



# OFFICE OF INSPECTOR GENERAL

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## AUDIT OF USAID/HAITI'S IMPROVED COOKING TECHNOLOGY PROGRAM

AUDIT REPORT NO. 1-521-14-005-P  
MARCH 3, 2014

SAN SALVADOR, EL SALVADOR



*Office of Inspector General*

March 3, 2014

**MEMORANDUM**

**TO:** USAID/Haiti Mission Director, John Groarke

**FROM:** Regional Inspector General/San Salvador, Jon Chasson /s/

**SUBJECT:** Audit of USAID/Haiti's Improved Cooking Technology Program  
(Report Number 1-521-14-005-P)

This memorandum transmits our final report on the subject audit for your review and comment. This report contains 15 recommendations to improve USAID/Haiti's implementation of the Improved Cooking Technology Program. We have considered your comments on the draft report and included them in Appendix II.

Based on our evaluation of management comments, we acknowledge that the mission has made management decisions on all recommendations.

We determined that the mission has taken final action on Recommendations 3 and 4. Please coordinate final action for the remaining recommendations with the Office of Audit Performance and Compliance Division.

I want to thank you and your staff for the cooperation and assistance extended to us during this audit.

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**Abbreviations**

The following abbreviations appear in this report:

ADS	Automated Directives System
BME	Bureau of Mines and Energy
COR	contracting officer's representative
EMPR	environmental mitigation plan and report
IEE	initial environmental examination
LPG	liquefied petroleum gas
MEO	mission environmental officer
PMP	performance management plan

# SUMMARY OF RESULTS

About 90 percent of Haitians meet their daily household energy needs with open fires or stoves that burn charcoal or wood. Charcoal production causes severe environmental degradation in a country where forests cover only 2.6 percent of the land.<sup>1</sup> Deforestation has caused erosion and destroyed natural watersheds, leaving Haiti vulnerable to landslides and flash floods.

In addition to damaging the environment, relying on unclean fuels causes health problems. Daily exposure to smoke from traditional cooking practices results in a range of acute, chronic, and deadly health problems, especially respiratory illnesses. According to USAID, exposure to indoor air pollution leads to nearly 3,000 premature deaths in Haiti per year.

To address these problems, on January 31, 2012, USAID/Haiti signed a 3-year cost-plus-fixed-fee completion contract worth \$8.2 million with Chemonics International Inc. to implement the Improved Cooking Technology Program. As of April 30, 2013, cumulative obligations and disbursements totaled \$8.2 million and \$2.7 million, respectively.

The program's goal was to reduce coal consumption in Haiti by establishing a thriving, sustainable, and affordable market for clean cooking solutions. The program sought to:

- Promote the use of more efficient biomass cookstoves in individual households.
- Expand the use of cleaner, more efficient commercial-grade liquefied petroleum gas (LPG) stoves in individual households and businesses such as street vendors, schools, and orphanages, which consume large amounts of coal.
- Strengthen the legal and regulatory framework for the safe distribution and commercialization of LPG.
- Increase the program's impact and sustainability through carbon financing, in which a developing country sells greenhouse gas emission reductions to industrialized countries, thus helping the purchasers meet their obligations for reducing emissions under the Kyoto Protocol. Program officials expected that revenue from carbon financing would subsidize the cost of cookstoves and provide revenues for future program operations.

The purpose of this audit was to determine whether the program was establishing the near- and long-term foundations for a sustainable market of clean, efficient, and affordable cooking solutions in Haiti.

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<sup>1</sup> U.S. Department of Agriculture's Forest Service, *Haiti Biodiversity and Tropical Forest Assessment*, December 2010.



Charcoal stoves (left) sell for about \$2. Costs for the biomass charcoal stoves (right) that USAID/Haiti's program is promoting range from \$10 to \$50. (Photo by RIG/San Salvador, June 28, 2013)

The audit found that the program has made some progress toward meeting its objectives. For example, it has:

- Carried out systematic testing of various biomass stoves and selected four types to support and promote through program-funded activities.
- Developed strong relationships with five biomass stove manufacturers and retailers to increase stove supply and price accessibility in several areas of Port-au-Prince.
- Helped manufacturers establish distribution networks and improve marketing and customer service.
- Trained 37 technicians in LPG stove repair and manufacturing.
- Supported radio programming to increase local awareness of improved cooking technology.
- Designed a comprehensive mass communication campaign for biomass and LPG stoves.

Despite these positive steps, the program did not reduce charcoal consumption by large users and households as significantly as planned. By April 2013, the program projected to reduce consumption in Port-au-Prince by 63,745 metric tons by having at least 29,600 beneficiaries with improved energy services. However, it reached only 24 percent of the reduction target (14,981 metric tons) and reached only 37 percent (10,905) of the anticipated number of beneficiaries.

The stoves were too expensive for many Haitians because the program has not yet obtained carbon financing to reduce prices and provide for the program's long-term financial sustainability (page 5). Other aspects of the cookstoves' marketing effort need to be addressed to expand sales, including establishment of a certifying lab, improved marketing through raffles, and eliminating an unnecessary training component (page 7).

Sales of LPG stoves also lagged, and the program converted only 337 of the targeted 4,550 large users (street food vendors, orphanages, and schools) from charcoal to LPG. The program did not have enough targeted financing options and marketing activities to educate these users on the benefits of using LPG, and LPG industry stakeholders were not involved enough in expanding the LPG market (page 9).

The audit identified additional issues that should be addressed to help the program meet its objectives.

- USAID/Haiti did not implement all environmental requirements (page 11). The mission did not approve environmental plans with updated information about risk activities and their mitigation measures. In addition, program management staff did not get the requisite environmental training.
- Mission staff did not provide sufficient performance monitoring (page 12). As a result, the quality of the data was problematic.

In consideration of our audit findings, we recommend that USAID/Haiti:

1. Review time frames for carbon finance implementation to determine whether expected results can be achieved during the program and modify the contract to reflect realistic achievements or document the reasons for not modifying the contract (page 6).
2. Implement a plan to resolve delays in activities that must be completed before carbon finance validation and certification can occur (page 6).
3. Coordinate with Chemonics to (1) improve communication, coordination, and partnership among contractors, subcontractors, and partners in the field, or (2) replace a current subimplementer with one that has a greater presence in Haiti and expertise working there (page 6).
4. Require Chemonics to prepare a data quality plan for the baseline report, and review and approve it (page 7).
5. Implement a plan to support the Bureau of Mines and Energy (BME) in developing the certification lab or securing alternate partner(s) to house it (page 9).
6. Determine whether the charcoal workers' alternative livelihood activity is adding cost-effective value to the program, and document the decision to either continue or terminate the activity (page 9).
7. Implement alternative marketing strategies aimed at church groups to expand the biomass cookstove market, and expand marketing efforts to other urban community groups and document such efforts (page 9).
8. Coordinate with Chemonics to secure more affordable financing options for large consumers of charcoal to switch to LPG (page 11).
9. Coordinate with Chemonics to strengthen the marketing and outreach plan for large consumers of charcoal by using the resources and expertise of LPG distributors (page 11).

10. Coordinate with Chemonics to (1) examine the perceived conflict of interest related to the LPG legislation, and document conclusions and planned actions, and (2) implement a plan to increase collaboration among industry stakeholders through more discussions and forums (page 11).
11. Document in writing how USAID/Haiti can achieve targets for the number of large consumers of charcoal converted to LPG or set realistic targets for the remainder of the program (page 11).
12. Implement a policy for mandatory environmental training for all mission staff involved in program management and for annually reviewing that all current staff have attended the training (page 12).
13. Identify and incorporate risk activities that were not previously part of the approved environmental mitigation plan and report, and amend the initial environmental examination (IEE) if necessary, and document all actions taken (page 12).
14. Include Chemonics employees in the next environmental training session and document their attendance (page 12).
15. In collaboration with Chemonics, (1) update the program's performance management plan (PMP) to include needed revisions to the indicator descriptions, collection method, and targets, and (2) implement it to address indicators' data limitations for evaluating the program's impact (page 15).

Detailed findings follow. Appendix I describes the audit scope and methodology. Our evaluation of USAID/Haiti's management comments will appear on page 16, and the mission's comments will appear in Appendix II.

# AUDIT FINDINGS

## **Delayed Carbon Financing Results Put Program’s Success and Financial Sustainability at Risk**

According to USAID’s Automated Directives System (ADS) 202.3.6, a major task of contracting officer’s representatives (CORs) and development teams is to monitor the quality and timelines of a contract’s key outputs. The guidance states, “Delays in completing outputs or problems in output quality provide an early warning that results may not be achieved as planned,” and that “early action in response to problems is essential in managing for results.”

USAID/Haiti recognized that the higher cost of the improved stoves compared with traditional coal stoves was a major impediment to the program’s success. Therefore, the program was designed to use carbon financing to subsidize the production cost of the improved stoves, which would allow manufacturers to offer consumers more affordable stoves.

To obtain carbon credits, Chemonics needed to:

- Develop a complete technical proposal that describes the program’s design and includes a baseline report and a monitoring plan.
- Have the Haitian Government sponsor the proposal.
- Have an independent technical committee validate the program by assessing the technical proposal and comparing it to the requirements established by the Kyoto Protocol. Have the United Nations’ certifying group review and register the program under the protocol so member nations of the United Nations Framework Convention on Climate Change may trade and sell the program’s emission reduction credits and meet the reduction targets these nations are bound to.

However, the carbon financing certification process was delayed, which in turn delayed receipt of the expected funds. While Chemonics reported completing some design documents, other problems have delayed the program’s final approval.

**Lack of Baseline Report.** The credit financing baseline report provides important information about firewood and charcoal consumption rates, stove use trends, and other market data to determine potential carbon reductions. Chemonics hired an U.S.-based subcontractor to complete the report by June 2012.

At the time of our audit—June 2013—the report was not finished. Initially it focused on Port-au-Prince, but USAID expanded the scope in July 2012 to cover the entire country in hopes of increasing the potential sources of carbon financing. The organization that got the contract, however, lacked experience in Haiti and monitored the program from the United States, relying on Chemonics to manage local field partners to ensure the collection of quality data. According to the subcontractor, communication problems with Chemonics and the field partners’ lack of expertise led to flaws in the data quality.

**Haitian Government Did Not Approve Project.** To be eligible for the United Nations carbon financing program, Chemonics needed to have the Haitian Government's approval. But the government has not identified the person within the Ministry of Environment who would be responsible for approving the program.

**Shortage of Stove Distributors.** To participate, stove distributors must meet eligibility requirements defined in the design documents. Chemonics has an agreement with an international stove manufacturer that is interested in selling stoves in Haiti but does not have a local distributor. While eligible distributors have been identified, as of July 2013 Chemonics did not have an agreement with any of them. According to the subcontractor tasked with leading the carbon financing activity, these distributors are interested in a voluntary carbon market that did not abide by the Kyoto agreement protocols. Local stove manufacturers that Chemonics initially expected to participate have not shown interest in having their stoves registered by this program.

**Expectations of Carbon Markets Incorrect.** USAID/Haiti and Chemonics' assumptions on the stability of the carbon credits market proved inaccurate because they estimated sales would provide a steady revenue stream for the program's sustainability; even if Chemonics finishes the proposal for the program's validation by the United Nations, the program is unlikely to obtain as much revenue from carbon credit sales as anticipated. Carbon credit prices have decreased substantially during the past year, threatening the economic viability of any carbon finance program unless its investors are willing to trade off low returns for the program's social impact. Mission officials said they recognized this challenge and decided to hire a technical adviser to determine whether the program should continue with the certification process.

USAID/Haiti did not respond to any of these problems in a timely manner. The COR said Chemonics has been working diligently to address them, and she agreed that the mission needs to provide greater input.

Carbon financing was intended to provide a continuing source of revenue to help stove manufacturers establish sustainable production and sales of improved stoves at affordable prices. While the carbon market is declining now, this could change, and the possibility of investors willing to pay premium prices for assisting development still exists. However, due to the delays encountered, 3 years might not be enough time for the project to achieve its intended results. Based on these observations, we make the following recommendations.

***Recommendation 1.*** We recommend that USAID/Haiti review time frames for carbon finance implementation to determine whether expected results can be achieved during the program and modify the contract to reflect realistic achievements or document the reasons for not modifying the contract.

***Recommendation 2.*** We recommend that USAID/Haiti implement a plan to resolve delays in activities that must be completed before carbon finance validation and certification can occur.

***Recommendation 3.*** We recommend that USAID/Haiti coordinate with Chemonics International Inc. to (1) improve communication, coordination, and partnership among contractors, subcontractors, and partners in the field, or (2) replace a current subimplementer with one that has a greater presence in Haiti and expertise working there.

***Recommendation 4.** We recommend that USAID/Haiti require Chemonics International Inc. to prepare a data quality plan for the baseline report, and review and approve it.*

## **Some Program Activities Were Not as Successful as Planned**

According to ADS 202.3.6, a major task of CORs and development teams is to monitor the quality and timelines of a contract's key outputs. The guidance states, "Delays in completing outputs or problems in output quality provide an early warning that results may not be achieved as planned," and that "early action in response to problems is essential in managing for results."

USAID/Haiti's contract with Chemonics emphasized the importance of establishing a "thriving local market" for improved biomass cookstoves. Chemonics planned to stimulate demand and strengthen the production base by addressing needs of stove buyers and manufacturers alike.

While Chemonics has implemented numerous activities to boost the industry and improve market conditions, certain activities to increase consumer awareness of and confidence in the stoves have not succeeded.

**Stove Certification Process and Lab Set-up Halted.** According to Chemonics, testing and certifying improved cookstoves were critical to the program's success because consumers could be certain that the stoves were more efficient and therefore worth more than traditional ones. The testing also was necessary to support the program's eligibility for carbon financing. Rather than resorting to a foreign lab, the program intended to build local capacity by providing technical training to the Haitian Government to establish a stove certification process that met international standards and testing protocols.

USAID/Haiti selected BME to house a national testing and certification lab. It would be funded through fees that stove manufacturers paid for testing and certification. In January 2013 the program paid to train BME technicians and employees on international testing standards, data collection, and results analysis and interpretation. The mission also purchased testing equipment for the lab.

However, the stove certification process stalled in March 2013. A BME representative said they could not conduct all the necessary tests because nobody knew how to install the testing equipment. In addition, the technicians did not have enough expertise to meet international testing standards or to manage the national certification process independently.

Several reasons account for this activity's slow progress. Chemonics' subcontractor said not enough time was allotted and the staff did not have much experience setting up a lab. Chemonics' staff also expressed concern that the lab may not be a priority with BME because of other projects it was working on.

**Raffles Had Mixed Results.** As part of the efforts to raise awareness for the improved cookstoves, Chemonics gave several away at 32 raffles held within church communities and 7 in camps for internally displaced people. The goal was to create links between the communities and manufacturers, thus increasing access and exposure.

However, the raffles have not generated additional sales so far. According to Chemonics, the raffle winners were the only people out of 800 participants who got improved stoves; raffle

organizers confirmed that they did not know of any members of their community who purchased an improved stove. Although the program had more success with raffles held at the camps, it continued to focus primarily on raffles held at churches and did not conduct any in other social networks, such as parent-teacher associations, as planned.

Chemonics officials said they did not know how to sell stoves to low-income population, so they plan to bring in an expert to help. The focus on churches has been problematic, too, because, according to program officials, some view the raffles as a form of gambling and refuse to participate.

**Alternate Livelihoods Activities Did Not Support Program Goals.** USAID/Haiti anticipated that sales of improved cookstoves would eventually result in less demand for charcoal, which in turn would threaten the livelihood of Haiti's charcoal workers. Therefore, as stated by the contract, part of the program sought to help charcoal sellers diversify their businesses and increase their incomes by becoming vendors of improved stoves.

However, the demand for charcoal has not decreased as expected because, according to Chemonics, it would take at least 4 to 5 years for program efforts to affect stove sales significantly. Program officials said there has been no noticeable charcoal worker displacement.



**Charcoal retailers or *dettallions* in Port-au-Prince sell the fuel near sites where distributors drop off charcoal produced in rural Haiti.  
(Photo by RIG/San Salvador, June 18, 2013)**

In addition, the activities funded generally supplemented the income from the charcoal sales instead of creating alternative livelihoods. The program tried to get charcoal workers interested in selling improved stoves, but found that they had little motivation to do so because they could make more money selling charcoal and they had invested significantly in building relationships along the charcoal supply chain.

Therefore, Chemonics opted to create community savings clubs in which members contribute money that could be lent to other members to fund an economically viable activity; Chemonics' subcontractor had used these successfully in other countries.

Since there has been no significant disruption of charcoal markets in Haiti and charcoal workers have not been put out of work, training them for alternative employment is not required. Furthermore, Chemonics staff expected that as charcoal demand decreases, the charcoal

workers would find other ways to make a living with or without USAID's assistance. Officials said this activity does not affect the production or sale of stoves—the program's primary activity. Given the program's other significant challenges, the focus on market disruptions that are unlikely to occur is an unnecessary distraction for the staff.

The lack of a certifying organization and an effective marketing strategy could hamper the program's success. In addition, limited resources should not be used on a project that does not help achieve the program's goal. Barriers to success for past cookstove programs in Haiti included a lack of quality control for stove production and cultural resistance to new technologies, and lack of knowledge of the benefits. In the contract's statement of work, Chemonics asserted that any successful program must address these issues. Based on this, the audit recommends the following.

***Recommendation 5.*** *We recommend that USAID/Haiti implement a plan to support the Bureau of Mines and Energy in developing the certification lab or securing alternate partner(s) to house it.*

***Recommendation 6.*** *We recommend that USAID/Haiti determine whether the charcoal worker alternative livelihood activity is adding cost-effective value to the program, and document the decision to either continue or terminate the activity.*

***Recommendation 7.*** *We recommend that USAID/Haiti implement alternative marketing strategies aimed at church groups to expand the biomass cookstove market, and expand marketing efforts to other urban community groups and document such efforts.*

## **Chemonics Did Not Meet Targets to Reduce Charcoal Consumption**

Under the terms of the contract, Chemonics expected to replace traditional coal stoves with LPG stoves for at least 10,250 large consumers of charcoal: these users were 9,450 street vendors in Port-au-Prince and 800 schools, orphanages, and other institutions. Based on further survey data, the Chemonics work plan established the official target at 9,500 new users of LPG stoves by end of the program. Additionally, to develop a sustainable LPG industry and promote LPG as a cooking fuel, the contract required Chemonics to work closely with the Haitian Government, LPG companies and distributors, and other parties to provide technical expertise and to help stakeholders agree on LPG regulations, standards, and pricing.



**To decrease the health and environmental hazards associated with charcoal, a USAID program in Haiti encourages schools, orphanages, and street vendors to replace charcoal-fired stoves (left) with stoves fueled by LPG (right). (Photo by RIG/San Salvador, June 18, 2013)**

The audit found that Chemonics has made very slow progress toward achieving these goals. As of March 2013, midway through the project, Chemonics has converted 337 large users (about 7 percent of its target). Moreover, Chemonics could not get the Haitian Government and LPG industry stakeholders to agree on regulations.

These things happened for several reasons.

- Chemonics planned to identify and provide financing options for vendors, but this plan did not work as intended. Although Chemonics was able to sign an agreement with a microfinance institution, the financing options offered were still not affordable to all vendors. Some preferred to use their savings to purchase the LPG stoves rather than finance them and have to pay interest. Furthermore, Chemonics did not focus on providing viable financing options to schools to convert to LPG stoves.
- The demand for LPG stoves was much less than Chemonics had predicted mainly because LPG stoves cost significantly more than charcoal stoves (about \$100 versus \$4). Vendors were unwilling to make such an investment.
- Chemonics did not focus on organizing public events to demonstrate the benefits of LPG to street vendors and schools. It planned to hold demonstrations at 50 schools and orphanages; however, as of March 2013, the program's community mobilization team had been to only 6 schools. According to the mission, this happened because the benefits were minimal compared with the costs associated to organizing these events; so Chemonics and USAID/Haiti decided to rely less on public demonstrations to educate the consumer than originally planned.

The LPG market also remained underdeveloped because the Haitian Government did not enact a law governing LPG regulations, standards, and pricing. Members of the industry did not agree on fuel distribution methods, its mass commercialization, and other regulatory policies. Some industry representatives also said the program's effort to build consensus was hurt by a perceived conflict of interest: Chemonics' technical representative owned an LPG distributing company and supported one LPG distribution method over another.

Because of these regulations were not enacted, Chemonics could not train key government employees, as described in the work plan.

Reducing charcoal consumption is a critical component for reducing both pollution and deforestation. To help the program succeed in this effort, we are making the following recommendations.

**Recommendation 8.** *We recommend that USAID/Haiti coordinate with Chemonics International Inc. to secure more affordable financing options for large consumers of charcoal to switch to liquid petroleum gas.*

**Recommendation 9.** *We recommend that USAID/Haiti coordinate with Chemonics International Inc. to strengthen the marketing and outreach plan for large consumers of charcoal by using the resources and expertise of liquid petroleum gas distributors.*

**Recommendation 10.** *We recommend that USAID/Haiti coordinate with Chemonics International Inc. to (1) examine the perceived conflict of interest related to the liquid petroleum gas legislation and document conclusions and planned actions, and (2) implement a plan to increase collaboration among industry stakeholders through more discussions and forums.*

**Recommendation 11.** *We recommend that USAID/Haiti document in writing how it can achieve targets for the number of large consumers of charcoal converted to liquid petroleum gas or set realistic targets for the remainder of the program.*

## **USAID/Haiti Did Not Follow All Environmental Procedures**

According to ADS 204.3.4, each COR is responsible for making sure that USAID fully complies with procedures<sup>2</sup> to identify and mitigate environmental damage that might result from activities the Agency funds. The COR is responsible for making sure resources are available to complete environmental work and preparing the IEE before contractors receive program funds. In addition, the USAID/Haiti IEE for the program required the COR to:

1. Review and approve, along with the mission environmental officer (MEO), the environmental mitigation plan and report (EMPR), a document from the implementer that defines mitigation measures for activities that might cause environmental damage.
2. Review the implementer's annual submission of an environmental mitigation report, which contains an updated environmental monitoring and evaluation tracking table, an explanation of findings, and recommendations for effective monitoring.
3. Amend the IEE and its mitigation plan to include any new activities identified after the EMPR has been approved that would receive a negative determination with conditions.

In January 2013 USAID/Haiti approved an EMPR from Chemonics, which identified 12 out of 25 program activities that might cause environmental damage and defined mitigation measures

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<sup>2</sup> The procedures are outlined in 22 Code of Federal Regulations 216.

to be taken. However, Chemonics submitted eight<sup>3</sup> more EMPRs to the COR that identified additional activities—such as land degradation caused by extracting clay to use in making stoves—that should have been included in the program-wide EMPR. USAID/Haiti did not pass these additional EMPRs on to the MEO for approval or to determine whether the IEE and overall EMPR needed amendments. As a result, the additional activities were not reviewed and approved by the appropriate USAID authorities before they began.

These problems happened for a variety of reasons. First the deputy MEO said only three of the mission's ten CORs and agreement officer's representatives pass EMPRs on regularly since most program managers are unaware of internal guidance on reporting procedures and required MEO approvals. Although the mission provides environmental training at least once a year, USAID employees are not required to attend. USAID/Haiti held its most recent 22 CFR 216 training in April 2012, and 5 of the 35 attendees were USAID/Haiti staff; the rest were other program partners. The COR confirmed that she has not received environmental compliance training since her February 2012 designation as activity manager for this program.

Second, Chemonics officials said they did not receive any training on environmental compliance, and they were confused about how to report risk activities identified and subsequent mitigation measures taken. Staff assigned to another Chemonics program in Haiti initially handled the cookstove program environmental tasks, such as devising the EMPR. When the report was approved in January 2013, the cookstove program staff took over the environmental responsibilities, but they were unsure of how to utilize the environmental plan and how to continue to report on environmental compliance.

USAID/Haiti is responsible for the activities implemented by its partners and their compliance with environmental regulations. Without strict compliance with the regulations, environmental problems could result, and USAID could potentially face legal action. USAID's Office of Inspector General issued three reports between April 2012 and September 2013 identifying problems with USAID/Haiti's compliance with its environmental responsibilities.<sup>4</sup> To correct the problems, we are making the following recommendations.

***Recommendation 12.*** We recommend that USAID/Haiti implement a policy for mandatory environmental training for all mission staff involved in program management and for reviewing annually that all current staff have attended the training.

***Recommendation 13.*** We recommend that USAID/Haiti identify and incorporate risk activities that were not previously part of the approved environmental mitigation plan and report, and amend the initial environmental examination, if necessary, and document all actions taken.

***Recommendation 14.*** We recommend that USAID/Haiti include Chemonics International Inc. employees in the next environmental training session and document their attendance.

## **Not All Program Data Met Criteria**

According to ADS 202.3.6.1, assessing performance refers to determining “whether the outputs

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<sup>3</sup> Two were dated July 2012, and six others were dated between February and March 2013.

<sup>4</sup> Report Numbers 1-521-12-003-P, 1-521-13-001, and 1521-13-008-P.

produced by [a] contractor are timely and of acceptable quality.” ADS 203.3.11.1 states that data used to make decisions must meet five key criteria validity, and they are listed in USAID’s TIPs No. 12.

- Validity - The extent to which a measure actually represents what we intend to measure.
- Reliability - Data should reflect stable, consistent data collection processes and analysis methods over time.
- Precision - Precise data have a sufficient level of detail to present a fair picture of performance and to enable management to make decisions.
- Integrity - Focuses on whether there is improper manipulation of data.
- Timeliness - Data should be available and up to date enough to meet management needs.

However, some data used to demonstrate progress toward achieving the program goal did not meet those standards.

**Indicator Methodology Did Not Measure the Number of Beneficiaries Accurately.** One key program indicator is *Number of beneficiaries with improved energy services due to USG (U.S. Government) assistance*. According to the program’s PMP, this indicator reports on the number of people who benefit from improved cookstoves and access to gas, including members of households, businesses, schools, orphanages, and others. Chemonics also proposed to develop a detailed methodology for estimating the number of beneficiaries for households and for other users with higher consumption rates, like schools, orphanages, and street vendors.

It did not do this, however. Instead Chemonics reported only the number of improved cookstoves sold in Port-au-Prince. As a result, the number of beneficiaries was never calculated, and the number of stoves sold was used as a proxy. Furthermore, if a single food vendor decided to purchase more than one stove, the program counted that vendor as more than one beneficiary, which reduced the accuracy of the results.

Chemonics planned to verify actual consumer usage through a household survey scheduled for the end of the year. Nonetheless, as of April 2013, Chemonics reported 14,560 beneficiaries in fiscal year 2013 compared with 29,300 targeted, which appears to undercount significantly the actual number of beneficiaries

**Program Does Not Measure Market Expansion Accurately.** The program’s PMP had four indicators, shown in Table 1, to track the growth of the improved technology market. All four relied on sales data reported by various firms.

**Table 1. Indicators to Track Growth (Unaudited Amounts)**

Number	Indicator	FY 2013 Target	FY 2013 Results as of April
3	<i>Number of certified improved biomass stoves sold in metropolitan Port-au-Prince</i>	10,000	6,995
13	<i>Quantity of LPG sold in metro Port-au-Prince (metric tons)</i>	20,000	6,426
14	<i>Number of commercial LPG stoves sold by manufacturers in</i>	4,300	251

	<i>target area</i>		
22	<i>The increase in sales of household LPG stoves as a result of the program's promotion of LPG</i>	15,000	3,633

However, Chemonics staff found that despite their monthly monitoring efforts, they could not rely on the accuracy of the sales data the firms provided. Efforts to train firms to collect accurate data did not keep up with the addition of new retailers to the sales network, which increased the risk of inaccurate reporting. Firms used varying methods for data collection; one manufacturer's shops averaged 300 sales per month and used receipts to keep track of sales, while another manufacturer sold to ambulatory salespeople who did not report how many they sold.

As of March 2013, Chemonics provided accounting, cost calculation, and customer service training to around 20 retailers and manufacturers. Eight of the 17 project partners signed a memorandum of understanding agreeing to share sales data with the program, and Chemonics gave retailers cash/receipt books to record their sales. However, the audit found that most of the retailers were not using them.

**Calculation for Reduced Charcoal Consumption Was Not Correct.** One of the two overall program indicators is *Amount of charcoal consumption reduced as a result of increased use of improved cooking technologies due to project assistance*. The indicator assumes an average household uses 2.7 kilograms<sup>5</sup> of coal per day and that improved stoves are 30 percent more efficient, saving 0.68 kilograms of charcoal per day.

However, although Chemonics' testing confirmed that the savings amount was correct, the indicator assumes a reduction of 1.5 kilograms of charcoal per day, instead of 0.68, thus overstating the actual reduction levels that the program could reach. Using this corrected method, the estimated charcoal savings would be 6,999 metric tons from October 2012 through March 2013, or about 23 percent less than the 9,082 metric tons the mission reported.

**Program Does Not Measure Carbon Dioxide Reduction Accurately.** In early 2013 USAID added an indicator to measure how much greenhouse gas emissions decreased (measured through the reduction of CO<sup>2</sup>) as a result of program activities. The program assumes that saving 1 kilogram of charcoal reduces CO<sup>2</sup> emissions by 5.75 kilograms. Because the program's reported charcoal reductions are overstated, the reported decrease of 52,280 metric tons of CO<sup>2</sup> also is incorrect. The program actually decreased the amount by 40,242 metric tons as of April 2013 and met 23 percent of the target.

**Targets for LPG Consumption Did Not Correlate With Charcoal Consumption Reduction.** A project indicator tracks *Amount of charcoal consumption reduced as a result of increased use of improved cooking technologies due to project assistance*. Targets for charcoal reduction were based largely on the expectation that 4,950 large users would switch to LPG each year. Logically, this would imply that LPG consumption would increase and charcoal consumption would show corresponding reductions. However, targets for the program's third year show sustained reductions in charcoal use, but anticipated a lower demand for LPG (10,000 versus 20,000 metric tons).

<sup>5</sup> *Haiti: Strategy to Alleviate the Pressure of Fuel Demand on National Woodfuel Resources*, World Bank's Energy Sector Management Assistance Program Technical Paper 112/07, 2007.

**Table 2. Yearly Targets for Reduced Charcoal Consumption and LPG Sales  
(Unaudited Amounts)**

<b>Indicator and Number</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<i>2. Number of metric tons of charcoal consumption</i>	3,640	60,105	60,105
<i>13. Metric tons of LPG sold</i>	0	20,000	10,000

When consulted, Chemonics staff agreed that targets for No. 13 did not properly reflect program efforts to increase the use of LPG. This should be adjusted in the PMP targets.

These errors occurred because Chemonics and USAID/Haiti employees did not carefully monitor how the data were collected and submitted. Although the COR reviewed monthly and quarterly reports and asked for clarification on reported data, site visits to program partners and beneficiaries for data verification were not conducted. Instead, most of the COR's visits to Chemonics were for planning purposes and to promote the program at its start.

In addition, while the PMP was updated at least three times to show many program monitoring changes, not all issues were addressed due to oversight including indicator definitions, data limitations, formulas, or assumptions used in setting targets. For example, program staff agreed that the PMP's expected results were not adjusted after the program started, and indicator results reported to USAID were calculated from partial data.

USAID relies on performance indicator results to determine whether the Agency is on track to achieve program goals. Without valid, reliable data, USAID cannot make informed decisions about program progress and identify needed improvements. Therefore, this audit makes the following recommendation.

***Recommendation 15.*** We recommend that USAID/Haiti, in collaboration with Chemonics International Inc., (1) update the program's performance management plan to include needed revisions to the indicator descriptions, collection method, and targets, and (2) implement it to address the indicators' data limitations for evaluating the program's impact.

# EVALUATION OF MANAGEMENT COMMENTS

In its response to the draft report, USAID/Haiti agreed with all recommendations. Based on our evaluation of management comments, we acknowledge that the mission made a management decision on all recommendations and has taken final action on Recommendations 3 and 4. Our detailed evaluation of the comments follows.

**Recommendation 1.** In August 2013 USAID/Haiti paid a short-term consultant to review the state of the carbon market. Based on his recommendations, mission officials said they will modify language in the contract to reflect realistic achievements for the carbon finance program. The revised language will be completed by the end of February 2014. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 2.** USAID/Haiti plans to address delays in carbon finance activities by expanding the validation process. The project activities will be registered with the international certifying body by July 2014, and a long-term study completed by August 2014. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 3.** To address this recommendation, USAID/Haiti hired a field study coordinator in June 2013. This person supervises data collection and assists with coordination between partners. Based on mission comments and the supporting documentation provided, we acknowledge that the mission made a management decision, and final action has been taken on Recommendation 3.

**Recommendation 4.** The field study coordinator established a data collection methodology and verified data collections. This coordinator also supervised the data collected and used in the national baseline report presented in November 2013. Based on mission comments and the supporting documentation provided, we acknowledge that the mission made a management decision, and final action has been taken on Recommendation 4.

**Recommendation 5.** In December 2013 USAID/Haiti signed a memorandum of understanding with Haitian officials to establish the laboratory within the State University of Haiti and to have the university's science department conduct the testing. BME would approve and certify results. The laboratory is expected to be moved by March 2014. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 6.** USAID/Haiti and Chemonics determined that the activity is not cost-effective, and they plan to modify the contract by the end of February 2014 to remove the alternative livelihood requirement. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 7.** USAID/Haiti agreed to implement additional activities to support the expansion of retailers' marketing strategies to target urban community groups, including women

and church groups. These activities will be completed by September 2014. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 8.** USAID/Haiti officials said that, per the project's approved FY 2014 work plan, Chemonics will work with microfinance institutions to test loan products that target large users of charcoal. Chemonics also will provide technical assistance to the institutions to support the use of more extensive loan products to retailers and other consumers. These activities will be completed by September 2014. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 9.** USAID/Haiti stated that Chemonics' fiscal year 2014 work plan incorporates activities that use LPG distributors' expertise. The mission further stated that Chemonics is working with the three largest LPG distributors to develop a memorandum of understanding in which they agree to collaborate in marketing LPG stoves to large charcoal users; the agreement is expected to be finalized in May 2014. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 10.** As of July 2013, USAID/Haiti had addressed the conflict of interest by having the chief of party represent the program at stakeholder meetings, with the technical lead focusing on management areas that require his technical expertise. Also the chief of party sent letters to two organizations to address the matter of impartiality.

By end of May 2014, the program expects to increase collaboration among industry stakeholders by having the memorandum of understanding described in Recommendation 9. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 11.** USAID/Haiti will modify the contract with Chemonics in February 2014 to adjust the target for street food vendors, increase household targets, expand the geographic scope, and focus conversion efforts on private schools and orphanages. USAID/Haiti also plans to set more realistic targets for converting large users of charcoal to LPG and develop a monitoring plan to be sure these activities have close oversight. The revisions will be finalized by March 2014. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 12.** USAID/Haiti will draft a mission order that addresses environmental compliance procedures, roles, and responsibilities. Furthermore, USAID/Haiti officials said they would determine how much training CORs need and would develop an environmental overview course as part of the mission's training curriculum. The mission will use the Federal Managers Financial Integrity Act annual review process to test the adequacy of the training. These proposed actions will be completed by October 2014. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 13.** USAID/Haiti undertook a review of risk activities under the approved Pillar A Environmental Mitigation and Monitoring Plan & Report (EMPR) and activities under the Improved Cooking Project. The review to date has not identified any activities that were not previously part of the approved EMPR. These quarterly reviews of mitigation reports will continue through the life of the project, with a proposed completion date of January 31, 2015. Based on the mission's response and planned actions, we acknowledge that a management

decision has been reached on this recommendation.

**Recommendation 14.** USAID/Haiti scheduled environmental training for late February 2014 and will document Chemonics' attendance. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

**Recommendation 15.** USAID/Haiti worked in collaboration with Chemonics to revise the PMP, which will be finalized by the end of February 2014. USAID/Haiti also has hired a new monitoring and evaluation specialist who will help the COR monitor this program regularly. Based on the mission's response and planned actions, we acknowledge that a management decision has been reached on this recommendation.

# SCOPE AND METHODOLOGY

## Scope

We conducted this audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions in accordance with our audit objective. We believe that the evidence obtained provides that reasonable basis.

The purpose of this audit was to determine whether USAID/Haiti's Improved Cooking Technology Program was achieving its main goal of establishing the near- and long-term foundations for a sustainable market of clean, efficient, and affordable cooking solutions in Haiti.

On January 31, 2012, USAID/Haiti awarded a 3-year, \$7.2 million cost-plus-fixed-fee contract to implement the program. The award was later increased to \$8.2 million in April 2013. The program included five objectives; the fifth was incorporated in April 2013. As of April 30, 2013, cumulative obligations and disbursements totaled \$8.2 million and \$2.7 million, respectively. This represents the amount tested.

The audit covered activities from the program's inception on January 30, 2012, through June 30, 2013. The team conducted fieldwork from June 6, 2013, through August 6, 2013, in the Port-au-Prince metropolitan area

In planning and performing the audit, the audit team assessed significant internal controls used by USAID/Haiti and the Office of Infrastructure, Engineering, and Energy to monitor program activities. These controls were the contractor's quarterly progress reports, financial reports, contractor-submitted PMP data, and program work plans. The team also examined USAID operating reports, environmental compliance due diligence, award and modification requirements, subawards, the COR's designation letter, portfolio reviews, and other reports to identify any risk or weaknesses in program management. Finally, the team reviewed USAID/Haiti's Federal Manager's Financial Integrity Act report for fiscal year 2012 and past audit reports to identify issues encountered by similar audits.

The audit team also reviewed Chemonics' management controls over its subcontractors, including Mercy Corps and C-Quest Capital. Controls reviewed included data validation, reporting systems, and monitoring and evaluation methods.

## Methodology

To answer the audit objective, we reviewed program documentation, including contract and progress reports, and corroborated information with interviews and site visits. We evaluated the mission's management and oversight of the program, the performance of implementing partners, and the effectiveness of activities. We met with USAID's employees responsible for program management, like the COR, program officer, the mission's monitoring and evaluations specialist, and the deputy mission environmental officer. In addition, we met with Chemonics employees such as the chief-of-party, the technical leads for each program component, the monitoring and evaluation specialist, and the finance manager.

The audit team reviewed a sample of 82 judgmentally selected activities out of 152 based on their relevance to the audit objective. To assess whether the program was achieving its goals, we selected subcontractors to interview regarding activities they were responsible for, and we visited program partners and beneficiaries, including five manufacturers, one distributor, two retailers, one LPG distributor, two LPG distribution stations, as well as six users of charcoal and LPG stoves.

All site visits were within Port-au-Prince—the area delimited by the program’s scope. The final itinerary for audit field visits was refined through discussions with Chemonics and took into consideration travel time between locations, availability of program participants, and an activity’s reported progress compared with expected results and relative significance to the overall goal. Field visits were used to validate the use of funds and to document aspects of monitoring, reporting, and compliance with environmental and gender requirements.

To validate performance data, we judgmentally selected a sample of performance indicators for testing based on relevance to the program’s main goals. For these selected indicators, we examined data collection methodologies and compared annual progress reports with supporting documentation at Chemonics’ and partners’ offices. Since these samples were selected judgmentally, the results cannot be projected to the entire population. We believe our substantive testing was sufficient to support the audit’s findings.

# MANAGEMENT COMMENTS



**TO:** Jon Chasson, Regional Inspector General

**FROM:** Mark A. White, Acting Mission Director/s/

**DATE:** January 31, 2014

**SUBJECT:** Mission response to the draft report of USAID/Haiti's Audit of Improved Cooking Technology Program (RIG draft Report No. 1-521-14-00X-P).

This memorandum represents USAID/Haiti's actions taken to address and reach the management decisions for the recommendations reported in the draft Audit of USAID/Haiti's Improved Cooking Technology Program / RIG Report No. 1-521-14-00X-P. The mission agrees with all recommendations and provides below the responses to these recommendations.

**Recommendation No. 1:** We recommend that USAID/Haiti review time frames for carbon finance implementation to determine whether expected results can be achieved during the program and modify the contract to reflect realistic achievements or document the reasons for not modifying the contract.

## Mission Response

USAID/Haiti agrees with the recommendation and has addressed it in the following manner: In August 2013, the Mission funded a short term expert in household renewable energy and energy efficiency projects in the carbon market. The consultant reviewed the state of the carbon market as well as realistic timelines for the project achieving expected results. Based on the recommendations of the consultant's September 2013 report, "Mid-Term Evaluation of the State of Carbon Finance for ICS Program in Haiti," USAID/Haiti will modify the contract to ensure that more realistic timelines for expected results are reflected.

## Plan of Action and Timeline

USAID/Haiti will modify language in the contract to reflect realistic achievements for the carbon finance program (component 4) by end of February 2014.

**Recommendation No. 2:** We recommend that USAID/Haiti implement a plan to resolve delays in activities that must be completed before carbon finance validation and certification can occur.

### **Mission Response**

The Mission agrees with recommendation 2. The September 2013 report, “Mid-Term Evaluation of the State of Carbon Finance for ICS Program in Haiti,” establishes the plan to resolve delays in activities in order for the carbon finance project validation and certification to occur. The process revolves around the certification of the Project of Activity (POA) for Haiti.

### **Plan of Action and Timeline**

The Mission wishes to expand on status of ongoing activities which support the POA validation process. These include the following:

1. The Longitudinal Report (year-long study) to be completed by the end of August 2014;
2. National Baseline Report completed in November 2013;
3. Letter of Approval from the Government of Haiti: the Mission to follow up on status of the expected letter before the end of March 2014;
4. Letter of Non-Diversion of ODA Funds: the Mission to send Chemonics the letter before the end of March 2014; and
5. The Project of Activity expected to be registered by July 2014.

**Recommendation No. 3:** We recommend that USAID/Haiti coordinate with Chemonics to (1) improve communication, coordination and partnership among contractors, subcontractors, and partners in the field, or (2) replace a current subimplementer [*sic*] with one that has a greater presence in Haiti and expertise in working there.

### **Mission Response**

This recommendation has been addressed. Based on lessons learned in the first phase of the National Baseline Report, communication and coordination was resolved in the following manner: Chemonics hired a field study coordinator in June 2013 to supervise data collection of the project’s new field partner Papyrus for the second phase of surveys. The field study coordinator provided real time coordination between the partner responsible for the carbon credit activities, C\_Quest Capital (CQC), and Papyrus. The new field study coordinator is also responsible for Papyrus’ implementation of CQC’s communicated data collection requirements. This management structure has proven effective and has resulted in the timely completion of the National Baseline Report and the accelerated rate of progress of the Longitudinal Study.

### **Plan of Action and Timeline**

This action was taken as of June of 2013.

**Recommendation No. 4:** We recommend that USAID/Haiti require Chemonics to prepare a data

quality plan for the baseline report, and review and approve it.

### **Mission Response**

This recommendation has been addressed. In June 2013, Chemonics hired a field study coordinator to prepare and implement a data quality plan whose scope of work consisted of establishing a data collection methodology and verifying the data collections. The field study coordinator supervised the data collection of its new field partner Papyrus and ensured the study's data quality. After quality assurance, the data was then submitted to CQC for analysis.

### **Plan of Action and Timeline**

This Action was taken as of June of 2013, and the National Baseline Report was finalized in November 2013.

**Recommendation No. 5:** We recommend that USAID/Haiti implement a plan to support the Bureau of Mines and Energy in developing the certification lab or securing alternate partner(s) to house it.

### **Mission Response**

The Mission has fully addressed this recommendation. The lab will be housed at State University of Haiti (Université d'Etat d'Haiti or UEH). Pursuant to a letter sent in September 2013 to the Director for Bureau of Mines and Energy (BME), on December 17, 2013 the project signed a memorandum of understanding to this effect with the Minister of Public Works, the Director of the BME, the Rector of the State University, and the Directors of UEH's Science Department. The memorandum of understanding establishes new stove testing protocols for the project-funded equipment to be installed at the university. Testing will be conducted by the UEH, and then the results will be officially approved and certified by the BME.

### **Plan of Action and Timeline**

This action was taken as of December 2013.

**Recommendation No. 6:** We recommend that USAID/Haiti determine whether the charcoal worker alternative livelihood activity is adding cost-effective value to the program, and document the decision to either continue or terminate the activity.

### **Mission Response**

The Mission in collaboration with Chemonics carried out an analysis and review of the "worker alternative livelihood activity" and determined that the activity is not cost effective. As a result, that activity will be terminated, and those resources to be directed to other priority areas.

### **Plan of Action and Timeline**

By end of February 2014, USAID/Haiti will modify the language in Chemonics' contract to remove the alternative livelihoods activity requirement (as well remove this expected result from the Performance Management Plan (PMP)).

The Mission wishes to clarify one finding related to the "Alternate Livelihoods Activities." One of the references in the auditor's report, "Furthermore, Chemonics staff expected that as charcoal demand decreases, the charcoal workers will find other ways to make a living with or without USAID's assistance" (p. 8) reflects Chemonics' staff opinion and does not represent a factual or formal USAID position on the matter.

**Recommendation No. 7:** We recommend that USAID/Haiti implement alternative marketing strategies aimed at church groups to expand the biomass cookstove market, and expand marketing efforts to other urban community groups and document such efforts.

### **Mission Response**

The Mission agrees with this recommendation. USAID/Haiti is addressing this recommendation through Component 5 of the project, "Capacity of enterprises along the biomass cookstove supply chain to profitably scale up production and sale of ICS strengthened" as of April 2013. This component will support the creation or expansion of retailers' marketing strategies to target urban community groups to include women and churches. It should also be noted that other marketing project activities resulted in 12,777 improved charcoal stoves sold, exceeding its target for FY 2013.

### **Plan of Action and Timeline**

This action was taken as of April 2013.

**Recommendation No. 8:** We recommend that USAID/Haiti coordinate with Chemonics to secure more affordable financing options for large consumers of charcoal to switch to liquid petroleum gas.

### **Mission Response**

Mission agrees with the recommendation and had begun addressing the concern prior to the audit. In March 2013, Chemonics hired a Loan Product Development Consultant to develop loans and mobile money options that will increase access to credit for manufacturers, retailers and consumers (small and large), as reported in various 2013 monthly reports. This Loan Development Consultant developed a number of loan products. One such new loan product, *Kredi Eneji Vèt*, developed in November 2013, allows for any person who can show proof of work to have access to this micro loan. The micro-loans range from 1,000 Haitian gourdes (HTG) to 100,000 HTG and are for green energy products, such as solar lamps, improved cookstoves, and LPG all of which are distributed by the Improved Cookstove Technology Program partners.

Based on positive consumer interest during the pilot phase, in FY 2014 *Kredi Eneji Vèt* will be

open to street food vendors for the purchase of LPG stoves. In the approved FY 2014 workplan, Chemonics will work with micro-finance institutions to pilot loan products developed in the previous year, targeting large users of charcoals. Chemonics will also provide technical assistance to other interested micro-finance institutions to support the roll-out of more extensive loan product programs to retailers and other consumers.

### **Plan of Action and Timeline**

The FY 2014 workplan which describes the plan to pilot the developed loan products will be finalized by the end of February 2014.

**Recommendation No. 9:** We recommend that USAID/Haiti coordinate with Chemonics to strengthen the marketing and outreach plan for large consumers of charcoal by leveraging the resources and expertise of liquid petroleum gas distributors.

### **Mission Response**

Mission agrees with the recommendation. USAID/Haiti has ensured that Chemonics's FY 2014 workplan clearly incorporates activities that leverage the expertise of LPG distributors. Chemonics is currently collaborating with the three largest LPG distributors to establish a memorandum of understanding (MOU) to ensure collaboration on expanded marketing for use of LPG stoves and on large charcoal user conversions.

### **Plan of Action and Timeline**

The MOU will be finalized and negotiated by end of May 2014.

### **Comment on Audit Findings**

The Mission wishes to correct one of the findings related to the conversion of large users. The audit report states, "Chemonics did not focus on organizing public events to demonstrate the benefits of LPG to street vendors and schools. [...] According to the mission, the implementer did not have more public demonstration activities because the benefits were minimal [...]" (p. 10). As of the end of FY2013, Chemonics had organized 91 public demonstrations, six of which were in schools. Chemonics saw a spike in LPG stove orders during public demonstrations. A total of 442 commercial and 203 household LPG stoves were ordered during demonstrations. Public demonstrations have proven to be one of the successful methods for reaching large charcoal users. The mission had stated that Chemonics' demonstrations to the public schools were less beneficial because they relied on the Ministry of Education to allocate a budget to support these conversions. Private schools require financing mechanisms to purchase or are already incorporated into the State's free feeding program.

**Recommendation No. 10:** We recommend that USAID/Haiti coordinate with Chemonics to (1) examine the perceived conflict of interest related to the liquid petroleum gas legislation and document conclusions and planned actions, and (2) implement a plan to increase collaboration among industry stakeholders through increased discussion and

forums.

### **Mission Response**

Mission agrees with recommendation 10. For part (1), as early as July 2013, USAID/Haiti discussed the matter of the perceived conflict of interest with Chemonics. As of July 2013, the project's Chief of Party began representing the project in stakeholder meetings. The technical lead remains focused on areas requiring his technical expertise. Furthermore, the Chief of Party also sent letters to two of the industry's stakeholders, Entrepreneur du Monde (EdM) and to TOTAL, to address the matter of impartiality. The Mission also has the disclosure and two recusal letters submitted by Chemonics and dated October 11, 2011; November 7, 2012; and March 13, 2013, respectively. For part (2) the recommendation to increase collaboration among industry stakeholders was addressed under the response and activities described in the Mission's response to Recommendation 9.

### **Plan of Action and Timeline**

This is an ongoing activity. Initial action was taken as of July 2013.

**Recommendation No. 11:** We recommend that USAID/Haiti coordinate with Chemonics to document how it can achieve targets in writing for number of large consumers of charcoal converted to liquid petroleum gas or set realistic targets for the remainder of the program.

### **Mission Response**

USAID/Haiti agrees with the recommendation. Chemonics' FY 2014 workplan documents how the implementer plans on achieving its required targets. Chemonics awarded a grant to SWITCH, S.A. on December 11, 2013, a local commercial enterprise (also called "social impact business") to convert 900 street food vendors (SFVs) in the Port-au-Prince area from charcoal to LPG. They will be funding and engaging in a comprehensive media campaign and aggressive sales campaigns. Additionally, the mission will set more realistic targets for the remainder of the program.

### **Plan of Action and Timeline**

USAID/Haiti will modify Chemonics' contract by the end of February 2014, to (1) reflect a more accurate number of street food vendors—4,139—in the Port-au-Prince targeted for conversion to LPG; (2) add a new the target of 42,000 households switching household charcoal users to LPG; and (3) expand the geographic scope to allow for synergies when appropriate. In addition, under the FY 2014 workplan, USAID/Haiti has ensured that Chemonics focuses its LPG conversion efforts on private schools and orphanages.

USAID/Haiti will finalize, by the end of March 2014, a monitoring plan which includes more frequent progress meetings and more site visits for the year. This will ensure regular and close oversight of these activities.

**Recommendation No. 12:** We recommend that USAID/Haiti implement a policy for mandatory environmental training for all mission staff involved in program management and for reviewing annually that all current staff have attended the training.

### **Mission Response**

USAID/Haiti agrees that management should ensure that Assistance Officer Representatives and Contracting Office Representatives (AOR/CORs) have the environmental training necessary to properly carry out their AOR/COR duties and responsibilities. USAID/Haiti is in the process of issuing a Mission Order summarizing environmental compliance procedures and roles and responsibilities. A five-day environmental training course is scheduled for February 2014.

### **Plan of Action and Timeline**

The AOR/COR Supervisor and the Award Officer will identify the level of Environmental Training that is needed for each AOR/COR. USAID/Haiti will develop an environmental overview course as part of its training curriculum. Environmental training needs will be assessed annually in order to offer training sessions accordingly. The adequacy of AOR/COR environmental training will be tested as part of the annual *Federal Managers' Financial Integrity Act* review process under *Management Control Review Committee* oversight. USAID/Haiti will issue a Mission Notice to inform staff of these dispositions. These actions will be completed by October 2014.

**Recommendation No. 13:** We recommend that USAID/Haiti identify and incorporate risk activities that were not previously part of the approved environmental mitigation plan and report, and amend the initial environmental examination, if necessary, and document all actions taken.

### **Mission Response**

USAID/Haiti agrees with this recommendation. The Mission has undertaken a review of risk activities under the approved Pillar A Environmental Mitigation and Monitoring Plan & Report (EMPR) and activities under the ICT Project. The approved EMPR is an umbrella document outlining potential categories of risks and appropriate mitigation measures. Pursuant to this umbrella EMPR, the contractor must submit quarterly environmental mitigation reports that are specific and detailed as to particular activities under the contract. When those quarterly environmental mitigation reports are submitted, they are reviewed and must be approved by a Mission Environmental Officer. Our review to date of activities and quarterly reports under the ICT project has not identified any activities that were not previously part of the approved EMPR. Therefore, at this time, the Mission has concluded it is not necessary to amend the IEE or EMPR. These quarterly reviews of mitigation reports will continue through the life of the project, with a proposed completion date of January 31, 2015.

The findings the auditor reported concerned a misunderstanding by Chemonics on how to report mitigation measures taken for specific project activities. In June 2013, Chemonics, the COR and

the Deputy Mission Environmental Officer (Deputy MEO) met to discuss the environmental mitigation plan, and the appropriate format to use for reporting mitigation measures taken. The Deputy MEO had approved the previously submitted environmental reports, which included all the necessary information and appropriate mitigation measures. There was no need to correct any of the previous reports. Chemonics and the COR continue to work closely with Mission's Deputy MEO. The Mission has documented its meeting with the implementer and will continue to conduct regular review of the activities to ensure that the approved EMPR remains accurate and comprehensive, and that the contractor is complying with the reporting requirements.

**Recommendation No. 14:** We recommend that USAID/Haiti include Chemonics employees in the next environmental training session and document their attendance.

#### **Mission Response**

USAID/Haiti agrees with this recommendation and has already ensured that the next training session, which is in February 2014, includes Chemonics project employees. Confirmation of their participation was received by the Mission.

#### **Plan of Action and Timeline**

USAID/Haiti will document Chemonics' completion of the February 2014 environmental training session by March 2014.

**Recommendation No. 15:** We recommend that USAID/Haiti, in collaboration with Chemonics, (1) update the program's performance management plan to include needed revisions to the indicator descriptions, collection method, and targets, and (2) implement it to address the indicators' data limitations for evaluating program impact.

#### **Mission Response**

USAID/Haiti agrees with recommendation 15. For part (1), USAID/Haiti addressed the concerns in the PMP in collaboration with Chemonics. An updated PMP has been submitted as of December 27, 2013 to the COR and is currently under review by the Mission. The updated PMP addresses the concerns identified in the audit. Furthermore, since the audit, USAID/Haiti hired a new monitoring and evaluation (M&E) specialist dedicated to the infrastructure team who will, in collaboration with the COR, lead monitoring and data quality assurance efforts. For part (2), USAID/Haiti will ensure that the changes to the PMP are applied to the program activities through regular monitoring.

#### **Plan of Action and Timeline**

USAID/Haiti will finalize the updated PMP by the end of February 2014.

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