



ANNUAL REPORT

UNF Project ESA-GLO-02-236

Promoting Energy Efficiency Standards

December 2002 – December 2003

ANNUAL REPORT #1

December 2002 – December 2003

Project Symbol and Title: GLO/02/236 – Promoting Energy Efficiency Standards:

Collaborative Labeling and Appliance Standards Program (CLASP) – Phase II

SUMMARY OF ACCOMPLISHMENTS

1) DIRECT COUNTRY/REGIONAL ASSISTANCE	
CHINA	<p><u>Development of draft specifications for energy efficiency endorsement labeling of computers and monitors (June 2003)</u></p> <p><u>Implementation of printer energy efficiency endorsement labeling (May 2003)</u></p> <p><u>Studies:</u></p> <ul style="list-style-type: none">• Interim report on the development of energy efficiency criteria for office equipment endorsement labeling (November 2003)
INDIA	<p><u>Second draft of enforcement plan for information labeling (November 2003)</u></p> <p><u>Draft Refrigerator and Air-conditioning test procedures (March 2003)</u></p> <p><u>Studies:</u></p> <ul style="list-style-type: none">• Quantitative survey report of the market research conducted for most effective label message (December 2003).• Revised analysis of energy efficiency of frost-free refrigerators in the market (November 2003)• Qualitative survey report from the market research conducted on the most effective label message (In progress-Final report due August 2003)• Base case analysis of GHG reduction potentials for room air-conditioners and refrigerators (January 2003)• Indian test facility assessment report(January 2003)

	<p><u>Training:</u></p> <ul style="list-style-type: none"> • Terms of Reference for refrigerator test procedure-training program (December 2003). • Report on proficiency testing of frost-free refrigerators (December 2003).
BRAZIL	<p><u>Studies:</u></p> <ul style="list-style-type: none"> • <i>Technical Improvement of Residential Refrigerator in Brazil: Energy Efficiency Analysis</i> presented at EEDAL international conference (October 2003) <p><u>Program Development:</u></p> <ul style="list-style-type: none"> • Revised RFP/TOR for a Market Assessment of an S&L Priority Product (November 2003) • RFP/TOR for a Motor Standard Evaluation Study (November 2003) • Mission Report (July 2003)
SOUTH AFRICA	<p><u>Studies</u></p> <ul style="list-style-type: none"> • Report: "<i>Capacity Building in Energy Efficiency and Renewable Energy</i>" Report No. 2.3.4-05, title: <u>Appliance Labeling Study</u> by Department of Minerals and Energy, (February 2003) <p><u>Program Development</u></p> <ul style="list-style-type: none"> • Mission Report (November 2003) • Technical advice to AED led labeling stakeholder forum (June 2003)
SARI	<p><u>Training</u></p> <ul style="list-style-type: none"> • Completed Course 4.5: Designing and Managing Energy Test Facilities and Protocols (October 2003) • Completed Course 4.6: Effective Development and Harmonization of S&L Programs in South (October 2003)
2) ENABLING TOOLS DEVELOPMENT	
WEBSITE	<ul style="list-style-type: none"> • New database (November 2003) • Two sample CLASP website revisions (November 2003) • Coordination and linking with APEC ESIS website (June 2003)
POLICY ANALYSIS TOOL	<ul style="list-style-type: none"> • Preliminary website: http://pams.lbl.gov/ (November 2003)
RECS SURVEY TOOL	<ul style="list-style-type: none"> • Draft residential energy use survey form. (November 2003)
3) CLASP MANAGEMENT	
TECHNICAL MANAGEMENT AND REPORTING	<p>Annual report (December 2003) 6 month report (June 2003)</p>

Work plans for all tasks for project life (May 2003)
--

Activity 1 – China Country Program

Task 1.1 Energy Efficiency Information and Endorsement Labeling Integration

Description of Activity: China is considering the policy relationships of its existing voluntary, energy efficiency endorsement labeling program and its mandatory energy information labeling program which is about to be implemented. The goal of this label integration assessment is to offer consumers additional information and capture higher energy savings. CLASP is providing technical, assistance on issues and strategies for label integration.

Accomplishments in the Reporting Period: During this period, the basic work-plan for the study and the organization for the team in China and internationally was finalized. In addition, the contracts for the two Chinese organizations responsible for the work (the China Center for the Certification of Energy Conservation Products, or CECP; and the China National Institute of Standardization, or CNIS, were issued. Owing to several factors described in “Departure from Original SOW” below, the schedule for implementation of this work has been delayed.

Deliverables in the Reporting Period: None

Departure from Original SOW (if any): Two major developments delayed the work on the label integration study. The first involved uncertainties introduced into the timeline owing to new leadership at the China Certification and Accreditation Administration (CNCA) and the dissolution and reorganization of the energy efficiency departments of the former State Economic and Trade Commission. The second involved the slow-down and stoppage of most international meetings and work activities for several months after April 2003 owing to the SARS crisis.

These delays are expected to have an impact mainly on the schedule of the deliverables and not the ultimate product of the study. The final project results will be divided into two stages. The first, the finalization of the proposal for the technical integration of the two labels, will occur within the project time period. The second, which is the labeling of multiple products after approval and implementation of the integration proposal, is contingent on final government approval of the information label. This approval is expected in 2004.

In November 2003, further uncertainty was introduced when the CNCA rejected parts of the new framework for the information label. Though the issues remaining to be addressed are not considered major, it may further delay the label until May or June 2004.

Other Noteworthy Achievements: N/A

Next Steps: The two Chinese organizations (CECP and CNIS) involved in the internal analysis will begin examination of the range of products for consideration in application of the integrated label. With the assistance of the international expert, the technical issues related to efficiency categories and labeling criteria will be examined to determine what linkage to establish between the two.

Task 1.2 Development of new “Reach” Standard for Motors

Description of Activity: CLASP is providing the China National Institute of Standardization (CNIS) with technical assistance to develop and implement a “reach” standard for small- and medium-size asynchronous motors. This “reach” standard represents a new policy approach to standards development that will result in significantly more aggressive minimum efficiency standards, combined with a much longer lead-in time for manufacturers to prepare for the change.

Accomplishments in the Reporting Period:

- Securing of co-funding for CNIS from the Energy Foundation (November 2003)
- Securing of co-funding for an additional international expert from the Energy Foundation (November 2003)
- Issuance of contract to the China National Institute of Standardization in support of the motors standards work. (August 2003)
- CNIS developed a technical committee to proceed with this work. The workplan was developed and the project team established. (June 2003)

Deliverables in the Reporting Period: None

Departure from Original SOW: Due to CNIS’s accelerated workplan for the implementation of other product standards, the motors standard work has been delayed by nine months. Full project activity began in Q3 2003 instead of December 2002, with completion of all work expected by Q3 2004 instead of December 2003.

Other Noteworthy Achievements: The necessary additional co-funding for this task was secured in November 2003. At that time, support for another international expert on motors efficiency was also secured.

Next Steps: Assistance to CNIS in the modeling and analysis of data gathered on the China motor market (Q2 2004), and review of the draft specification for the reach standard (Q3 2004)

Task 1.3. Endorsement Efficiency Labeling of Office Equipment

Description of Activity: To assist the Center for the Certification of Energy Conservation Products in the technical analysis of office equipment performance and the establishment of efficiency criteria for labeling.

Accomplishments in the Reporting Period:

- Completion of draft specification for computers, monitors, fax machines, and copiers (December 2003)
- Final modeling and analysis of office equipment market data and estimate of energy savings (October 2003)
- Meetings with computer, monitor, copier, fax machine, and DVD manufacturers and other stakeholders (October 2003)
- Draft specifications for energy efficiency labeling of computers and monitors (June 2003)
- Implementation of printer labeling (May 2003)
- Office equipment product data collection (February-April 2003)
- Development of printer efficiency specifications (February 2003)

Deliverables in the Reporting Period: See Appendix A.

- Interim report on the development of efficiency criteria for office equipment (November 2003)
- Printer labeling specifications (May 2003)

Departure from Original SOW (if any): N/A

Other Noteworthy Achievements: At the international workshop on government energy efficiency programs in Beijing (September 2003), the National Development and Reform Commission (NDRC) gave their approval for linking a new government energy efficiency procurement policy, currently under development, to energy efficiency certification labeling. This ensures increased market transformation impacts as office equipment products will be subject to efficiency procurement regulations.

Projected labeling savings from office equipment certification is expected to reach 420kt carbon equivalent on an annual basis in 2012, or 1.75 million tonnes carbon equivalent cumulatively by then.

Next Steps: Issuance of the final certification documents for office equipment and program implementation (starting in January 2004).

Activity 2: Country Program in India**Task 2.1 Baseline and Market Assessment for S&L Target Products**

Description of Activity: CLASP will assist the Indian Bureau for Energy Efficiency (BEE) verify that refrigerators, air-conditioners, water heaters and motors are the appropriate priority products for initial S&L development.

Accomplishments in the Reporting Period:

- Hired local market research firm to assist CLASP in data gathering for product assessments.
- Developed the baseline data for market, engineering, usage, behavioral patterns and other ancillary factors for refrigerators and room air-conditioners.
- Revised the initial analysis of data on the energy efficiency for frost-free refrigerators in the market based on the feedback received from the Technical Committee for Refrigerators. This Committee was established together with the Technical Committee for Air-Conditioners and the Steering Committee for Cooling Technologies (See Accomplishments section under Task 2.3).
- Initiated the analysis of GHG reduction potential for room air-conditioners and refrigerators.

Deliverables in the Reporting Period: See Appendix A.

- Report on baseline data for market, engineering, usage, behavioral and ancillary data for refrigerators and room air-conditioners (December 2003).
- Report with revised and adjusted analysis of energy efficiency of frost-free refrigerators in the market (November 2003).
- Draft base case analysis of GHG reduction potentials for room air conditioners and refrigerators (January 2003)

Departure from Original SOW (if any): Efficiency data for air-conditioners is not available as there are no testing labs capable of performing testing per the selected IS/ISO procedure. As a result, current data analysis is centered on refrigerators. Task 2.2 describes in more detail the progress being made on advancing air-conditioner standards.

Other Noteworthy Achievements: Collection of baseline data for refrigerators from various manufacturers is a significant achievement. Unlike other markets, the manufacturer associations in India do not share this information among themselves. CLASP has won the confidence of the manufacturers, evidenced by the thorough data collection provided to CLASP and used in the above mentioned analytical report of energy-efficiency of frost-free refrigerators (See Deliverables). This current data will help in updating the GHG emission scenario. The policy makers in India may use the scenario for setting their emissions reduction targets.

Next Steps:

- A comparative analysis of Indian refrigerator product efficiency (frost free) with international levels (March 2004).
- Revise the projections for GHG reduction potential for refrigerators and air-conditioners based on improved data collected as a part of this task (March 2004).

Task 2.2 Assessment of Testing Capacity for Priority Products and Expansion Needs

Description of Activity: CLASP will work with BEE to assess the existing testing infrastructure including existing capacity, number of new testing laboratories required, and scope of upgrading current facilities. Identification of the most appropriate test procedure for India will be determined as will any training needs.

Accomplishments in the Reporting Period:

- Assessed five refrigerator and air-conditioner test facilities
- Developed draft test procedures for refrigerators and air-conditioners
- Prepared an international comparison of test procedures with ISO and Australian test procedures
- Initiated the accreditation process for refrigerator test labs. As part of the refrigerator test lab accreditation process, the round robin testing of two frost-free refrigerator models is in progress.
- Completed Terms of Reference for a training program for refrigerator test facility staff.

Deliverables in the Reporting Period: See Appendix A.

- Terms of Reference for refrigerator test procedure-training program (December 2003).
- Report on proficiency testing of frost-free refrigerators (December 2003).
- Draft refrigerator and air-conditioning test procedures (March 2003)
- Indian test facility assessment report (January 2003)

Departure from Original SOW (if any):

Technical recommendations for the test facility upgrades are complete, as noted above. However, concurrent to the CLASP activities and with the technical recommendations from CLASP, ITS is developing a detailed technical and financial plan for air-conditioners. CLASP will provide data, protocol information, and other assistance to ITS for their plans, but will not duplicate this effort.

Other Noteworthy Achievements: N/A

Next Steps:

- Training of testing engineers on using the selected test procedures (February 2004).
- Develop test facility accreditation protocol for refrigerators and room air-conditioners. (March 2004)

Task 2.3 Development of at least one new Minimum Efficiency Standard

Description of Activity: This task involves selecting a product for initial implementation of mandatory standards in India. Once a product is selected, this activity will:

- Support the formation of committees in BEE and BIS to propose, review and set a timeframe for finalizing minimum efficiency standards
- Provide technical assistance in the dialogue among consumers, manufacturers and other stakeholders to review the draft, revised and final standards and labeling criteria for target products.
- Train BIS/BEE on engineering analysis of the product
- Prepare a draft standard
- Develop the final standard for approval

Accomplishments in the Reporting Period: A steering committee and two technical committees have been formed for refrigerator and room air-conditioner standards. The committees are made up of representatives from manufacturers, consumer organizations, BEE, BIS and CLASP. Dialogue and technical assistance is provided on an on-going basis through meetings of the technical committees. The committees have been meeting every 1-2 months, to review progress on data collection. Tentative dates of the first draft MEPS has been set for November 2004.

Deliverables in the Reporting Period: None

Note: Minutes of the steering committee meetings are available upon request.

Departure from Original SOW (if any): The BEE decided to introduce labeling as the first step in the S&L process. The first label will be launched in early 2004. Also, there has been a recent change over in the BEE leadership which is delaying progress. CLASP is continuing to work with the other Steering and Technical committee members, but delays are anticipated. However, CLASP is working to minimize the impact of the delays by initiating an analysis of the market and technical data developed and will draft proposed MEPS, based on this data. This draft will then be provided to the committees with the hope that BEE will be ready to participate in the analysis and review process.

Other Noteworthy Achievements: N/A

Next Steps:

- Analyze market and technical data and prepare preliminary draft MEPS (April 2004)

Task 2.4 Preparation of Energy Information Labeling for One Product

Description of Activity: Once an initial target product has been selected, CLASP will support the:

- Analysis of the product's current market and technical options
- Training of BEE in the development of a criteria-setting model
- Establishment a new efficiency criteria for labeling of the selected product
- Identification of stakeholders
- Test the proposed labels nation-wide

- Assist in harmonization of labeling criteria

Accomplishments in the Reporting Period:

- Close contact with and support of the activities of the Labeling Committee
- Completion of the market research study to test the consumer reaction to labels and to find out the most effective message on labels.
- Revised implementation plan for labels
- Revised and adjusted star rating plan for frost-free refrigerators
- Identification of labeling stakeholders
- Developed draft energy efficiency star rating plan.

Deliverables in the Reporting Period: See Appendix A.

- Quantitative survey report of the market research conducted for most effective label message (December 2003).
- Modified implementation plan for information labeling (November 2003).
- Qualitative survey report from the market research conducted for the most effective label message (June 2003)

Note: In the case of the quantitative and qualitative reports, and most other reports in India, they may be considered draft, though they may have been finalized by the authors and other related participants, until officially adopted by the Indian government.

Departure from Original SOW (if any): None

Other Noteworthy Achievements: N/A

The refrigerator-labeling program is being introduced in two phases. The first phase, to be launched in early 2004, will be for frost-free refrigerators. The second phase of the labeling program will include direct cool refrigerators. The second phase will be completed by the end of the year 2004.

Next Steps:

- Finalizing the procedure for check and challenge test protocols for labeling enforcement (January 2004)
- Collect data and develop star rating plan for direct cool refrigerators (May 2004)
- Assist in the development and accreditation of a testing facility for air-conditioners, in the testing of current products in the market, and in developing a rating plan (May 2004).

Activity 3: Country Program in Brazil

Task 3.1 Institutional Capacity and Data Needs Assessment

Description of Activity:

CLASP's goal in Brazil is to assist the Ministry of Mines and Energy (MME), the Ministry of Sciences and Technology (MCT) and other relevant stakeholders to advance the Energy Efficiency Law in Brazil (Federal Law 10.295- October

2001), which mandates the establishment of minimum efficiency standards for appliances.

In particular, CLASP aims to help Brazil develop the technical understanding which will support more effective Minimum Energy Performance Standards (MEPS) policy, and in-country technical expertise necessary to support preparation of a mandatory standard for the target appliances through techno-economic analysis. That expertise includes the economic and statistical capability for data collection and analysis, as well as the technical capability for appliance testing.

Accomplishments in the Reporting Period:

- Updated 2-year workplan in line with MME & MCT priorities (December 2003)
- Identified Brazilian organizations to work with CLASP on data-gathering and analysis processes. RFPs sent out and responses collected (December 2003).
- In partnership with UN/DESA, sent a Brazilian Government representative from INMETRO to participate at the EEDAL conference (October 2003)
- Scoping Mission (July 2003)

Departure from Original SOW (if any): CLASP's original workplan submitted to UNF/USAID for Brazil has been updated to reflect the revised requests made by the Ministry of Mines and Energy and Ministry of and the Ministry of Sciences and Technology (MCT). The new tasks will be more geared towards conducting studies and carrying out capacity building activities to encourage dissemination of the LCC refrigerator study in Brazil.

In July 2003, Marina Godoy (MME) and Claudio Júdice (MCT) suggested that CLASP's workplan be modified to consider the following three studies:

- 1) Conduct an appliance market analysis and data collection for specific appliance - to be determined by CGIEE.
- 2) Inventory and compare international experience of standard-setting methodologies.
- 3) Evaluate the implementation and effectiveness of new mandatory standards for tri-phase motors (small commercial motors up to 250 HP).

CLASP held a conference call with all funders on September 4 to discuss the updates to the workplan, the proposed studies, and the challenges faced under the new Lula administration. Participants included Mohan Peck (UN/DESA), Paul Schwengels (US/EPA), and Simone Lawaetz (USAID/Washington). At this time, the funders agreed to move forward with the studies and noted support for additional tasks in the Brazil would be contingent on the GOB's response to the three studies carried out.

Deliverables in the Reporting Period: See Appendix A.

- Mission Report that includes assessment of existing institutional roles. (July 2003).

- Updated Workplan (December 2003)

Other Noteworthy Achievements:

In the follow-up from the July Mission, Marina Godoy (MME) confirmed the desire to have CLASP assistance in the assessment of current energy efficiency of one end-use equipment. In addition, she requested an additional task – an evaluation of the implementation and effectiveness of the new mandatory standard for tri-phase motors (small commercial motors up to 250 HP).

Further, CLASP continued its integration with Brazilian key stakeholders, including governmental agencies and local universities. In September, CLASP and UN/DESA collaborated on sending a Brazilian Government representative to participate at the EEDAL conference in October 2003. Gustavo Kuster, from INMETRO participated in the conference, and in December 2003 became the lead INMETRO manager for the labeling program. Thus, the project's investment in his training and conference participation was highly valuable.

Next Steps:

- Complete data gathering and assessment for one appliance. This step is being done in conjunction with Task 3.2. (April 2004)

Task 3.2 Assessment of Current Levels of Efficiency of End-Use Equipment in Brazil.

Description of Activity: CLASP will assess current levels of efficiency of one end-use product in Brazil and establish a benchmark which will enable the determination of the impacts of an S&L program. Possible products include: unitary air conditioners, refrigerators and lighting devices. The assessment document will include a background on standardization and labeling for the selected product and will outline a set of potential energy efficiency improvements for that product. The document will reference other international minimum energy performance standards (MEPS) and will highlight examples of successful implementation.

Accomplishments in the Reporting Period:

- Gained Ministry approval for assessment of the current levels of efficiency for one end-use equipment (November 2003).
- Sent out a Revised Request for Proposals (RFP) following Ministry's approval of TOR (November 2003).

Deliverables in the Reporting Period:

- Market Assessment – Revised RFP/TOR (November 2003)

Departure from Original SOW (if any): None.

Other Noteworthy Achievements:

On December 1st, CLASP partnered with ICF, Econoler, DEM and other local and international standards experts to respond to the ELETROBRAS Expression of Interest to carry out standards and labeling work in Brazil. If accepted, CLASP and partners will respond to the Brazil RFP for technical support. This SOW compliments the current CLASP activities and, if CLASP is selected to lead the implementation program, will enable CLASP to provide the techno-economic capacity building support envisioned and in accordance with the official government plans.

Next Steps:

- Review the new proposals submitted from local partners and select the most appropriate partner (January 2004)
- Carry out study (Q1 2004)

Task 3.3 Technical Capacity-Building for at least one Standard or Label

Description of Original Activity: CLASP will incorporate results of the preceding tasks to support Brazil in developing the in-country technical expertise necessary to prepare at least one label or standard. CLASP will also provide technical assistance in the S&L dialogue with consumers, manufacturers and other stakeholders for the review of the draft, revised and final documents.

Accomplishments in the Reporting Period:

- Gained support from INMETRO and MME to conduct a capacity training workshop, focused on the LCC methodology (December 2003)
- CLASP submitted comments on the revised Refrigerator LCC study and is supporting the update and revision of that study (October 2003).
- Leveraged \$30K in funding from EPA to carry out a LCC Assessment workshop tentatively planned for March-April 2004.

Deliverables in the Reporting Period: None.

Departure from Original SOW (if any): See notations made under Task 3.1 Overall standards-related activities in Brazil have been progressing very slowly. The CGIEE Committee, (Management Committee for Energy Efficiency Parameters and Levels) which establishes procedures that will govern how standards will be set for end-use equipment, has not convened since the Lula administration came to power. As a result, no decisions have been made regarding which appliance standard or label will be the next product of focus. Further, CLASP's role is to support the in-country technical efforts through capacity building. Thus the work plan has been refocused to direct CLASP efforts, utilizing the LCC refrigerator report, as a case study for training Brazil in the LCC methodology. It is expected that a refrigerator standard will be developed, but the timing of that standard development is uncertain due to the political changes in Brazil.

Other Noteworthy Achievements:

- To date, the first Life Cycle Cost Assessment document for an appliance in Brazil which was prepared by CLASP in collaboration with local and international partners with leveraged funding from USEPA and the Climate Technology Initiative has only been presented at international venues outside of Brazil. After participation from INMETRO (a CGIEE Representative) at the EEDAL conference in Oct 03 in Italy, CLASP and funders became aware of the need to revisit the Refrigerator LCC study and properly disseminate results over the coming year. Due to leveraged funding from EPA to carry out technical capacity-building activities in Brazil, there is interest on revising the LCC refrigerator study and formally presenting the findings to key stakeholders. This will permit CLASP to gather stronger buy-in from all sectors and to train on the LCC methodology. In the first trimester of 2004, CLASP will focus on preparing the local Brazilian team to present the results of the refrigerator LCC study within Brazil.
- CLASP plans to coordinate a workshop/seminar in Brazil to help Brazilian agencies to further develop the technical understanding to support more effective MEPS policy, and in-country technical expertise necessary to support preparation of a mandatory standard for the target appliances through techno-economic analysis. That expertise includes the economic and statistical capability for data collection and analysis, as well as the technical capability for appliance testing.

Next Steps:

- Increase the involvement of MME and INMETRO in CLASP training program (January 2004).
- Plan and conduct training workshop (March-April 2004)
- When CGIEE selects the next product for energy efficiency Standards or Labels, provide technical support as appropriate (To be determined).
- Explore options with MME and INMETRO to further develop a training program for key S&L staff in Brazil (January 2004).

Task 3.4 (NEW) Evaluate the implementation and effectiveness of new mandatory standards for tri-phase motors (small commercial motors up to 250 HP).

Description of Activity:

A team of local and international contractors along with CLASP Staff will conduct a preliminary impact assessment of the first Minimum Energy Performance Standard (MEPS) passed in Brazil in December 2002. As requested by MME, the study will focus on the standards-setting process, which includes an assessment of manufacturer's view of the process as well as the success of enforcement and likely energy savings. This study will also explore the readiness of the testing lab community for implementation of the standard and related labeling information and review the technical accuracy of the standard. To the extent possible, the

evaluation team will track sales data on new motors, and work with PROCEL and INMETRO to review information that was used to develop the standard.

Accomplishments in the Reporting Period:

- Draft RFP/TOR for motor standard implementation study has been sent out to 6 universities. (November 2003).

Deliverables in the Reporting Period: See Appendix A.

- Motor Study RFP/TOR (November 2003)

Departure from Original SOW (if any): At the request of MME, this task has been added to the original SOW.

Other Noteworthy Achievements: N/A

Next Steps:

- Evaluate the Motor study proposals and select consultant (January 2004).
- Monitor the development of the study (February –April 2004).

Activity 4: Country Program in South Africa

Task 4.1 Development of Advocacy Tools

Description of Activities: The CLASP goal in South Africa is to develop S&L advocacy tools whilst creating a climate conducive to adoption of an indigenous S&L program. Specifically, CLASP would:

Subtask 4.1a: Cooperate with government officials and researchers who can identify data relevant to the S&L impacts on the appliance market;

Subtask 4.1b: Conduct analysis of South African market utilizing the aforementioned available data and the CLASP Policy Calculator; and

Subtask 4.1c: Support South African officials in the creation of a forum for implementation of S&L

CLASP's aim is to encourage widespread support for standards and labeling by providing technical support and advice directly to stakeholders; and indirectly through the Academy for Educational Development (AED) who is tasked with stakeholder involvement and public participation under its "Public Understanding and Participation"(PUP) project.

AED's scope of work includes convening meetings of stakeholders, reviewing status of policy and plans by the government agencies involved in standards and labeling, producing course materials, carrying out focus group surveys, and making presentations, in conjunction with technical input and assistance of CLASP.

Accomplishments in the Reporting Period:

Subtask 4.1a: Cooperate with government officials and researchers who could identify data relevant to the S&L impacts on the appliance market.

- To support AED's efforts, CLASP has attended workshops in February, July, and November of 2003, and provided tools such as CLASP's Recruitment Screener, Moderator Topic Guide, Label Rating Forms, and Comparison Labels for use in the Focus Group Survey.
- CLASP provided commentary on the Focus Group Questionnaire, the labels selected for use by the Focus Group, the selection criteria for focus group members, and provided technical assistance on the questions raised prior to the Focus Group Survey presented in November, 2003.
- CLASP participated in a stakeholder meeting in November 2003, arranged by AED. Participants included: NER, DME, IIEC, USAID, TSI-ESKOM, and others. The purpose of the meeting was to review the results of the Focus Group Survey on energy information labeling and determine the next steps for the South African appliance labels. CLASP acted as technical support and advisor during this workshop; and has since continued technical assistance by reviewing the AED's interim reports.
- During the November meeting, Focus Group receptivity was cited, label design preferences noted, and consumer behaviors discussed, as presented by CASE, the local consultants charged with conducting the survey. After this meeting, CLASP held meetings with other government agencies involved in the S&L process and requested technical data be forwarded for CLASP's review of the Focus Group results prior to survey results acceptance and final design of label.

Subtask 4.1b: Conduct analysis of South African market utilizing the available data and the CLASP Policy Calculator.

- CLASP concurred with the preliminary *S&L Impact Assessment* outlined in the *Appliance Labeling Study Report No. 2.3.4-05* and the preliminary *S&L Product Prioritization* outlined in that report (see Annex A : Mission Report). The priority appliances were: water heaters, refrigerators and freezers, stoves, and space heaters.
- CLASP had planned beta-testing for the Policy Calculator (PAMS; see Task 6.1) in the South African context; however, due to the instability of the program, it had heretofore been unclear which agency would best be suited to test the tool. (See Departure from Original SOW.) During meetings with DME, DME expressed strong desire to use the Policy Calculator and CLASP presented them with a summary of its uses.

Subtask 4.1c: Support South African officials in the creation of a forum for implementation of S&L.

- In the November 2003 meeting in Pretoria, a local consumer marketing company, Lemon & Lime, presented their ideas on the marketing strategy

for the appliance label. Since Lemon & Lime had been hired by AED to lead the future marketing efforts, the government and private sector forum attending this meeting were receptive. Lemon & Lime recognized the need to encourage public participation for the new label but admitted lacking experience in energy conservation and efficiency. CLASP suggested that this local marketing company (or similar entity) be encouraged to learn the mix of social marketing and public relations needed for such a program. Further, CLASP suggested that the Demand Side Management (DSM) program under ESKOM embrace the S&L marketing efforts by co-funding the public communications campaigns for the label since it also meets their DSM mandate.

- The stakeholders attending the Pretoria meeting suggested supporting use of the EU style label “*as-is*” while CLASP urged that the lower third of the label design be designed by national competition to encourage public sector awareness and involvement.
- TSI presented their findings of the market analysis for product label implementation and presented a draft Action Program that includes the participation of all key stakeholders in the government and private sectors (see Annex A : Mission Report).
- In December 2003, CLASP received the Draft Report on the strategy of the government, that includes implementation on standards and labeling. CLASP provided comments to the document’s originators, DME. CLASP technical advisor also reviewed and amended “draft memo” from AED, with particular advice as to “Next Steps” for the implementation of standards and labeling.
- CLASP participated in the Energy Efficiency in the Public Sector workshop in Pretoria in November 2003, that encouraged government agencies to seek energy efficient (labeled) equipment for their public procurement programs. CLASP also participated in a 3-day conference on City Energy Strategies in Cape Town, South Africa, that presented results of various cities that had green building programs, energy efficiency procurement strategies, and energy efficiency standards initiatives.

Deliverables in the Reporting Period: See Appendix A.

- Mission Report (November 2003) with Annex A Report: “*Capacity Building in Energy Efficiency and Renewable Energy*” Report No. 2.3.4-05, title: Appliance Labeling Study by Department of Minerals and Energy, Feb. 2003

Departure from Original SOW (if any):

It now appears the DME has become interested in testing the Policy Calculator. This interest now makes the original SOW intact. A Study Tour would facilitate this participation. (See Next Steps).

Other Noteworthy Achievements:

- During November meetings, DME stated its desire to learn state-of-the-art accounting practices and economic modeling for EC&E from the US. Therefore, a study tour to include training in use of the Policy Calculator (PAMS) is being proposed.
- Other meetings held during the November Scoping Mission revealed the need by the government for energy efficient “green” buildings for the SA police. This new project would result in a viable standard for an indigenous construction material as well as serving the government’s mandates for procurement piloting in the government sector.

Next Steps:

- Prepare new project proposals for the aforementioned projects that developed during this Scoping Mission (January 2004)
- Review the data to be received from CASE and track the progress of the label through its initial Public Enquiry period (January 2004).
- Preparatory Mission to follow-up initiatives estimated to occur in January 2004 (Label Working Group meeting, launch of new label, SASB meeting) and pave the way for the new projects to follow (January 2004)
- Obtain funding for and launch new projects (such as Study Tour or Energy Efficient Police Buildings) (February-March 2004)

Activity 5: Education and Outreach: CLASP Website

Task 5.1 Website Maintenance

Description of Activity: Maintenance of CLASP website to ensure ongoing relevance, timeliness and usefulness. This includes ongoing maintenance, feature-based modification, responding to user needs and accurate tracking and analysis of all activity on the site.

Accomplishments in the Reporting Period:

Maintenance of CLASP’s S&L website during December 2002 to December 2003:

- 73 publications and news items were reviewed and uploaded to the web site.
- Monthly web hit analyses were prepared.
- More than nine user inquiries were logged and detailed responses prepared as part of the CLASP webmaster Q&A.

Deliverables in the Reporting Period: (Ongoing)

Numbers of items uploaded to the CLASP website are given in the below table:

Type	Number of Item
Article/Report/Book/Paper	14

Presentation and Proceedings	38
Related Site	12
Q&A	9
Total	73

See Appendix A for further details.

Next Steps: Continued maintenance of the site. (Ongoing)

Task 5.2 Website Technical Review

Description of Activity: Over the past two years, with support from USAID, CLASP has developed a comprehensive database of the status of standards and labeling programs worldwide. The S&L programs have been updated through support from the CLASP board and TAC, as well as through the utilization of other secondary information resources. CLASP is also collaborating with the Energy Working Group of APEC to combine information resources on S&L programs in the APEC countries. See Departure from SOW for further details

Accomplishments in the Reporting Period:

- Additional information on S&L programs in 16 APEC member countries was compiled and readied for the new CLASP website. CLASP is collaborating with the APEC ESIS Website. (December 2003)
- New database structure and its administrative module for the new CLASP website were completed. (October 2003).
- Two new layouts and look-and-feels of the new CLASP website were constructed and proposed to CLASP board members for inputs and comments (November 2003)

Deliverables in the Reporting Period: See Appendix A for further details.

- Summary of updated information on S&L programs in 20 non-APEC countries and 16 APEC countries entered to the new CLASP website (December 2003).
- New database and administrative module (online viewing) at <http://www.clasponline.org/adminweb/index.htm> . (November 2003)
- Two new layouts and look-and-feels for the new CLASP website. (November 2003)

Departure from Original SOW (if any): To improve functionality and usability of the CLASP website, the structure of the whole CLASP website has been reviewed. The result of this review will be a major modification of look-and-feel and database of the CLASP website. The new CLASP website will offer better functionality and usability to visitors and will serve as a better communication tool for CLASP. CLASP also has agreed to share technical information on S&L programs with APEC which is scheduled for completion in January 2004.

Other Noteworthy Achievements: N/A

Next Steps:

- Maintenance activities will be continued to ensure ongoing relevance, timeliness and usefulness of the existing CLASP website.
- The administrative module is under the testing by the CLASP webmaster, expected to be completed in January 2004.
- All information archives in the existing database and new updates are expected to be transferred to the new CLASP website by the end of December 2004.

Activity 6: Education and Outreach: New CLASP Tools**Task 6.1 Policy Analysis Calculator**

Description of Activity: The policy analysis calculator (PAMS) is a software calculation tool that allows policy analysts from many countries to produce a first-cut analysis of appliance efficiency program costs and benefits, examine the sensitivities of the analysis with respect to different policy parameters and assumptions, and continually refine the analysis as more data becomes available. The policy analysis tool provides both a consumer-oriented analysis, and a national cost-benefit analysis in the style of the analysis performed for U.S. appliance efficiency standards. The tool also includes an estimate of carbon emissions reductions. CLASP is supporting the ongoing development of and improvements to the tool.

Accomplishments in the Reporting Period: During the reporting period:

- Additional country-specific data for use in appliance efficiency policy analysis was collected for mostly internal use and is at:
<http://meteo.lbl.gov/VL/>
- In addition a preliminary regional analyses were performed for Asia and South America. The Asia analysis is described (for internal purposes) at:
<http://meteo.lbl.gov/VL/PAMS-Asia/AsiaEstimates200307.html>
- The PAMS model author, Robert Van Buskirk, also participated in the EEDAL conference in Turin Italy, introducing the tool to the international audience. In addition, the international audience provided feedback on the existing need and user base for PAMS modeling services. Dr. Van Buskirk met with Sanjay Dube of the IIEC (India), Jaroslav Marousek of Seven7 (Czech Republic), Gustavo Koster (Brazil), and Paul Waide (PW Consulting).

With regards to technical details of model development some completed tasks include the following:

1. Added appliance price, elasticity, and energy use data adjustment factors to country data table. (done 2003-09-27)
2. Checked the functioning of the model with respect to different countries. (done 2003-09-26)
3. Modified the lifetime function to reflect the actual lifetime of the appliance rather than the year in which the probability of retirement is 50% (done 2003-08-27)
4. Corrected the equation of the stocks sum to be the current year rather than stocks from two years before the current year in both the Base Stocks and Policy Stocks worksheets. (done 2003-08-27)
5. Added energy savings as source tonnes of oil equivalent (TOE) (done 2003-08-27)
6. Add inputs to user input page for generation, T&D factors, and CO2 factors (done 2003-08-27)
6. Disaggregated site-to-source factor as Generation Factor and T&D loss factor (done 2003-08-27)
7. Added CO2 emissions savings (done 2003-08-27)

The PAMS tool is set up with default data and assumptions that enables a user to perform a basic analysis even if country-specific data has not yet been compiled. Constant refinement of the default data and assumptions improves the capabilities of the model. Consequently, the model is in an ongoing state of development as noted in the above mentioned technical details of model development. An initial development/distribution web site has been set up for the model at:

<http://pams.lbl.gov/>

Deliverables in the Reporting Period: See above listed Web links.

- Preliminary web site: <http://pams.lbl.gov/>

Departure from Original SOW (if any): None

Other Noteworthy Achievements: N/A

Next Steps:

- In early 2004, funding leveraged by through the PAMS developer will support additional development, improvements and testing of the tool. By Q1 2004, the final deliverables will be posted at the pams.lbl.gov website. After that, additional technical improvements, features, and adjustments to the tool will be negotiated on a case-by-case basis to meet country-specific needs.
- Potential application of the PAMS tool in South Africa (see South Africa Summary; Task 4)
- Continue discussions with Angela Morin of the Alliance to Save Energy with regards to providing policy analysis support for Eastern European partners using PAMS.

Task 6.2 Development of Model Survey Forms

Description of Activity: Development of two standardized survey forms that address basic saturation and end-use questions. They will assist energy practitioners in collecting more and better data for the development and implementation of S&L programs. One set of forms will be for the residential sector and the other for the commercial sector. Each set will have forms for the following technologies:

- Building Characteristics
- Lighting/Indoor
- Lighting/Outdoor
- Heating
- Air Conditioning
- Refrigeration
- Hot Water
- Cooking
- Appliances & Stand by Power

Accomplishments in the Reporting Period: An initial draft of the residential energy use survey form has been developed and has been field-tested by the Ghana Energy Foundation (through leveraged funding from USAID). We are awaiting a copy of the data gathered from about 3000 residential surveys conducted throughout the country. The data being collected will provide the most extensive detailed information about residential energy usage on the continent of Africa. This data will also provide necessary feedback as to how to improve, expand, and revise the existing draft form. Already it has been assessed that two additional sections (in addition to the Cooking and Appliances & Standby Power added earlier this year-see list above) be added. The first is a section on motor vehicles and the second one is a section on the identifying members of the household (their education, occupation) and the total household income.

Deliverables in the Reporting Period: See Appendix A.

- Draft residential energy use survey form.

Departure from Original SOW (if any): There has been a one month delay in completing the final draft survey forms in order to incorporate feedback from prior field testing.

Other Noteworthy Achievements: N/A

Next Steps: We expect to receive feedback on the draft survey by early January 2004 when design of the final survey forms will begin. The survey template, once final, will be made available on the CLASP website. First steps include: determining how the survey template will/can be used, and by whom, how it will be disseminated, how it should be structured (customizeable; edited on line or downloaded and edited; spreadsheet format (MSEXcel) or text (MSWord), etc.). The final residential and commercial survey forms will be completed and posted to the website by February 2004.

Activity 7: Education and Outreach: Training for the South Asia Regional Initiative (SARI)

Task 7.1 Develop Two New Courses:

Description of Activity: CLASP worked with Academy for Educational Development (AED) and NEXANT, in conjunction with proposed USAID's South Asia Regional Initiative in Energy Technical Assistance (SARI TA) program in 2003 in identifying proposed course concepts that would address the needs and constraints in developing S&L programs in SARI countries. CLASP also worked closely with AED and NEXANT in finalizing the course schedules and brochures.

Accomplishments in the Reporting Period: Following communication and discussion with AED and the chief trainers, it was agreed that the course duration is to be shortened to one week and number of participants is to be broaden up to maximum 25 participants. The *Designing and Managing Energy Efficiency Test Facilities and Protocols* course was scheduled during October 6-10, 2003 in Colombo, Sri Lanka while the *Effective S&L Program Development* course was scheduled during October 27-31, 2003 in Kathmandu, Nepal. However due to local security concerns in Nepal, AED had been advised by USAID to shift the venue to Bangalore, India on the same dates. CLASP also worked closely with AED and chief trainers for the development of final course brochures which were disseminated to SARI countries by AED.

Deliverables in the Reporting Period: See Appendix A.

- Final course brochure for Course 4.5: Designing and Managing Energy Efficiency Test Facilities and Protocols (September 2003)
- Finalcourse brochure for Course 4.6: Effective Development and Harmonization of S&L Programs in South Asia (September 2003)

Departure from Original SOW (if any): There was a decision to shorten the course length from two-week course to one-week course. This was primarily due to difficulties in getting nominees from SARI member countries for a two-week long regional training course and, in addition, it was confirmed by the trainers that all key technical assistance deliverables can be produced within a shorter course length. Therefore, after consultation with USAID, the primary sponsor of SARI work, it was agreed that the training course would be one-week long and number of participants increased to 25 participants.

Other Noteworthy Achievements: N/A

Next Steps: Task Complete.

Task 7.2 Conduct Two Workshops:

Description of Activity: CLASP worked with AED, NEXANT and the chief trainers in selecting the workshop host countries, designing course modules to address the needs and

constraints of SARI countries and determining the workshop participants. All the training materials were developed by the course trainers but AED was responsible for reproduction and dissemination of the training materials. The CLASP-selected chief trainers conducted the training courses with support from AED on logistical arrangements.

Accomplishments in the Reporting Period: The two chief technical trainers assigned by CLASP worked with AED and Sri Lanka Energy Managers' Association (SLEMA) in identifying key constraints in expertise and knowledge among regional professionals and stakeholders involved with S&L programs and developed appropriate course modules and agendas to address those constraints. The trainers had coordinated to ensure correlation between two course agendas and also worked with AED in screening nominees from SARI member countries so that sufficient overlapping of participants was obtained to keep the momentum of S&L initiatives in SARI region. Up-to-date training materials were also developed by the trainers and submitted to AED for necessary reproduction.

The course 4.5: Designing and Managing Energy Efficiency Test Facilities and Protocol was organized in Colombo, Sri Lanka during October 6 to 10, 2003. The training course was attended by 24 officials from Bangladesh, Bhutan, India, Nepal, Sri Lanka and the Maldives. In addition to the two key technical trainers assigned by CLASP, 3 guest speakers from the region were invited to provide regional and local perspectives to the participants. During the training course, country representatives from the above six countries also had opportunities to update local situations with respect to the testing facilities to other participants.

The course 4.6: Effective Development and Harmonization of Standards and Labeling Programs in South Asia was organized in Bangalore, India during October 27 to 31, 2003. The training course was attended by 22 officials from Bangladesh, Bhutan, India, Nepal and Sri Lanka. Similar to the course 4.5, 5 guest speakers from SARI member countries, AED and CLASP were invited to give regional and local perspectives and provide technical information to the participants. Country representatives from the above five countries also shared their experience regarding the standard and labeling programs in their own countries to other participants.

Deliverables in the Reporting Period: See Appendix A

- Completed Course 4.5: Designing and Managing Energy Test Facility with a recommendation report and course materials in CD-ROM format (October 2003)
- Completed Course 4.6: Effective Development and Harmonization of S&L Programs in South Asia with a recommendation report and course materials in CD-ROM format (October 2003)
- Up-to-date training materials (September and October 2003)
- Final list of course participants and course agenda for Course 4.6: Effective Development and Harmonization of S&L Programs in South Asia (October 2003)
- Final list of course participants and course agenda for Course 4.5: Designing and Managing Energy Test Facility (September 2003)

Departure from Original SOW (if any): Due to local security concerns in Nepal, USAID had advised AED to shift the venue for the *Effective S&L Program Development* course from Kathmandu, Nepal, to Bangalore, India on the same dates.

Other Noteworthy Achievements: N/A

Next Steps: N/A

Activity 8: Technical Management and Reporting

Task 8.1 Technical Management and Reporting

Description of Activity: This task primarily supports the activities of the CLASP Executive Director in managing the AID and UNF-funded efforts comprehensively. The goal of this support is to provide for effective leadership and technical management of every task. In addition, the CLASP Technical Advisory Group (TAC), made up of more than 15 international S&L experts from around the world, will be engaged in the review of annual work plans along with UNF and UNFIP. The anticipated outcome is a more vigorous phase-two project, providing higher quality technical services and higher levels of funding leverage.

Accomplishments in the Reporting Period:

- Prepared 6 month and annual report.

Deliverables in the Reporting Period:

- Annual Report (December 2003)
- 6 month report (June 2003)

Next Steps:

- Mid-project review of original work plans (Jan 2004)
- Continued management and technical oversight of program (Ongoing)
- Begin collecting project status reports quarterly (February 2004)