DATEX GRANT URBAN ENVIRONMENT (URB/01-98)

FINAL REPORT

CARE-Haiti
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1. SUMMARIZATION OF PROGRAMME ACCOMPLISHMENTS

1.1 Recall of Strategic Objectives : USAID and ASSET Programmes

The Grant was received for the implementation of the Urban Component of the ASSET (Agricultrally Sustainable Systems and Environmental Transformation) Program , as sub-contract between Winrock Int. and Datex Inc. *for* the accomplishment of ***USAID Strategic Objective # 2*** *"Environmental Degradation slowed" and the Intermediate Results "Sustainable Energy Options Used" and "Urban Environment Improved."*

Objective of the USAID/ASSET Grant within the CARE-BME Energy Conservation Program was to provide adapted solutions and prototypes of energy-substituting equipment for diffusion among small-scale economic operators.

1.2. Development of Energy-Saving Solutions for Small Enterprises and Schools

The Objective of the Program was to develop Energy Solutions for Small Enterprises with funding of $ 250,000 for 18 months, from Dec.98 to Mai 2000. (see Program Description in Annex I)
3 categories of businesses were targeted: 1)school canteens, in view of the fact that CARE-Haiti is involved in 1200 schools in nutritional improvement, and these schools use traditional energy (wood, charcoal), thereby contributing to Haiti's environmental problems, 2) informal restaurants and cooking stalls (maje kwit), mostly women, 3) bakeries, distilleries and dry cleaners which use wood or charcoal. At the outset, we have to state that the external conditions became increasingly unfavorable during the end of 1999, with the price rise for oil - - and the devaluation of the national currency which affected gas, and an international crisis of confidence in the Haitian government which for 18 months had dissolved the parliament and repeatedly postponed elections.

1) School Canteens: in co-operation with the National School Feeding Program and WFP, CRS, BND and CARE (ADRA closed in 1999), 10 fuel-saving school canteens were set up in Port au Prince (3), Gonaives (4, now 3), Cap Haitien (3). During 6 months, gas and improved wood and charcoal stoves were tested and continue to be used up to today. A workshop was held with major partners to summarize the results (Annex II). A marketing phase for improved stoves in school canteens was to take place during 12 months and it was expected to reach 100 schools. Up to date WFP has provided 30 schools with gas stoves (out of an expected 100), CRS has bought charcoal-saving stoves for 30 schools, and CARE itself has set up 10 pilot schools in its North-West education project (in addition to the 3 during the test program) in view to prepare a larger component within the new education project (2002). Donors have been approached and sensitized to fund or facilitate funding within their school nutrition programs.

2) Restaurants (Manje Kwit) It was foreseen to develop prototypes and experimental models based on the model of the household stoves, and test and distribute about 100 such stoves for charcoal. 3 prototypes were developed and tested in a pilot study with 20 women (the Grand MIRAK, the four cantine for wood , the four cantine for charcoal and a four potager, see photo 1). Simultaneously, gas stoves were introduced on a test basis in one Parc Industriel, as a result of which a credit program by GRAFFSI and IFE with backing of the CEE resulted in the conversion of about 24 restaurants to gas. Due to the crisis, however, the CEE suspended its refinancing of the local bank and the credit program was halted, and about half of the restaurants could not obtain gas stoves. The project has held talks with the managers of the Parc Industriels and resumed demonstrations of all types of stoves (LPG, kerosene, charcoal) for the 'manje kwit' as well as for the workers in these parcs. The development phase has taken longer than 6 months foreseen and the marketing phase was correspondingly shorter, and has not yielded the projected quantitative results of 1000. In my view, this component requires its own approach and publicity and needs full-time female personnel to reach out to this complicated target group of women street-side cooks, with a small-credit program of its own. An attempt to work with the Min.of Social Affairs to distribute 20 stoves to the 'friteuses' (those who fry doughnuts at carneval) was in my view a failure, because the Ministry did not do any follow-up.

3) For bakeries and dry cleaners a 6-month survey phase was planned: a market study was copleted in jan.1999, followed by a feasibility study for a and a business plan for a local oven producer. This was completed in august 99, which left 6 months for pilot marketing. However, as there are private local producers who are interested in

selling their products, CARE's involvement in marketing can be minimal: information of customers about the product and putting them in contact with micro-finance institutions.

The studies were distributed to 15 commercial banks and discussed with some. The FDI (Fonds de Développement Industriel) agreed to refinance those banks which were ready to finance bakeries. However, feedback from Haitian banks was minimal, given the deterioration of conditions (decline of local currency and rise of the prime interest rate of Bank of Haiti from 15 to 20%). According to the business plan, about 72 bakeries per year were to be converted from wood to diesel. But in reality, the rhythm is about 3-4 p.m., i.e. 48 per year, as the producer manages along, but has not provided the business data to qualify for a bank loan.

1.3. Initial Extension of Energy-Saving Solutions

Following the tests of Prototypes - in particular kerosene stoves - demonstrations of stoves were held in the Industrial Park to generate interest and demand among the food sellers. A similar series of demonstrations was held in schools.
Yet, the bakery component developed along other lines : in nov.99 Micro-Credit National (a company owned by UNIBANK and financed by IFC, KfW and others) opened its operations: CARE arranged 4 meetings between MCN, the local producer and bakers. As a result of which about 7 loans have been awarded, but about 10 more bakeries were installed due to customers who paid cash.(List in ANNEX 4).

For the dry cleaners the development of a diesel boiler-cum-burner system was begun. For this a no cost extension was requested. However, to fulfill all the bureaucratic requirements of USAID and CARE (not to buy used equipment, spend only on materials and not services, requesting pro formas from alternative producers and suppliers) or to obtain waivers to relinquish these requirements takes more than the 3 months, so when we were finally ready to order te time was up and our grantor ASSET had to close out, due to the blocking of Congress funds by Sen.J.Helms.

2. OVERALL DESCRIPTION OF THE PROGRAM UNDER THIS GRANT

2.1. R&D and Sub-Sector Investigations (Proposed Activities)

2.1.1. School Canteens (test of improved models for wood, charcoal and gas LPG)

Demonstration 6 months, Pilot-Marketing 12 months.
In cooperation with the National School Feeding Program (PNCS) and with the support of WFP, CRS, BND, ADRA and CARE 10 model kitchens with improved stoves will be set up in schools in Port au Prince, Gonaive, Cap Haitien and Jacmel, in view of the study of cooking practices and fuel consumption. The findings will be used to set up demonstration centers to provide other schools the opportunity to study the impact of upgrading school kitchen facilities.
The marketing and distribution will commence on a pilot basis. Included in this phase will be the review of credit needs and support mechanisms. It is expected that a system to allow schools to pay for stoves can be arranged with the organizations cooperating in the PNCS, and that 100 schools will be converted, thus providing the base for the long-term commercial manufacture of canteen stoves, and create links between schools and manufacturers. The project will continue to work with the Pilot Center for Vocational Training (CPFP) which has produced over 300 stoves for school canteens in the past (this production is in the meantime in the hands of a private enterprise set up by one of the CPFP's employees supported by Microcredit).

2.1.2. Development and Distribution of Improved Stoves to Manje Kwit[1]

Demonstration (6 months) , Pilot Marketing (12 months)

Prototypes and experimental models will be constructed with the participation of metal workshops and will be evaluated at the testing center of the Bureau of Mines and Energy. The tests will consist of measurements taken over a period of 2 weeks comparing the traditional and improved stoves' performance. The same models will undergo long-term trials (approx. 4 months) to measure acceptance and durability.

[1] This means literally "eating cooked (food)" and refers to open air cooking stalls operated by women in the major markets who use open charcoal grill stoves which waste fuel.

Up to 100 units of the most efficient models will be distributed in about 20 locations in Port au Prince where Manje kwit are concentrated. Each location will receive between 3 to 6 improved stoves. The pilot marketing will include improved stoves for such fuels as charcoal, kerosene, and gas LPG, and include a review of credit and other support mechanisms. No direct subsidy will be provided but the project will assist NGO's to provide credit to producers and to Manje kwit for the purchase. By the end of this phase a long-term commercial marketing strategy will have been developed with those artisans who presently make the traditional stoves.

2.1.3. Small Industries Development

Survey (6 months) and Demonstration and Pilot Marketing (12 months)

Bakeries, dry cleaners and distilleries are assumed to be the largest industrial consumers of wood and charcoal. A study would determine the industries with inefficient energy use, practices and fuel consumption to assess the scope for fuel conservation or substitution. This will result in a short-term plan to test and evaluate promising interventions, including new ovens, burners and management practices.

A small number of industries would be fittes out with new equipment and trained in new management practices. To ensure that the industries participate fully in the testing and are interested, they would contribute half the cost of the new equipment. The interventions will be evaluated to determine the long-term feasibility of improving the performance of small-scale industries. When costs and benefits have been determined , the project will look into the credit opportunities and linke the commercial dissemination to SSE credit programs.

2.1.3.1. Studies and Business Plans for Bakery-Oven Producers

Actually, a market survey of wood-consuming bakeries and dry cleaners was done which estimated the market at about 1300 bakeries in Haiti and about 150 dry cleaners. During this survey a few local producers of improved ovens were identified, among them one who uses imported diesel burners, (2 others who use gas or petroluem burners), for whom a business plan was developed, based on about 60-70 units per year.

2.1.3.2. Marketing of Bakery Ovens

As the local producer had already built and installed 30 ovens before the business plan, he was already introduced in the market. The project made some publicity among bakers and invited them to joint meetings with a micre-credit institution, the producer and the BME. As a result, the micro-credit institution was prepared to finance viable bakers, and about 5 ovens were financed on about 10 credit applciations, while the producer sold an additional 5 ovens on cash. He was, however, himself unable or unwilling to provide the necessary data and streamline his management and obtain a credit for expanding his operation to the level foreseen by his business plan. The BME is continuing the investigation of other local oven producers using gas burners.

2.1.4. Development and Distribution of Prototype for Laundries

Unlike for the bakeries no local producer of improved laundries could be identified during the survey phase. Therefore, based on the precedent of the diesel-burner for bakery ovens, it was decided to compare the performances of a local and imported boiler-cum-diesel burner. In looking at local boilers for the tests, we found that they were too old and the security risk too great. Following that a local firm proposed to manufacture a boiler but declined at the last minute, but another manufacturer provided an offer of constrtucting a 8 hp boiler at 12,000 $H ($ 3000). We then identified a US manufactuer who had a series of reconditioned boilers at prices ranging from $3000-4000 (USD) including diesel burner and pump, with 1 year guarantee. When we were ready to order, - time to obtain alternative offers, and pro forma invoices - we did not get the necessary waivers (for reconditioned equipment), as we ran into a time deadline and could get no further extension, as US funds had been blocked by Congress Chairman of the Foreign Relations Committee and had to follow close-out procedures. Thus the balance foreseen for this R&D activity is being returned.

2.2.1 Tests of Kerosene-Stove Models and Demonstration of Selected Kerosene Stove Models

About 12 kerosene household stove models were tested by BME and 2 were selected for further marketing. One has a local importer; the other models can be produced locally provided burners are imported (a Portuguese manufcaturer of quality burners could no longer be found, probably has ceased production, Indian and Chinese

manufacturers make the same burners at lower price but also lower quality). The pilot marketing of the first type of kerosene stove has begun basically at the Industrial parks and through Church groups (the Baptist mission of Haiti alone has 50 parishes through which stoves are disseminated). With the French Volunteers who work in the protection of the buuffer zone of the Foret des Pins, it was agreed to introduce and demonstrate improved stoves models in rural markets, and occasional demonstrations are held in Fonds Verrettes.

2.2.2. Pilot Installations for Manje kwit in the Parc Industriels

There are 2 major Industrial Parcs, (and one at Montrouis) where thousands of workers work in textile shops and private Manje kwit (hot cooks) serve thousands of meals during lunch hour. These Manje kwit have been the first target group for iimproved stoves (charcoal and LPG), and BME has facilitated a number of demonstrations in the Parc owned by SONAPI. As a result of this, a local manufacturer of gas stoves (imported burners) who collaborates with ELF, embarked on a credit program - assisted by CEE funds, a local bank, the Institute for Women Entrepreneurs (backed by the Executive) - and provided about 24 such cooks with gas stoves. As a result of a political crisis of confidence in the government, EEC cut funding and the entire program was suspended. The demand by Manje kwit for gas stoves yet is unaffected, even by the recent rise in LPG prices.

2.2.3. Demonstration School Canteens in the CARE Education Project of the Northwest

Four improved canteens were set up under the canteen test program (see above), but it was decided to install another 7 with the CARE Education project, in order to have a sample of 10 schools to study and make recommendations (especailly concerning financing and modifying curriculum with regard to energy conservation) for the follow-on phase of the Education project (2001-2004) to include a larger component, because at the end of a phase no funds are available for equipping school kitchens. As most of these schools are in rural areas, and availability of LPG is doubtful, most schools have opted for improved wood stoves and the APEP have indicated a willingness to reimburse the cost of stoves from the future fuel economies.

2.2. Transition from R&D to Extension

A dossier has been prepared over the last months to show how an extension of the models - incorporated into a business promotion program for energy-savers - could make a substantial impact of fuel savings and pollution reduction (CO2) avoided. The lack of confidence by mode donors in the political process in Haiti, however, makes it unlikely that support even for such NGO's as CARE will be forthcoming. Thus, chance has it that such a promising phase will not be followed, for political reasons, by anything of benefit tothe Haitian poor population.
(Proposal in Annex II).

3. DESCRIPTION OF THE METHODS OF WORK USED

3.1. Sub-Contracts with BME for Tests and Pilot Installations

Appropriate models were first developed in collaboration with local metal working shops, or local producers (e.g. gas stoves or diesel ovens, also local boiler producers). These were then tested in the laboratories of the BME, and field tested with a limited number of consumers.

3.2. Sub-Sector Survey Surveys with CARE Project Personnel

Since about october 1999, field extension and building up of credit programs was begun, supported by publicity to make the models known to the public.. More publicity is needed: budgets were insufficient and the time to develop a publicity in Haiti is excessive (due to too many administrative requirements with CARE which change all the time and a lack and slowness of competent agencies).

3.3. Development of Partnerships

Little has been done on the publicity side (manuals, brochures). The only regular publicity which has been regular is the quarterly news bulletin Synergies. Since we had to change the printer (the previous printer being unable to do the work because of a contract for election ballots, we had to pass through the CARE procurement department to get alternative suppliers, and it took them 2 months without finding anyone to be able to do the work). At least 2 months of work were spent to prepare a proposal for a follow-on phase. Future funding,

however, is jeopardized by the general poltiical situation in Haiti and the crisis provoked by the attitude of US Chairman of Foreign Relations Committee. Yet cooperation at a low level has been pursued with Plan International, Catholic Relief Service, and initiated with AFVP (Agence Française des Volontaires du Progrès) for the demonstration and diffusion of improved stoves. The partnership with the CARE Education Project in Gonaives is mentioned above.

Partnerships have also been established with ELF Gaz , and Shell Gaz, and could be extended for the financing of bulk programs (such as a large number of canteens or Manje kwit).

3.4. Socio-Economic Impact

Strategic Objectives

Increase incomes of households through reduced spending on fuel
Increase incomes of artisans and other producers from selling a new technology
Create resales jobs and incomes.

About 100 artisans were trained of which about 40 artisans work full-time on household stoves for CARE; about 15 resellers sell improved stoves throughout the urban area.

Stoves **Producers'** incomes are increased by 3.34 HD[2] per stove (over the sales of trad .stoves), or 50000 HD ($ 16,700) over 3 years. **Resellers** have increased their incomes by 25,000 HD[3] or USD 1390 US.

Household Incomes have increased through savings by about 1 million USD p.a.; the Manje kwit women have increased their income through savings on fuel by more than 1 million USD p.a. about 100 large wood or charcoal saving stoves have saved the schools about 111000 USD, or thousand one hundred per school per year. As for gas stoves in canteens and manje kwit, 300 units have saved about

Table 1 Household Economies from R reduced Spending on Fuel p.a.

Stoves Type	Sales or Plcmt.	Economy p.day [4]	Economy p.year	in USD
Household stove	15,000	49500 Gd	16.425.000 Gd	912.500
Grand MIRAK	500	100*500=50000	18.250.000 Gd	1,013,888
Canteen Stoves	100	100*100 = 10000	2.000.000 Gd	111,111
Gas Stoves	300	300*100 = 30000	10.950.000 Gd	608.333
Kerosene	0			
Diesel Ovens	7	200-28=72	7*26280=183960	
TOTAL				2.645.832

Social (Hygiene- and Helath Related Benefits)

Women's working time reduced through faster cooking devices
Womens' and children's health hazards (from smoke-free, ash-free and cleaner stoves) educed incidence of respiratory and eye diseases potentially reduced
Bakers and workers' and customers' health hazards reduced (smoke free, soot free , ash free bakeries),
Restaurants' and school' cooks cancer risks from charcoal residues potentially reduced.

A Networks of artisans' associations and resellers are integrated into the project, and shall be integrated into professional support systems (Office National des Artisans, Microcredit, Small Enterprise Support Programs) to increase their economic viability and lift their self-esteem.

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[2] 1 drum of 10 Haitian Dollars can make 8 traditional stves which are sold at 24 HD, giving a margi of 14 HD or 1.66 per stove. 1 drum of 20 HD can make 4 MIRAK which are sold at 40 HD, leaving a margin of 20 HD or 5 HD per unit. Despite the higher margins, traditional stoves sell faster with lower purchasing power, so resellers prefer to sell traditional stoves yet.

[3] trad.stove 30 HD per dozen bought and sold at 120 H, i.e. 90 HD ,or 7.5 HD margin per unit; MIRAK a dozen bought at 60 and sold at 180 HD, leaving a margin per unit of 10 HD; this is an increase of 2.5 HD per stove.

[4] à 2.2 kg of charcoal consumption p. HH p.day, at a price of 2.7 Gourdes/ kg , this represents 3 Gd.p.day per HH, or

3.4. Environmental Impact Assessment

Strategic Objectives

- reduce the emission of green house gases
- reduce charcoal and fuelwood demand and simultaneously increase household and business
- slow the degradation of arborous vegetation with a resultant reduction in soil erosion and desilting.
- preserve land under tree and forest cover

Table 2 Wood Saved and Gas Emissions Avoided per year

Stove Type	Sold or Placed	Charcoal Economy/day	Charcoal economy/year	CO2 avoided per year (tons)
Household stove	15,000	1.1 kg	6022 tons	22,886
Grand MIRAK	500	3.0 kg	545 t	2,071
Canteen Stoves	100	3.0 kg	109 t	474
Gas Stoves	300	6.0 kg	327 t	1,243
Kerosene	0			
Diesel Ovens	7		2450 t wood	9,310
Dry Cleaners				

For a follow-on phase the following effects are expected, with about 4 tons of Carbon Dioxide avoided per ton of wood saved.

3.6. Monitoring the Market

We do think that a future project needs to be run along business lines and cannot be successful if it has to follow the rules of bureaucracy, since it needs to react quick and flexible. It is wasteful that an expensive project manager should have to waste months only to conform to the administrative requirements, because his salary costs more than the gains or savings made from proper procedures. In fact , if a project manager has no autonomy over the budget, it would be better to employ an accountant to head the project.

4. GRANTEE'S OVERALL ASSESSMENT OF THE VALUE AND CONTRIBUTION MADE BY THE PROJECT

4.1. Contribution and Value of the Project (Lessons Learned:replication...production capacity assessed...)

The main contribution is a) the development of alternatives - marketable stove prototypes - to traditional equipment which is wasteful of natural resources :wood and charcoal, and pollutes the environment, as well as b) the identification and development of local supply capacity.

There is mass assemblage of gas cookers and stoves - with imported burners - and there is an importer of kerosene stoves. Large charcoal-saving stoves - for canteens and kitchens - can be manufactured by the same artisans workshops who produce small household stoves. This means the local capability of replication exists.

Lessons learned:

On the Demand Side: Despite the fact that the Haitian economic environment is not very conducive to change in environmental policies (petrol and diesel prices are maintained at fixed levels to subsidize transport and car owners, household gas and other alternative energies are not favored by detaxation, like in the Dominican Republic, and as a consequence of high energy prices, the environment - which still provides the cheapest energy suffers), the response to new energy-saving equipment is positive. We have been trying to encourage the BME to propose laws/ruling for detaxation of solar and wind equipment, and for cross-subsidy of LPG.

Marketing each product and approaching target group requires a special approach and marketing campaigns, which means specialized staff and more intense publicity (and higher advertising budgets) to increase consumer awareness. To create appropriate publicity is a full-time job and requires the skills of a specialized professional. Local personnel and agencies do not work time-efficiently.

The Haitian partner (BME) has shown little capacity to seek funding which would enable the long-term stability of the project. Yet the LPG importers (Shell, Elf, Texaco) are willing to help. Marketing needs to be privatized and placed in the hands ideally of producers but of traders (retailers and wholesellers). This is done to some extent for the gas stoves through Ecogaz and Valerio Canez, who is a shareholder of the former. The oven producer KRISCO however, is incapable - because too busy to serve customers - of marketing its own product. For the large charcoal-saving stoves, as well as for large kerosene stoves efficient producers and distributors have yet to be found.

The project has moved from a research and development phase to an extension phase which requires other strategies: enterprise promotion with credit packages, effective publicity, marketing techniques. All these need to be developed since the market of Haiti is not very transparent.

On the Supply Side: Producers are not very organized and lack strength; business support programs with amangement training components for the small enterprise and informal sector are virtually non existent. The Haitian banking system is not very supportive of investment, and most donors have anyway stopped their waning support to the private sector.

4.2. Non-Accomplishments and Shortfalls

The test and demonstration phases have clearly taken longer than planned (6 months), due to the sluggish start up. As a consequence, the pilot marketing phases (intended at 12 months) were much shorter. The acute lack of funding has had project staff to concentrate more on writing project proposals to renew funding than on project execution. The blocking of funds from US government and audits have thrown CARE into a cash-flow crisis which has slowed down administrative procedures. For the last 6 months, a political crisis has virtually eroded donor confidence in Haiti, and the little existing support for the environment has been suspended.

Thus, marketing figures are below the projected levels (see above Summary). Certain prototypes could not be developed (e.g. a boiler-burner assembly for dry cleaners who still use wood) due to length of time of procedures (seeking alternative offers) and slow response from local sub-contractors.

Cooperation with other agencies and organizations also has not developed as much as wanted, as many of them have suffered from the same budget constraints.

4.3. Relation with the Household Stoves Project (Grant by Dutch Government)

The Household Project has entered a marketing phase - with the development of publicity from which the small enterprise project should benefit (specially the large stoves for food sellers, restaurants and kitchens) - through development of posters, radio spots. Some of the personnel funded by this component will be active in the marketing of gas and kerosene cookers for households but also small enterprises.

In that project the marketing of household stoves will be privatized through a private association of ex-project technicians in a centra office in town where publicity, advice, maintenance and repairs as well as sales of stoves will take place. This will progressively also market the models of alternative energy equipment which come onto the market.

4.4. Outlook and Further Developments: Towards Small-Business Development in Environmentally Sound Energy

The technology has been developed but it now needs extension through a business support approach, which assists enterprises willing to invest in envirnmentally beneficial technologies. A proposal for funding such an extension phase was submitted to USAID, which for each cateorgy of target group (business category) will provide a business plan appraoche.

4.5. Projected Environmental Impact : Medium Term Targets (2 years)

Table 3 Quantified Effects on Charcoal and Wood Consumption

Stove Type	**Units**	**Fuel Economy/ per day**	**Charcoal saved tons/p.a.**	**Wood equiv. t saved 2 yr.**	**Savings in USD**	**CO2 av metric t (4 mt p.**
HH type charcoal-saving	**2**5,000	**27.5** tons	**10.038**	**140,525**	**3,011,250**	**563,**
HH type gas, petrol	25,000	**50** tons	**18,250**	**255,500**	**5,475,000**	**1,022**
restos charcoal saving	1,000	**3** tons	**915**	**12.810**	**328,500**	**51**
restos (gas stoves)	1,000	**6** tons	**1.200**	**16,800**	**600,000**	**67,**
canteens (gas stoves)	1,000	**6** tons	**2.190**	**30,660**	**1095,000**	**122,**
canteens (charcoal saving stove)	1,000	**3** tons	**600**	**8,400**	**300,000**	**33,**
dry cleaners (diesel burners)	100	**500** t of wood	**15.600**	**31,200**	**390,000**	**124,**
bakery ovens (diesel)	**2**50	**550** t of wood	**27.500**	**55,000**	**687,500**	**220,**
Casamance kilns	100	**100 t** of wood	**10,000**	**20,000**	**250,000**	**80,**
TOTAL				**566,895**	**12,144,250**	**2,273,**
based on a rate of 20 Gourdes/$						

5. RECOMMENDATIONS

Integrate the Energy Saving Program into other USAID Programs, e.g. urban and rural small-enterprise development programs (PRET), off-season agricultural revenue and forestry programs, adopting a business promotion approach.

Elaborate Business plans and strategies for each of the market segments above, and eventually for individual enterpreneurs and firms,

Lobby for support from other donors engaged in similar approaches (small business promotion, micro-finance, employment generation) to balance the financing and ensure sustainability of the program and SSE's promoted.

Lobby for support from petroleum companies (for example for converting batches of 100-200 schools to LPG).

Leave to BME the R&D and publicity side (to generate more demand), with CARE concentrating on small producers and rural cooperatives.

Monitor and describe the indicators of the energy market and projects e.g. for example via a news bulletin.

6. BIBLIOGRAPHY

7. FINANCIAL REPORT