And Market Data Analyzed</b>  |      |   |   |   |   |   |   |   |   |    |    |    |
| 4.1.1   | Market analysis  |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : Finalized document submitted to program and USAID  |      |   |   |   |   |   |   |   |   |    |    |    |
| 4.1.2   | Conduct longitudinal study to understand stove durability and consumer preferences   |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : Controlled cooking tests and price point testing completed   |      |   |   |   |   |   |   |   |   |    |    |    |
| 4.1.3   | Baseline studies used to determine current fuel consumption and non renewable biomass fraction                                     |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : Completed baseline compliant with all CDM requirements   |      |   |   |   |   |   |   |   |   |    |    |    |
| <b>4.2</b>  | <b>Carbon Credit Program Developed</b>   |      |   |   |   |   |   |   |   |   |    |    |    |
| 4.2.1   | Design a carbon credit program (pre-validation)  |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : Implementation and operational plans for PoA established   |      |   |   |   |   |   |   |   |   |    |    |    |
| 4.2.2   | Prepare the Program of Activities - Design Document  |      |   |   |   |   |   |   |   |   |    |    |    |
|   | Milestone : Project of Activities (PoA) -Project Design Document (PDD) submitted to Clean Development Mechanism (CDM)              |      |   |   |   |   |   |   |   |   |    |    |    |