WEBINAR

EFICIÊNCIA ENERGÉTICA FORÇA MOTRIZ PARA A TRANSIÇÃO ENERGÉTICA EM SÃO TOMÉ E PRINCIPE

ENERGY EFFICIENCY – KEY DRIVER FOR ENERGY TRANSITION IN SÃO TOMÉ AND PRÍNCIPE

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EXECUÇÃO

ALER Associação Lusófona de Energias Renováveis

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GREEN CLIMATE FUND

UNIDO

UNIDO project "Strategic program to promote renewable energy and energy efficiency investments in the electricity sector of Sao Tome and Principe"

Minimal energy performance standards: compliance, regulations and implementation For lighting, air conditioners and refrigerators

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What are we talking about?

Energy efficiency

- A concept that defines the means to rationalize the consumption of energy useful for service provided
- The lower energy consumption for the same service provided
- Avoid wasting energy by rationalizing the use of energy and using appropriate technologies that are not energy intensive
- Makes possible to provide more and more services while consuming as little energy as possible and to reduce greenhouse gas emissions

MEPS – Minimum Energy Performance Standards and labels?

- A visual support to buy the most adapted appliance
- A well-proven and developed tool

Objectives of the project

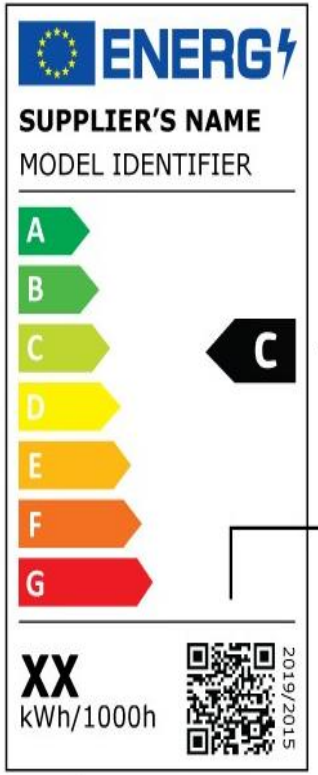
- Contribute to increasing national capacity to uptake **energy efficient appliances** in compliance with quality standards

- The successful implementation of minimum energy performance standards (MEPS) and a corresponding labelling scheme will:
  - Reduce electricity peak demand and reduce the pressure on the electricity network
  - Reduce overall electricity consumption and bills for consumers, who will spend a smaller fraction of their incomes on energy
  - MEPS and labeling of household appliances can serve as a powerful tool to inform consumers about differences in energy performance

How are MEPS and labels used?

- A simple mechanism – A threshold
- Eviction of the least efficient appliances and information (label) on the energy performance of the appliances sold
- Different level of information
  - Entire chain from production to resale, encouraging upscaling
  - Buyers, encouraging them to opt for the most efficient appliances

Information available - examples

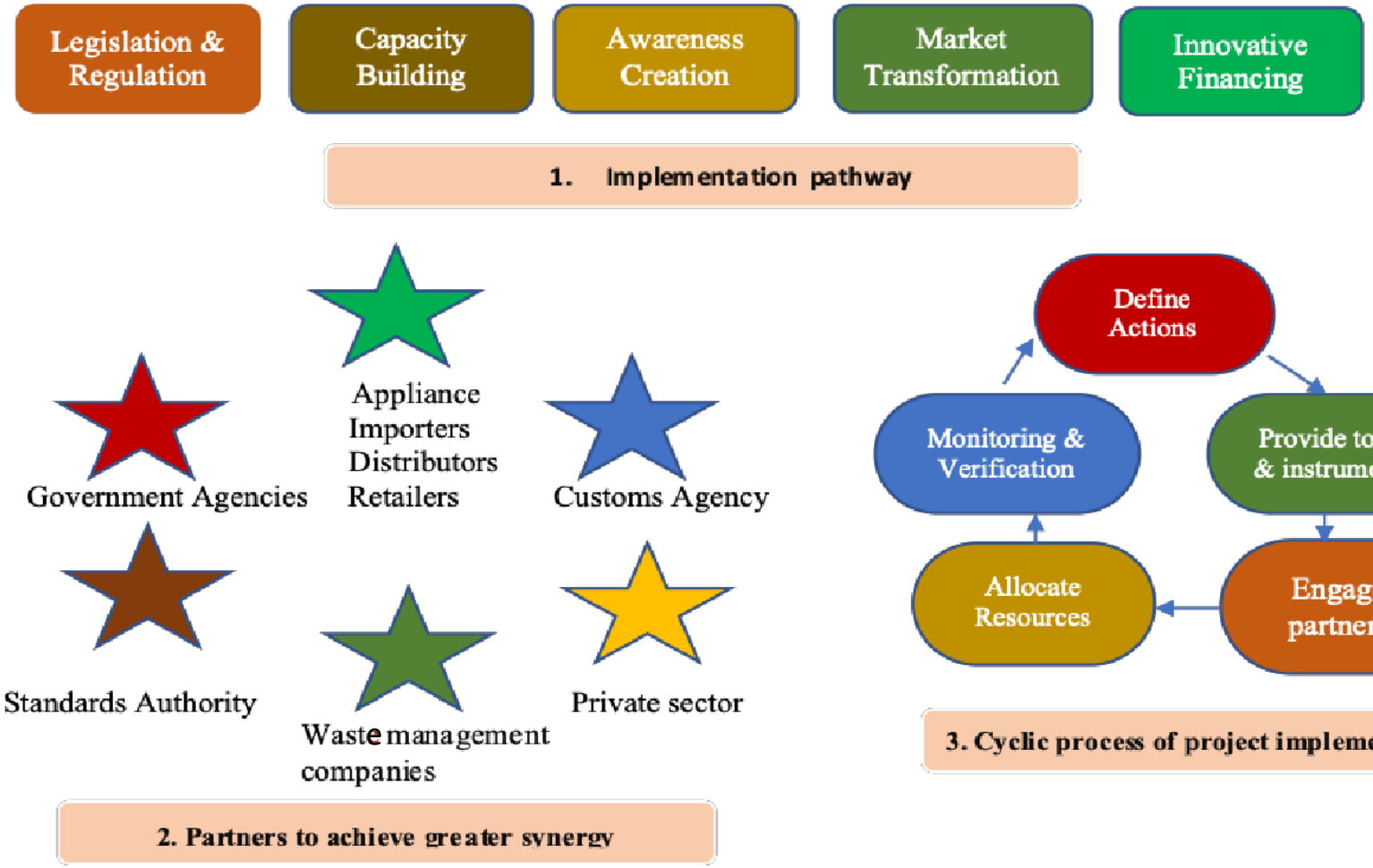


The energy efficiency class for this specific light source

The QR code gives access to more information on the model

The energy consumption of this product per 1000 hours

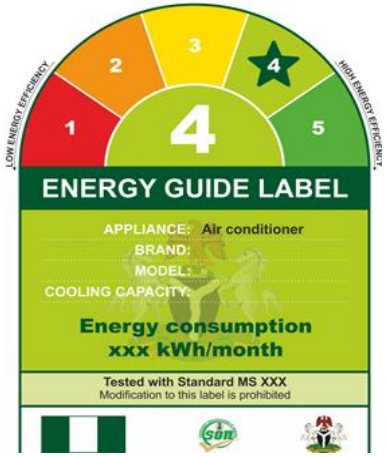
Stakeholders in Sao Tome and Principe

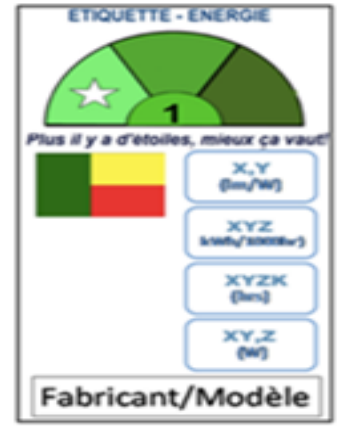


Adapted from: ESCAP, UN (2011) Guidelines for Strengthening EE Planning & Management in Asia *& the Pacific*

Lessons learned on MEPS

- Very developed area – lots of technical information on MEPS
- EU MEPS are very well studied and lots of available information
- Imported appliances from Portugal – already defined with EU MEPS
- Developed in Africa: African Union as ECOWAS has set up thresholds for MEPS
  - Cabo Verde follows EU standards, sets a high threshold on appliances + incentive measures
  - Benin follows ECOWAS MEPS model
  - Energy class thresholds can be revised every few years according to STP needs





Energy Label developed by the consultants and adopted by Nigeria (left) and Benin (right)

Development of the regulations

- Proposal of MEPS for lighting, air conditioners and refrigerators

  - DRAFT ENERGY EFFICIENCY (PROHIBITION OF MANUFACTURE, SALE OR IMPORTATION OF INCANDESCENT FILAMENT LAMP, USED REFRIGERATOR, USED REFRIGERATOR-FREEZER, USED FREEZER AND USED AIR-CONDITIONER) REGULATIONS

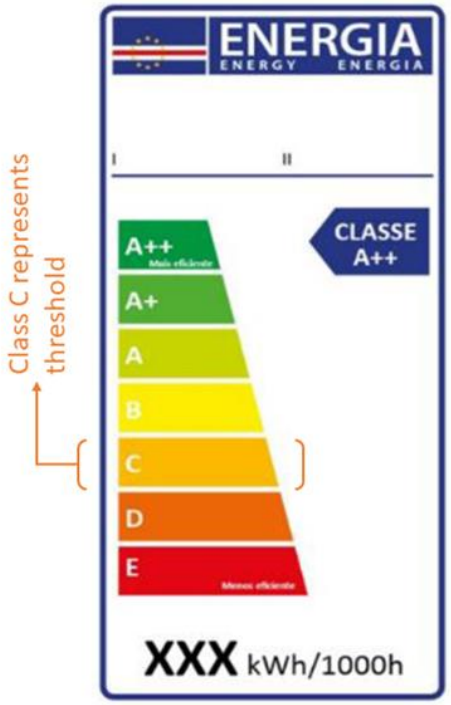
  - DRAFT ENERGY EFFICIENCY ENERGY EFFICIENCY STANDARDS AND LABELLING (HOUSEHOLD REFRIGERATING APPLIANCES) REGULATIONS

  - DRAFT ENERGY EFFICIENCY STANDARDS AND LABELLING (NON-DUCTED AIR CONDITIONERS) REGULATIONS

National MEPS & Labels - STP

Energy class thresholds

- A result of MEPS
- Example: lamps in Cabo Verde
- Energy classes range from A+++ to E
- Lowest acceptable class: C



Energy efficiency class	Energy efficiency ratio (EER) of non-directional lamps	Energy efficiency ratio (EER) of the directional lamp
A++	EER ≤ 0,11	EER ≤ 0,13
A+	0,11 < EER ≤ 0,17	0,13 < EER ≤ 0,18
A	0,17 < EER ≤ 0,24	0,18 < EER ≤ 0,40
B	0,24 < EER ≤ 0,60	0,40 < EER ≤ 0,95
C	0,60 < EER ≤ 0,80	0,95 < EER ≤ 1,20
D	0,80 < EER ≤ 0,95	1,20 < EER ≤ 1,75
E	EER > 0,95	EER > 1,75

Development of the Compliance Framework

- To support and guide the implementation of harmonized MEPS and the labeling program, as well as the establishment of national compliance programs, through a Monitoring, Verification and Enforcement (MV&E) Framework
    - The MV&E Framework includes a compliance certification reporting for importers, distributors and retailers of lighting, refrigerators and air conditioners (LRACs) as well as market surveillance and enforcement procedures for regulators, customs agency and standards agency
- To evaluate and adapt global best practice MV&E structures and mechanisms for application in STP; and
- Developed in consultation with the stakeholders as well with the approval of the Technical Committee (TC), for LRACs

Benefits of compliance framework

- Support the implementation of MEPS of the appliances through increased compliance of the standards

- Protect the market from appliances that fail to perform as declared or required
- Guarantee that consumer satisfaction is in line with their expectations
- Protect the importers, distributors and retailers of efficient appliances by ensuring that they are all subject to the same market entry conditions

- Ensure that MIRN (policy makers), DGRNE/EE Department (government energy agency), AGER (energy regulator), ENCE (certification body), SENAPIQ (standards authority) and Customs Directorate meet the objectives of the energy efficiency project

Appliance certification

- Imported appliances from Portugal
- If appliance has EU label, it has already been tested and has documentation for certification from an international laboratory
- Suppliers can be asked to provide certificates for their appliances
- If needed, cooperation with neighboring laboratories (e.g. Cabo Verde) is recommended

Conformity Assessment

- SENAPIQ will play the leading role in the assessment of the conformity of LRACs to the MEPS and labels adopted by STP
  - In collaboration with DGRNE and the private sector associations of LRAC importers, distributors and retailers – AENER and APERAS

- Role of DGRNE in supporting SENAPIQ in conformity assessment will be transferred to ENCE when it is established

- The conformity assessment will involve
  - Pre-testing of LRACs prior to import to STP
  - Verification of LRACs MEPS and label
  - Registration of LRACs

Pre-testing of LRACs prior to import to STP

- Importers of LRACs into STP (AENER/ APERAS) will be required to have their appliances tested at the country of origin (with accompanying test certificates)
  - and get the appropriate STP-approved label fixed to them, prior to import into STP
- Requiring test results from an accredited third-party laboratory before entry into the STP market reduces non-compliance and makes it possible to limit fraud
- Subsequent market checks help then ensure that, at a minimum, products are properly labelled
- A dedicated official of SENAPIQ will embedded with the Customs Directorate to support this work
- Importers will declare the appliance energy performance and other details on the label to officials of SENAPIQ and Customs at the STP port of entry for checking

Verification of LRACs MEPS and label

- SENAPIQ will check documentation, labels, and the declared MEPS of the imported LRACs, supported by analysis of the documentation (test certificate, etc) and research on the Internet
- In the event of doubts about the conformity of the appliances, or frauds, SENAPIQ may request controls and testing in an accredited laboratory
- SENAPIQ will then process the test results, and pursue any enforcement measures in the event of non-compliance
- The following checklist will be applied on LRAC labels: i) Is the energy label present?; ii) Is it found in the correct place?; iii) Is it immediately possible to link the energy label to the LRAC?; iv) Is the label content correct?; v) Are the colours of the label correct?; vi) Is the size of the label correct?
- The importer/distributor covers the cost of the verification test when the appliance fails on compliance, while the SENAPIQ – supported by an approved budget from MPFEA - covers the cost if the appliance passes the requirements

Registration of LRACs

- DGRNE will develop web-based Product Registration System (PRS) linked to Management Information System (MIS) to be shared with EMAE
- Importers/distributors of LRACs will register their enterprise and LRACs intended to be imported with DGRNE (later ENCE)
  - by entering information on their appliances into the PRS
  - DGRNE (later ENCE) will check declarations and supporting documentation on the LRACs
- If all required information is provided and automatic consistency checks are satisfactory, DGRNE (later ENCE) grants permission for the LRACs
  - by providing a mandatory registration number or withholds approval until identified issues have been resolved
- The information required
  - i) information on the importer/distributor; ii) the model name/serial number of the LRAC; iii) the country where the product was manufactured; iv) the date the product registration was made and when it was approved by DGRNE; v) a declaration of conformity signed by the importer/distributor or the legal representative; vi) supporting technical documentation and test reports on the LRACs; and vii) any relevant information on the compliance status of the product

Market Surveillance

- SENAPIQ will conduct Market surveillance of LRACs supported by Custom Directorate and DGRNE (later ENCE)
  - by gathering information through the PRS at DGRNE as well as records and surveys of the CCIAS, AENER, APERAS, SENAPIQ and Customs Directorate
- LRAC importers will also notify the Customs Directorate each time a shipment of appliances enters the STP
  - Customs then checks: i) harmonised customs code the LRACs are classified under; ii) weight and value of the shipments; and iii) details on the importer, etc.
- Customs officers will verify that the necessary documentation is available, and that the LRACs are properly registered at the PRS at DGNRE (later ENCE)
- Conformity verification on the LRACs will be mainly performed by officials of SENAPIQ, supported by DGNRE (later ENCE) and the Customs Directorate

Questions and Answers session

Thank you for your attention!