ECS

CREDP Caribbean Renewable Energy Development Programme

Implemented by: giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

EASTERN CARIBBEAN ENERGY LABELING PROJECT

Energy Sense = Dollar Savings

Forewords

Ambassador Mikael BARFOD Head of EU Delegation to Barbados and the Eastern Caribbean

The ECELP project was co-funded by the European Union (EU) with a grant of € 1.5 million from the EU- ACP Energy Facility. ECELP was fully in line with the priorities of the Facility, with its strong focus on Energy Efficiency. Energy Efficiency is the cheapest way in which to address the significant energy challenges facing the Caribbean region. My sincere thanks go out to all who have worked on the project to achieve the results attained so far. But indeed the project does not end here. A very important element of follow up is now needed and for this I urge all stakeholders in the region to support and undertake further actions. Without the successful enforcement of the standards that have been developed, the region will not reap the expected benefits. And, in the current energy context of the region, we cannot afford not to seek to reduce energy costs.

This is in general terms an exciting time for the energy sector in the region. Costs are admittedly among the highest in the world, but a number of cost competitive, clean technologies utilising the resources of the region are now emerging. The key to harnessing the real benefits of these technologies, e.g. lower fuel import bills, cheaper energy and green jobs, lies in governance. Without clear and collectively owned energy sector frameworks, embracing the principles of transparency and accountability, the Region is unlikely to attract the required investors or the Region will not attain the full benefits of investments.

The EU, which consists of a multiplicity of actors, continues to work with our regional partners to address the challenges of the energy sector and I strongly urge Regional leadership and collaboration at all levels.

Ambassador Mikael Barfod

Didacus JULES, PhD Director General OECS Commission

High electricity cost in the OECS region is a main concern for all consumers. Particularly low- and middle-income households spend significantly on electricity. One of the most effective means of reducing electricity bills is energy conservation through energy efficiency as no change in sector legislation and regulation is required. The OECS Commission together with the Caribbean Renewable Energy Development Programme has identified the introduction of energy efficiency standards and energy labels in combination with public education on energy efficient behaviour as means of reducing electricity expenditures. Therefore, the OECS Commission together with CREDP and co-financed by the European Union (EU) has implemented the first phase of the ECELP during 2012 and 2014. ECELP had identified a number of household appliances like fridges, freezers and illumination as the main electricity consumers for low- and middle-income households and has worked in the OECS region together with the national Bureaus of Standards, with the responsible Ministries, with retailers and importers of household appliances in an effort to introduce and establish energy efficiency standards and energy labels.

ECELP is one project of a series of energy efficiency programmes led by the OECS Commission. The Sustainable Energy Technical Assistance Project (SETA), financed by the CDB, is another such initiative, also the Eastern Caribbean Energy Regulatory Project (ECERA). The Commission intends to continue to support ECELP beyond this first phase and welcomes all future support from development partners. We would like to thank the European Union and the German Government for their commitment thus far.

Didacus Jules

Marina MEUSS Regional Director Gesellschaft für Internationale Zusammenarbeit

The Eastern Caribbean Energy Labelling Project (ECELP) goes back to an initiative of the Caribbean Renewable Energy Development Programme, CREDP/GIZ, by which it adopted the thematic complex of Energy Efficiency in its portfolio. The German Cooperation, the Organization of Eastern Caribbean States and the European Union have teamed up to implement ECELP, which is seen as the first step in a long process for the introduction of energy standards and labels in Caribbean states.

Energy Efficiency in the household and small business sector is in line with the overall objectives of the German International Cooperation, which includes the reduction of poverty and fostering the increase of sustainable development by increasing Energy Efficiency and deploying Renewable Energy resources.

ECELP has been a success and its outputs are a good starting point for future initiatives to build on a sound foundation in the fields of public awareness, political dialogue, development or adaptation of energy efficiency standards, and building capacity within the national Bureaux of Standards to test appliances and ensure adherence to energy efficiency standards by all players involved.

The campaign logo and theme that were developed ("Energy Sense = Dollar Savings") are catchy and carry the overarching message efficiently.

To expand the activity to the CARICOM countries, the dialogue on the political and on the technical level has to be increased. It is now important to not let the fire extinguish but to carry the flame forward into the next phase.

Marina Meuss

Eastern Caribbean Energy Labelling Project

The Eastern Caribbean Energy Labelling Project (ECELP) was financed by the EU ACP Energy Facility, the German Federal Ministry of Economic Cooperation and Development (BMZ) and the OECS Commission. The OECS Commission and the Caribbean Renewable Energy Development Programme (CREDP-GIZ) jointly implemented it between February 2012 and March 2014. Participating countries were the six independent OECS member states:

Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia and St. Vincent and the Grenadines.

The project aims at increasing the Energy Efficiency (EE) in the OECS region by introducing EE standards and labels for electrical household appliances and lighting equipment and promoting the use of energy-efficient products.

EE standards and labels contribute to energy saving.

How can they do that?

Standards can prevent inefficient equipment from being imported. Labels enable consumers to make informed purchase decisions.

Through the use of more efficient appliances households, businesses and the public sector benefit from lower electricity bills, and the country as a whole benefits from lower fossil fuel imports. Furthermore, reduced burning of fossil fuels contributes to environmental protection and climate change mitigation.

ECELP's Approach

ECELP worked with the national Bureaus of Standards (BoS), government offices responsible for energy, as well as importers and retailers of electrical equipment to increase the knowledge of energy efficiency, develop the necessary standards, policies and legislation and equip the relevant institutions with the capacities to implement the standards.

ECELP also aims at raising the energy efficiency awareness among the general public and educating consumers about energy efficiency labels and their implications.

"Under the project, the St. Kitts and Nevis Bureau of Standards worked with other government officials responsible for energy, importers and retailers of electrical equipment to increase the knowledge of energy efficiency and develop the necessary standards, policies and legislation. (…)

The ECELP provided support to the St. Kitts and Nevis Bureau of Standards for building capacity to carry out quality controls and basic efficiency measurements through the training of staff and the procurement of equipment.

It was a well-designed and successful campaign to raise the level of awareness of energy efficiency among the general public and educating consumers about energy efficiency labels and their implications. (…)

In order to achieve the overall objective additional funds must be sourced to enable investment in equipment and further training to improve the capacity for efficiency measurements on other appliances. The next phase of the project should also include a component to fit the Bureau of Standards with Solar Panels geared towards promoting the use of alternative energy in the region."

Mr. Hiram Williams
Director (Ag.)
St. Kitts and Nevis Bureau of Standards

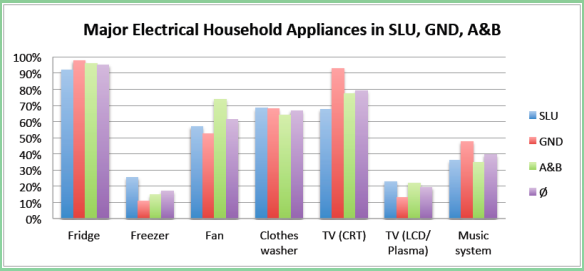
ECELP Activities in a Nutshell

ECELP's major activities comprised:

- Household surveys for collection of baseline information and impact evaluation of the public awareness activities
- Development of a roadmap for the introduction of EE standards and labels
- Development of templates for amendments in the legislative and regulatory framework (incl. adaptation of EE standards) and for voluntary agreements with retailers to promote EE standards and labels
- Installation of test labs and adaptation of test protocols for refrigerator energy consumption and CFL durability
- Establishment of communication channels among Bureaus of Standards, especially on a technical level
- Training for Bureau of Standards staff regarding EE standards and labels and related testing
- Development of a monitoring concept
- Public awareness campaign

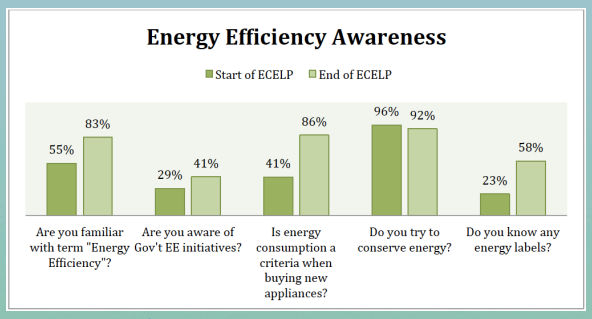
Household Surveys

Surveys in low- and middle-income households were carried out in St. Lucia, Antigua and Barbuda and Grenada at the beginning and at the end of the project. Baseline data on the major electricity consumers in the households and on people's energy efficiency awareness was collected during the first survey. The results informed the decision which appliances to focus on during the project and the conceptualisation of the awareness campaign.

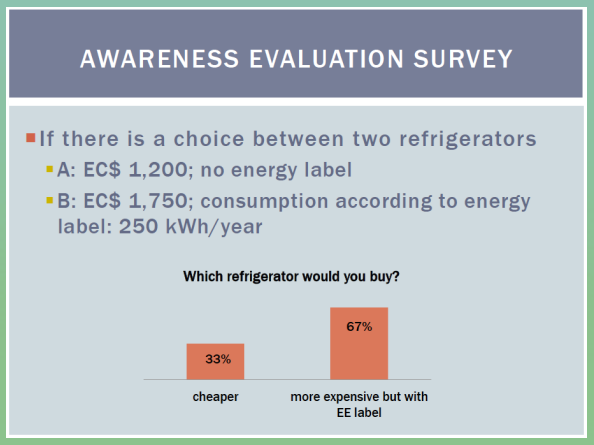


Result of the first household survey: distribution of items used in typical households

The second survey allowed gathering information on the project's impact on people's energy efficiency awareness. It proved that the awareness campaign had a positive impact and, as the diagrams below illustrate, the respondents' knowledge of EE increased considerably.



Comparison of pre- and post intervention results



Result from second survey proving the impact of the ECELP campaign

EE Standards & Labels Roadmap

A study was conducted on international examples of energy efficiency standards and labelling programmes and the existing framework conditions in the Caribbean. Subsequently, a roadmap for the introduction of energy efficiency standards and labels in the OECS and CARICOM region was developed.

The roadmap recommends a stepwise approach emphasising the importance of regional harmonisation and cooperation: Step 1: Voluntary Agreements on the display of energy labels are concluded between the Bureaux of Standards and participating appliance retailers. Step 2: Energy labelling standards – voluntary at first, later mandatory – are introduced. Step 3: Mandatory minimum energy performance standards (MEPS) are introduced. These would eventually include energy-efficient building codes and the phase-out of incandescent lights.

All steps need to be accompanied by consultations with, and training for, the participating retailers and information campaigns for the consumers.

"Energy consumption and energy costs in the Region are relatively high and is of concern for all households but especially so in the case of low-income households notwithstanding the negative impacts on the environment.

The current economic climate has caused a significant increase in the cost of living and by extension a decrease in disposable income. This puts undue strain on low-income households as they try to meet their daily living expenses. (...)

To date the Project has deployed all the above-mentioned strategies. The Bureau has placed twenty display stands [Info Ports] with the brochures and leaflets at high trafficked locations around the country, especially in the city of St John's – and has subsequently refilled them on two occasions. (...)

As a result of the public awareness paraphernalia substantial interest was generated with respect to energy and energy efficiency; consumers are especially interested in the Consumer's Guide and retailers are keen to have particularly their refrigerators tested, and localized EE labels provided. We expect further positive impact as we begin to intensify the programme of checking of refrigerators and CFLs.

The challenge for the Bureau now is to take the lead and reduce its own energy consumption and encourage other government entities to do the same. Strategies currently being supported by the Project are (i) the energy audit of the Bureau and (ii) the phasing in of LEDs. Another strategy which could be employed with Project funding support is that of supplementing the energy supply to public buildings with solar PV systems or other alternative forms of energy.

The Bureau takes this opportunity on behalf of the Government and People of Antigua and Barbuda to thank the EU ACP Energy Facility, the German Federal Ministry of Economic Cooperation Development (BMZ) and the OECS Commission for financing the Project and the OECS Commission and the Caribbean Renewable Energy Development Programme (CREDP-GIZ) for implementing the Project."

Mrs. Dianne Lalla-Rodrigues
MSc., MBA, BSc (Hon)
Director
Antigua and Barbuda Bureau of Standards

Legislative and Regulatory Framework

In a consultative process with the relevant national and OECS stakeholders, templates were drafted for **amendments to the existing OECS and national legislative and regulatory frameworks** in order to promote EE standards and labels. Internationally recognised EE labelling standards for light bulbs, refrigerators, air-conditioners and clothes washers have been adapted for the project region. The templates have been officially submitted to the governments to be incorporated into the legal and regulatory framework.

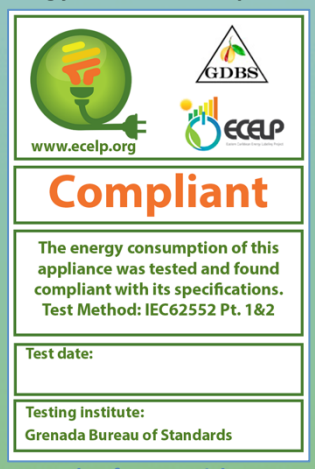
The submitted documents were accompanied by studies on the implications of the proposed measures as well as calculations of the possible energy savings. Thus, the potential impact of the measures was illustrated and the scenarios could be used to advocate for their adoption.

Emerging from a consultative process with the relevant stakeholders, **Voluntary Agreements** to

be concluded between the national Bureaus of Standards and participating appliance retailers have been drafted. The aim is to raise consumers' awareness by displaying energy labels in shops and advising customers about energy efficiency when buying electrical appliances. The Voluntary Agreements are meant to change customers' shopping behaviour even before the respective legislation and regulations are enacted.

There are two types of Voluntary Agreements:

One for the **display of energy labels at the point of sale** if such labels are readily available. The second governs the **retailer's participation in the testing campaign of refrigerators and CFLs**.



Example of a test sticker

The Bureaus train the participating retailers in matters relating to energy labels and energy-efficient appliances, so they can pass the information on to their customers. Participating retailers receive stickers for their shop doors and for the tested refrigerators and CFLs. This allows for improved customer information and for marketing the participation in the campaign.

Test Labs and Test Protocols for Refrigerators and CFL

Consultative processes were used integrating all participating Bureaus of Standard to adapt international protocols to suit the local conditions for testing refrigerator energy consumption and CFL durability.

Laboratory equipment for these simplified tests has been procured by ECELP and the respective software has been programmed. For CFL durability testing, racks were built to test 200 luminaires at a time by switching them on and off automatically in defined switching intervals.

The refrigerators are tested for their electricity consumption at close to laboratory testing conditions to confirm weather or not the consumption is that which the label promises it would be. The testing procedure that involves the use of various electronic thermometers and power meters required programming of tailor-made software.

In order to ensure technical support capabilities beyond ECELP's lifetime, a regional expert was trained during the sessions with the Bureaus.


CFL test stand in operation


Refrigerator test stand in operation

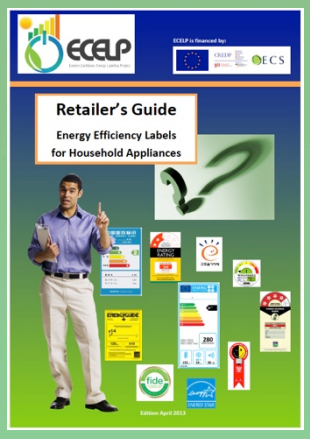
Establishment of Communication Channels among Bureaus of Standard

ECELP supported the establishment of communication channels between the technical departments of the different Bureaus involved in the project through regional meetings and workshops. Today, there is regular exchange about the progress of activities, and the various Bureaus help each other via remote assistance for trouble shooting in the execution of the tests. By the end of ECELP, the Bureaus of Standards self-organised workshops to exchange their experiences with testing and to fine-tune the harmonised test protocols.

Training of Staff

ECELP has facilitated staff training for Bureaus of Standards departments in the development and adaptation of energy efficiency standards and labels and the testing of refrigerator energy consumption and CFL durability.

Furthermore, a Training of Trainers programme has been carried out with staff of the six Bureaus of Standards. This aimed at enabling to offer training on energy-efficient appliances and energy labels for appliance retailers. The information used in the training was compiled in the "Retailer's Guide on Energy Efficiency Labels for Household Appliances", and has been handed out to retailers.



Cover of the Retailer's Guide

Monitoring concept

As an integral part of the initiative, ECELP has developed concepts to monitor:

1) The adoption and adjustment of EE standards in the OECS countries;
2) The impact of EE standards and labels on the market and on the domestic electricity consumption; and
3) The effects of the Voluntary Agreements.

The information collected under the first item would serve to maintain an overview over EE standards and labels used in the OECS member states and their degree of harmonisation.

The second item serves to collect information on the impact of EE standards and labels to facilitate their adjustment. Regular adjustment of EE standards and labels is important in order to sustain their effectiveness.

The third item serves to monitor the adherence of participating retailers to the agreements and their impact on customers.

The monitoring activities are very important for the sustainability of the energy efficiency standards and labels programme.

Public Awareness Campaign

A public awareness campaign consisting of video and audio materials has been developed and broadcasted for two months in a total of 23 TV and radio stations across the six participating countries.

The campaign slogan "Energy Sense = Dollar Savings" appeals on people's main reason to conserve energy as stated in the household survey: "to save money".

The campaign comprised a video and audio version each of

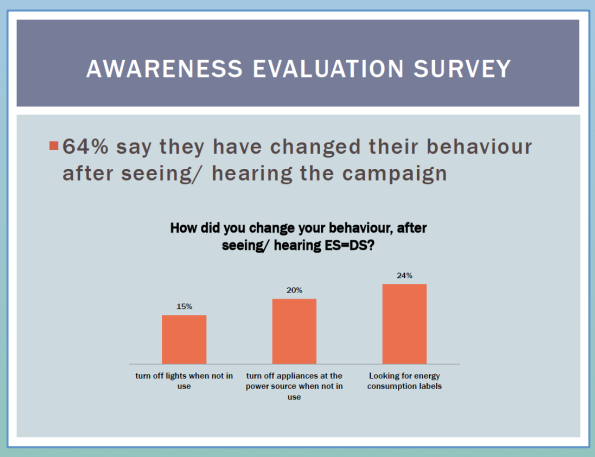
- A jingle around the campaign slogan;
- One short clip targeting consumers with the message to look for energy labels and buy energy-efficient appliances and light bulbs;
- One short clip targeting retailers with the message that Caribbean consumers want information about the energy consumption of the electrical equipment they are going to buy.

Public Awareness Campaign logo and slogan

Additionally, a video feature introduced ECELP and its key stakeholders and provided tips on energy efficiency and energy saving in the household for electricity end-users. The video is structured in a way that segments can be extracted to form shorter clips that can be shown in schools or at other occasions.

Screen shot of the video jingle

After broadcasting the public awareness materials selected people from the target group were interviewed in the framework of the second household survey to evaluate the campaign's influence on their behaviour. The results show that the campaign had a positive impact.



Statistic from the second household survey illustrating the impact of the PA campaign

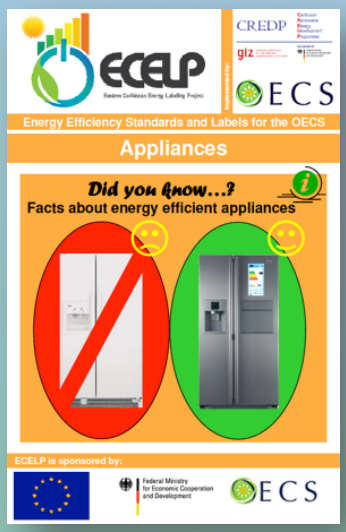
Simultaneous to the airing of the public awareness materials, the Bureaus of Standards distributed so called "Info Ports", brochure holders with ECELP information leaflets on energy labels, energy-efficient appliances and illuminants and "Customer's Guides on Energy Efficiency of Household Appliances".

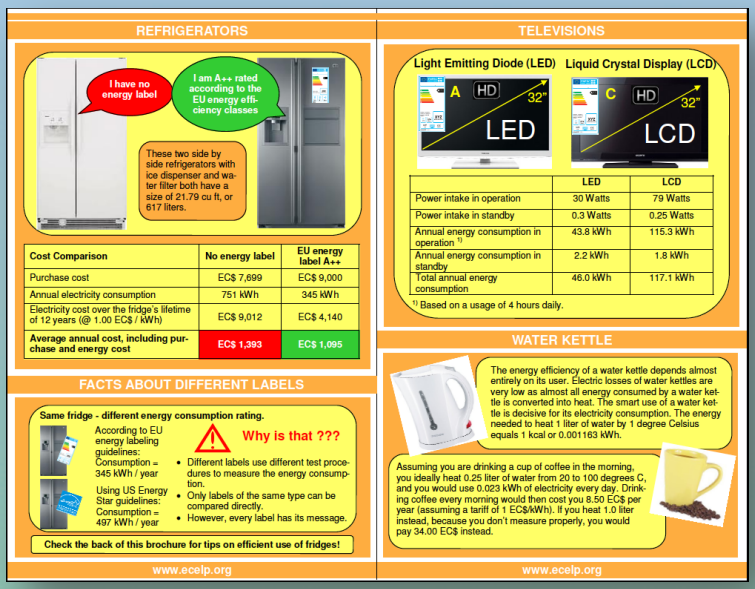
The Info Ports were put at appliance retail stores and at other highly frequented places, such as government offices, banks, utility payment offices, and schools.

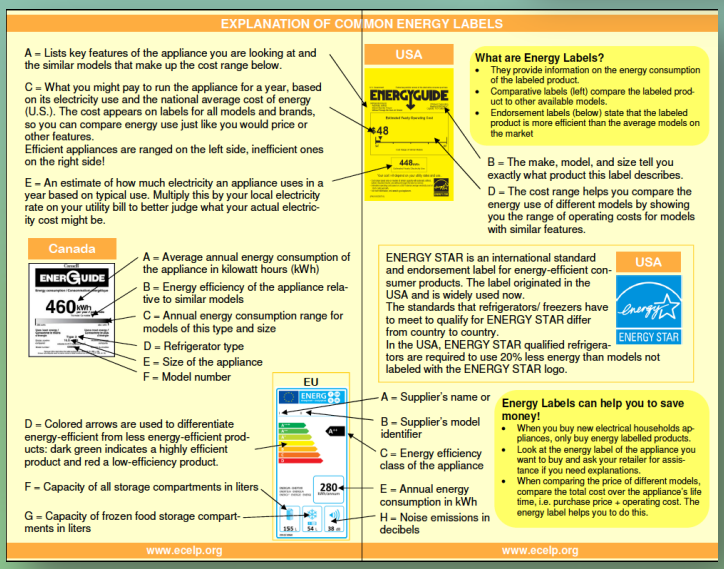
Info Port at Antigua and Barbuda Bureau of Standards

ECELP posters with similar information as contained in the leaflets were displayed in several retail stores and schools as well as during exhibitions for World Standards Day and for the annual CARICOM Energy Awareness Week.

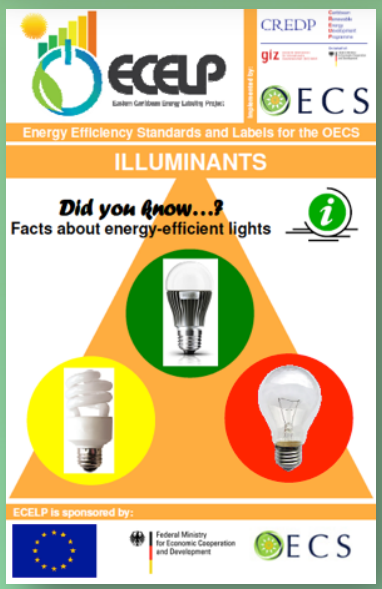
Flyers used in Info Ports:

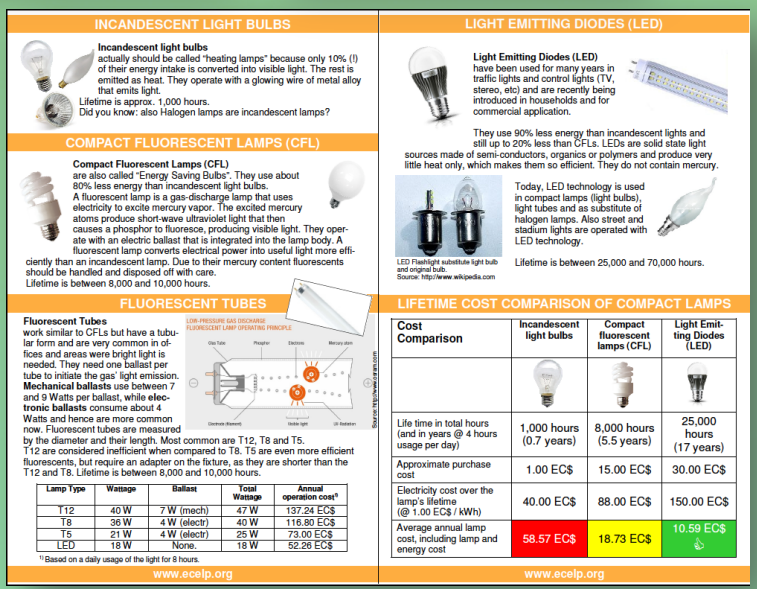






All materials can be downloaded from the official project web page: http://www.ecelp.org





The way forward

What remains to be done:

- Following an ECELP recommendation, the CARICOM Regional Organisation for Standards and Quality (CROSQ) has been mandated by the special COTED on energy in 2013 to develop an energy labelling standard for the CARICOM member states. CROSQ will need support to release an energy labelling standard based on the roadmap and the standards templates provided by ECELP.
- In most countries the Bureaus of Standards have had discussions with appliance retailers about the Voluntary Agreements and have identified the stores that are willing to participate. The full implementation of the Voluntary Agreements requires further support, in particular, publicity events and media coverage for the initiative.
- Testing of the energy consumption of refrigerators and the durability of CFLs has started in most Bureaus of Standards. At the moment, the testing has a pilot character. Assistance is needed to start regular product testing. This concerns especially the mobilisation of funds for the tests and the development of a concept for sustainable testing operation. Furthermore, a regional database for the test results accessible by all Bureaus of Standards needs to be set up to compare test results and to avoid testing the same product over and over.
- The monitoring concept needs to be implemented. To this end, training for staff of involved government offices (especially customs officers, energy departments and Bureaus of Standards) and importers of electrical equipment is required. Procedures for the operationalization of the concept must be developed and respective databases need to be set up.
- Further lobbying at the upper political level for the passing of legislation and regulations on mandatory energy labelling and Minimum Energy Performance Standards (MEPS) is required.
- The role of the Bureaus of Standards in implementing EE standards and labels, including the execution of performance tests, needs to be strengthened. Close cooperation with the Customs Departments is required.
- Standards institutions from other CARICOM countries beyond the OECS have repeatedly shown interest in ECELP and its activities. The project has tried to involve these countries as best as possible by cooperating closely with CROSQ, inviting standards institutions from other CARICOM countries to meetings, sharing information about its activities and making the public awareness materials available to interested standards bodies. As a CARICOM-wide harmonisation of EE standards and labels is envisaged, further assistance for the introduction of an EE standards and labelling programme for non-OECS CARICOM members is required.

"Saint Lucia is predominantly a consumer market and ensuring consumers have access to comparatively high quality products is dependent on the availability of not just regulations but the relevant infrastructure to support the regulatory framework. As a beneficiary of the Eastern Caribbean Energy Labelling Project (ECELP) the Saint Lucia Bureau of Standards (SLBS) has expanded its testing capacity through the addition of a new laboratory for comparative energy consumption analyses.

The new laboratory allows the SLBS to test refrigerating equipment, which further supports the SLBS' compliance program for energy efficiency labelling standards. The new test facility aims to address issues related to information about the electricity consumption of electrical appliances and of lifetime cost of an appliance versus the mere purchase cost. (...)

Currently, SLBS is developing a standard for energy labelling of Air Conditioners. Consideration should be given for developing the capacity to perform comparative testing for AC."

Mr. Hubert Reynolds
Head of Department – Compliance
Saint Lucia Bureau of Standards

Enquiries regarding ordering additional copies or information on this publication should be addressed to:

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