

CARICOM Energy Efficiency Standards & Labelling Programme

BNSI



**National Procedures
Manual - Barbados**

NATIONAL PROCEDURES MANUAL FOR BARBADOS

Executive Summary

The following document contains the required minimum procedures to implement a labelling scheme from the port of entry to the market. It also includes the description of monitoring and surveillance actions to maintain the confidence and compliance of the system in a sustainable way.

The Procedure is organized in six (6) steps: Pre-Registration; Compliance Verification; Registration of the Product; Issuance of Labels; Arrivals; Monitoring and Enforcement.

INTRODUCTION

Background

The Caribbean region is faced with many and varied challenges associated with the high cost of electrical energy. That is based on the fact that the Caribbean Community (CARICOM) Member States (MS), relies almost exclusively on imported fossil fuels to generate electricity. Significant efforts are being made to change this profile and there is now a trend towards more sustainable and cheaper sources specifically solar, wind and hydroelectric facilities. Nonetheless, consumers and businesses in the region still suffer from extremely high electricity tariffs. This reliance on fossil fuels also leads to environmental and greenhouse gas (GHG) emission issues, exacerbating the region's vulnerability to climate change and environment pollution.

The programme currently covers refrigerators, freezers, wine chillers and air conditioners (ACs) intended for household use on the one hand and light bulbs on the other. This means that manufacturers, importers, retailers and distributors with intention of selling any of these products under the programme in the region will now be required to have each model unit registered and tested, prior to sale on the regional market. The units will subsequently be affixed with the corresponding energy efficiency label.

Objectives

The purpose of this document is to outline the stages for the effective operations involved in the process of the CARICOM Energy Efficiency Standards and Labelling Programme (EESLP), including programme management activities that support the EE process for Barbados.

The goals of the EESLP are:

- 1) Establish, document and consequently inform consumers of the energy efficiency of the applicable products for the regional markets.
- 2) Assess compliance of the minimum energy performance standards adopted for the CARICOM region.

DOCUMENT CONTROL

Title	Version	Date
National Procedures Document for Barbados	Draft Report V2	2022/03/04
National Procedures Document for Barbados	Draft Final Report	2023/07/05
National Procedures Document for Barbados	Draft Final Report V2	2023/12/01

This manual was produced with assistance of **the Technical Assistance Programme for Sustainable Energy in the Caribbean (TAPSEC)**, undertaken by the CARICOM Regional Organisation for Standards and Quality (CROSQ), with financing by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. It was further updated with the assistance of the **Quality for Sustainable Energy in the Caribbean (QSEC) Project**.

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List of Acronyms

Table 1

AC	Air Conditioner
AHAM	Association of Home Appliance Manufacturers
BNS	Barbados National Standard
BNSI	Barbados National Standards Institution
BSJ	Bureau of Standards Jamaica
CARICOM	Caribbean Community and Common Market
CFL	Compact Fluorescent Lamp
CROSQ	CARICOM Regional Organisation for Standards and Quality
CRS	CARICOM Regional Standards
DCCA	Department of Commerce and Consumers Affairs
EE	Energy Efficiency
GHG	Green House Gas
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
LED	Light Emitting Diode
LSOC	Laboratory Services Order Contract
MEPS	Minimum Energy Performance Standards
MS	Member State
NB	National Body
NCRA	National Compliance and Regulatory Authority
NSB	National Standards Body
RTF	Regional Testing Facility
TSCF	Test Sample Collection Form
TTBS	Trinidad and Tobago Bureau of Standards
URC	Unique Registration Code
USD	United States Dollars

1. PRE-REGISTRATION

1.1. Application for registration of products

Importers/manufacturers shall file the application for registration of their products to the designated authority. Importers shall submit the application as follows:

- 1) Sending an email to the Department of Commerce and Consumers Affairs (DCCA) manifesting the intention of registering an item that falls within the regulation.
- 2) DCCA officials shall issue a reply containing all the available information to understand and follow the labelling process (read only access to the relevant standards and a copy of the National Procedures Manual), and a registration form, which includes the company's information and the declaration of the product's characteristics.
- 3) Annexed to the registration form, the importer shall submit test reports and energy performance data of the product for its compliance evaluation. Applicants can opt for one of the following:
 - a. Presenting data regarding a previous registration within a CARICOM country, with the registration code with which it can be identified in the database.
 - b. Presenting test reports, either from Regional Testing Facilities or International Laboratories.
- 4) DCCA will verify the completion of the application and request additional information if necessary. In case all the required documentation is available, confirmation will be sent to the applicant before the compliance verification is initiated.

2. COMPLIANCE VERIFICATION

Compliance verification activities will be carried out by the DCCA. Products registered in the regional database by being compliant in another CARICOM country can be deemed equivalent in Barbados. Additionally, a product can be proved compliant through the submission and evaluation of test reports from an international laboratory or one of the RTF, as explained in section 2.2.

2.1. Compliance by previous registration within a CARICOM country

Where a product is registered under an equivalent program in another CARICOM country, which has requirements that meet those of the National Standards, that product could be deemed compliant with no need of further assessments, given that the conditions of testing don't differ from those required in Barbados.

- 1) Applicants shall submit the certificate of compliance and the number of registration the regional database.
- 2) Additionally, any information from previous test reports shall be provided as support, indicating the testing parameters and results.
- 3) Local authorities will verify and use the documentation provided, and existent data in CROSQ Regional Database, to determine the energy efficiency class that corresponds to the product in Barbados' scheme, in order to produce the label.

2.2 Compliance with test reports

2.2.1. Requirements

Importers/manufacturers shall test their products based on the test methods and ambient conditions indicated in the corresponding National or Regional Standards:

- BNS CRS 57:2018 – *Energy labelling – Refrigerating appliances – Requirements*
- BNS CRS 58:2018 – *Energy Labelling – Compact Fluorescent Lamps and Light Emitting Diode Lamps – Requirements*
- BNS CRS 59:2019 – *Energy labelling – Air conditioners – Requirements*

Tests performed under different conditions or standards won't be admitted for compliance verification of the product, as the results may diverge within different testing methods.

Products can be proved compliant by test reports from tests performed either at the regional testing facilities (RTFs) located in Jamaica and Trinidad & Tobago, or at international laboratories selected by the manufacturer/importer.

2.2.2. Testing at RTFs

a) For lighting bulbs

For lighting bulbs (Light-emitting diodes - LEDs or Compact Fluorescent Lamps - CFLs), samples can be tested in the laboratories of the Trinidad & Tobago Bureau of Standards, located in 1-2 Century Drive, Macoya, Trinidad & Tobago, following these steps:

1. Applicants may contact BNSI or DCCA to request information about the required steps for testing in RTF.
2. Applicants will receive the directions in order for them to contact the regional testing laboratory about the intent to send items for energy efficiency testing, as well as details of the items and the request for a pro-forma.
3. Lighting equipment samples shall be packaged in such a manner to prevent damage or breakage, with proper signage to be placed on package (e.g. Fragile, Handle with care, etc.), and shipped following the manufacturer instructions for handling and storage.
4. The test will be performed at the local facilities, and the results will be sent to the manufacturer and forwarded to the DCCA for compliance assessment.
5. DCCA officials shall verify that the information included in the test report corresponds to that of the declared model, that tests were performed under the indicated conditions, that energy performance values fall within the MEPS,

b) For refrigerators and Air Conditioners

For the other appliances included in the labelling programme, that is, refrigerators and air conditioners, tests can be performed in Regional Testing Facilities of the Bureau of Standards Jamaica, located in 6 Winchester Road, Kingston 10, Jamaica. Applicants shall arrange for their items to be tested in these facilities.

1. Applicants may contact BNSI or DCCA to request information about the required steps for testing in RTF.
2. Applicants will receive directions in order for them to contact the laboratory about the intent to send items for energy efficiency testing, as well as details of the items and the request for a pro-forma.

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3. Appliances samples shall be packaged in such a manner to prevent damage or breakage, with proper signage to be placed on package (e.g. Fragile, Handle with care etc.), and shipped following the manufacturer instructions for handling and storage.
 4. The test will be performed at the local facilities, and the results will be sent to the manufacturer and forwarded to the DCCA for compliance assessment.

2.2.3. Testing in International laboratories (outside of the CARICOM region)

Applicants may opt to submit a test report for a model from a third-party laboratory. It is highly recommended for these laboratories to be accredited by international bodies. It shall be done as follows:

1. Applicants shall provide the laboratory with a sample of each of the different models to be registered in Barbados.
2. The laboratory will test the samples in accordance with the methods described in the corresponding CARICOM Regional Standards or their equivalent National Standards. The following testing standards are used for the indicated appliances:
 - For Refrigerators: AHAM HRF-1-2016, *Energy and internal volume of refrigerating appliances*
 - For light bulbs:
 - IEC 61000-3-2, *Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*
 - IEC 62560, *Self-ballasted LED lamps for general lighting services by voltage > 50 V - Safety specifications*
 - IEC 62612, *Self-ballasted LED lamps for general lighting services with supply voltages > 50 V – Performance requirements*
 - IEC 60969, *Self-ballasted compact fluorescent lamps for general lighting services - Performance requirements*
 - For Air Conditioners: ISO 5151, *Non-ducted air conditioners and heat pumps – Testing and rating for performance*
3. Applicants shall submit the test results to the DCCA for their evaluation.
4. If tests were performed in an accredited laboratory, a valid accreditation certificate shall be attached.

3. REGISTRATION OF THE PRODUCT (BY DCCA/BNSI)

3.1. Compliant products

Once the compliance verification is completed and approved, DCCA officials shall notify the applicants of the satisfactory registration, providing a proof of compliance certificate, and upload the data of the product in the Regional Database, with a unique registration number.

3.2. Non-compliant products

Products that fail to comply with the standards shall not be registered. DCCA officials shall communicate the applicants about the compliance evaluation results within a week after the decision. A list of non-compliant items shall be recorded for surveillance and statistical purposes.

3.3. Data protection

All the information regarding registered products should be subject to strict data protection rules.

Technical documentation and compliance evaluation should be available for the National Bureaus authorities from those countries in CARICOM that are implementing a labelling scheme and have access to the Regional Database, in order to implement verification and surveillance activities.

Sensitive technical information that is deemed inappropriate to share in the Regional Database should be available only to national authorities from the country of registration.

Any personal data¹ shall be kept only as long as it's necessary for processing, and pseudonymization and encryption practices shall be implemented in order to protect the data.

4. ISSUANCE OF LABELS

4.1. Issuance by the BNSI

BNSI will centralize the issuance of labels. Prior to the arrival of their consignments, importers can request BNSI officials for printed labels to attach to their products, once these are proven compliant and registered in the Regional Database.

1. Importers shall communicate the authorities of the date of arrival.
2. Items to be imported shall be listed indicating their registration number and the number of units to be included in the consignment.
3. BNSI officials will print the required number of labels for the indicated products, with the corresponding energy performance and other data.

4.2. Digital labels

Digital labels shall be generated and sent to the applicants in order to be published on internet sales websites. These labels shall contain the same information as the printed labels.

5. ARRIVALS

Consignments arriving to the ports of Barbados are flagged by the authorities based on different criteria such as the country of origin, the importer company's history, and the registration status. Customs authorities use the ASYCUDA system for this purpose. As for regulated items, imported items will be either released or held in customs depending on their registration and compliance status.

A list of registered compliant items will be elaborated and periodically updated by BNSI and DCCA and shared with Customs officials and the Ministry responsible for Energy. Compliant items will be indicated by their type of appliance, country of origin, brand and model number.

¹ information relating to an identified or identifiable natural person; an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.

DCCA officials will be in charge of assisting with the recognition of registered models. Additionally, Customs officials shall have access to the list of registered items in the Regional Database.

Importers must declare the products included in the consignment, indicating the status regarding the registration under the labelling programme, and providing their registration number and proof of compliance. Customs officials will perform random inspection activities with the collaboration of DCCA officials in order to verify the consistency of the declaration and identify non-compliant products in the consignments.

Those items with no pre-registration or previous compliance assessment, that is, those not included on the list or registered in the database, shall be held at customs premises until compliance is proven by testing a unit of each model in the Regional Testing Facilities. Whenever a consignment with non-registered products arrives at the port, importers shall bear the costs of transport and testing of the required units. The testing of these appliances will be carried out as indicated in Annexes I and II.

6. MONITORING AND ENFORCEMENT

6.1. Introduction

The proper display of energy labels is essential for consumers to enable them to select more energy efficient models at the time of their purchasing decisions. The publication of EE label provides the information available on the energy used by the appliance. Failure to correctly display these labels will be a definite breach of the EE labelling scheme. Examples of labels not being correctly displayed include:

- a. Labels not following the design established in the standards
- b. EE labels not matching the corresponding appliance
- c. EE labels covered with other stickers, advertising materials, or price tags
- d. EE labels placed inside the appliance, on the side or on the back
- e. “Do It Yourself” labels – hand-written labels or labels made by the retailers
- f. EE labels sealed in a plastic envelope, not accessible or visible to consumers in shops
- g. Only portions of the label are displayed or only the background with no figures
- h. Two EE labels for one appliance – in some cases also both the old/new labels, both showing a different energy class
- i. For internet shoppers, EE labels are not available online or some of the prescribed data is missing
- j. Usage of non-existing energy classes, such as A+++ or A++ in internet sales, where it is used as the energy class indication.

6.2. Market surveillance

Market surveillance shall be conducted by the DCCA, with a risk-based procedure. That is, surveillance activities will be focused on stores with high number of sales and variety models. Consumer complaints will have special consideration in cases where labels are found to be used incorrectly or non-existent.

DCCA officials may opt to prioritize the surveillance and supervision of only a selected number of appliances in a given year (that is, refrigerators, air conditioners or lighting

bulbs), based on the potential savings.

Visits to different stores and warehouses will be scheduled considering the size, diversity of models offered and previous non-compliances of the company.

Table 2 – Proposed arrangement of visits

Store	Location	Type of Appliances to be checked	Date of visit	Compliance
<i>Name of the store</i>	<i>Address</i>	<i>Appliances to be checked in this store. For example: refrigerators or air conditioners.</i>	<i>Estimated date of the visit.</i>	<i>Shall be filled once the visit is completed, indicating the level of compliance (%)</i>

1. Selected stores should be visited without warning.
2. Inspectors will check that every appliance under the labelling scheme is labelled in accordance with the Standards (correct coloured label, correct appliance and model data), that the label is visible and properly fixed, and that there's no other figure/sticker covering the information in the label.
3. If non-compliance is verified, in case of labels not being properly fixed or not visible, actions shall be taken depending on the grade of non-compliance.

6.3. Check-testing

The DCCA will be responsible for check-testing, using a risk-based approach, prioritizing those models with high number of sales, high energy ratings and/or previous non-compliances. Samples should be sent to Regional Testing Facilities to perform the check-testing, following the procedures indicated in the Annexes I and II:

1. Using the list of items registered in the regional database, the DCCA shall generate a list of selected appliances models to be tested in a given year. This selection will be based on:
 - Third-party complaints (customers or retailers)
 - Market share (total number of sales)
 - Annual energy consumption of the appliance
 - Energy rating (models with A or B ratings should have high priority)
 - Previous non-compliances
2. It is recommended for 1 out of every 5 models of each importer to be tested annually to check compliance. This can be adapted considering annual budgets and customer complaints.
3. Customers that are not satisfied or suspect that the information declared on the label is not accurate, can file complaints to the DCCA or the BNSI and request for a verification of the product and its energy consumption.
4. DCCA will be in charge of requesting a sample of the selected product and shipping it to the corresponding RTF, as indicated in the Annexes.
5. These items will be tested in the RTF and test reports shall be sent to the DCCA. The DCCA shall cover the cost of the test.
6. If test results differ by more than a 15% from the declared energy performance or the

model is in a lower class than stated, the importer will be offered to modify the information on the label or provide another sample of the same product to be tested, in order to confirm the results. All the expenses associated with the additional test will be borne by the importer.

7. If the additional test fails to prove the information on the label, then enforcement actions shall be taken. Depending on the level of non-compliance, actions will include the rectification of the information on the label, the withdrawal of the product from the market, the imposition of fines on the importer, and the prohibition to commercialize products for a certain amount of time.

ANNEX I – INGRESS AND EGRESS OF APPLIANCES FOR TESTING AT THE BSJ FACILITIES

1. INTRODUCTION

1.1. Purpose

This document gives guideline for the ingress and egress of appliances routed to the Energy Efficiency Laboratory at the Bureau of Standards Jamaica (BSJ) for energy efficiency testing for the CARICOM and Latin America.

1.2. Scope

This document is currently limited to the energy efficiency testing and labelling of refrigerators, freezers, refrigerator-freezers, wine chillers and room air conditioners intended for the domestic market of the CARICOM and Latin America.

1.3. Definitions

For the purpose of this document, the following definitions apply:

- Energy Efficiency (EE) Labelling Programme – refers to the programme under which the appliances listed above are subjected to energy efficiency testing and the subsequent energy efficiency label produced, based on the result of these tests.
- National Body (NB) – refers to an organization responsible for the inspection, monitoring and enforcing compliance with the adopted CROSQ Energy Labelling Standards within that country.
- Pro-forma - refers to approved costing submitted to client for acceptance.

2. IMPLEMENTATION

2.1. Responsibility

1. The Energy Efficiency Testing Laboratory at the BSJ is responsible for the energy efficiency testing of refrigerators, freezers, refrigerator-freezers, wine chillers and room air conditioners. This facility will also provide a test report to the respective National Body for which testing is done.
2. Each country's National Body will be responsible for their own general administration and compliance monitoring of the EE Labelling Programme and the provision of energy efficiency labels to their local importers/distributors/manufactures.

2.2. Methodology

2.2.1. Procedure

The following are guidelines to be followed when appliances are sent from a CARICOM member country to the BSJ for testing.

1. The individual National Body will contact the regional testing laboratory (BSJ) about the intent to send items for energy efficiency testing as well as details of the items and the request for a pro-forma.

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2. A pro-forma from the regional testing lab (BSJ) will be sent to the National Body prior to the item(s) being sent to the BSJ for testing. The pro-forma will include shipping and handling costs when items are being returned. The approximate turnaround time is also to be included in the pro-forma.
 3. The National Bodies will make their individual arrangements with their customs broker to get the items shipped to the regional testing lab (BSJ). This includes the entity shipping the items to Jamaica making contact with a local custom broker and making arrangements with the broker to have the items delivered to the testing lab at the BSJ.
 4. Upon receipt of the items, the laboratory shall inspect the items for damage before starting any test/assessment. Any defect(s) found will be logged in the BSJ's Job Tracking Management System (JTMS) and communicated to the relevant National Body.
 5. The items shall be tested according to the Regional Standards (or its national equivalents) and the relevant environmental conditions, within the turnaround time as stipulated on the pro-forma. The turnaround time includes submission of the report to the relevant National Body.
 6. Items shall be packaged in such a manner to prevent damage or breakage, with proper signage to be placed on package (e.g. Fragile, Handle with care etc.), and shipped following the manufacturer instructions for handling and storage.
 7. All inverter room air conditioners being submitted should be accompanied by the manufacturer's instructions on how to adjust the speed of the unit.
 8. All items being submitted must be accompanied by instructions on the operating test conditions such as ambient temperature (where applicable) and power supply (i.e. voltage and frequency) to be applied. This information must be provided by the National Body submitting the items for testing.
 9. After testing, the testing lab will make arrangements through their customs broker to have the items returned to the individual National Bodies. The cost of returning the items will be borne by the individual National Bodies, which could charge this cost to the importer.
 10. Failure to collect items within the stipulated time as per the Test Sample Collection Form (TSCF) will result in the disposal of the items as deemed fit.

2.2.2. Records/Documentation

1. Request for pro-forma
2. Approved Pro-forma
3. Job Management Tracking System (JMTS)
4. Test Report

3. Sample Management at Testing Facilities

3.1 Pre-test Storage

Importers, distributors and/or retailers will bear any cost associated with storage and handling during the time required for testing of new models prior to release for general sale. There will be possible allowance for storage at the importers site.

3.2 Post-test Storage

Tested devices will be stored for a maximum period of 60 days after the distributor/retailer has been advised of the availability for return of the device. Note: Where there are prior arrangements for disposal/return by the BSJ of National Compliance and Regulatory Authority (NCRA), then that arrangement will stand over this stipulation. In the event that items are not claimed within the stipulated timeline, they will be disposed of as the BSJ/NCRA sees fit.

3.3 Disposal/Return of devices

The distributor/retailer/manufacture shall indicate on the Testing Sample Collection Form (TSCF) the mode of disposal of the tested device(s) by the inspection body and the regional testing facility. The mode of disposal shall include the following:

- 1) Return to sender
- 2) Return to specified agent
- 3) Destruction of sample
- 4) Donate to charity
- 5) Other (to be specified at the time of collection)

Failure to indicate or collect sample within the previously specified and agreed time will result in the disposal of the product.

ANNEX II – INGRESS AND EGRESS OF APPLIANCES FOR TESTING AT TTBS FACILITIES

1 Introduction

1.1 Purpose

This document describes the process for the incoming and outgoing of Lighting Products for Energy Efficiency Testing from CARICOM countries routed to the Energy Efficiency Lighting Laboratory at the Trinidad and Tobago Bureau of Standards (TTBS).

1.2 Scope

This procedure is intended for Energy Efficiency Testing and Labelling Inspection for Self-Ballasted CFLs and LEDs Lamps for general lighting services for operation in a 60 Hz or 50 Hz alternating current distribution network and nominal voltages having rated voltages greater than 50 V (AC) intended for the domestic market within the CARICOM countries.

1.3 Reference

- CRS 58 2018 - CARICOM Regional Standard, Energy Labelling – Compact Fluorescent Lamps and Light Emitting Diode Lamps - Requirements
- TTCS 11: 2021 - Energy Labelling – Compact Fluorescent Lamps and Light Emitting Diode Lamps – Compulsory Requirements
- IEC 62612 - Self-ballasted LED lamps for general lighting services with supply voltages > 50 V – Performance Requirements
- IEC 60969 - Self-ballasted compact fluorescent lamps for general lighting services – Performance requirements

1.4 Definitions

- Request for Quotation (RFQ) – refers to a controlled lab document to input lighting product information and quantity.
- Laboratory Services Order Contract (LSOC) - refers to a controlled lab document which states the contracted services requested and the quotation for testing for acceptance
- National Standards Body (NSB) - refers to an organization responsible for the inspection, monitoring and enforcing compliance to the CROSQ Energy Labelling Standards within that country
- Regional Testing Facility (RTF) - refers to testing facility (TTBS) to carry-out testing services for Energy Efficiency Testing of Lighting Products for CARICOM and Latin American countries
- CLIENT – refers to NSB, Retailer, Importer, Distributor and/or Manufacturer

2 Requirements

2.1 Responsibility

The TTBS is responsible for:

- a. The Energy Efficiency Lighting Laboratory provides labelling inspection and testing of Self-Ballasted CFL and LED Lamps.
- b. Schedule dates for testing to accommodate each Client.

c. Provide Test Report to the respective - Client in a timely manner.

All NSB's will be responsible for their administrative and logistical arrangements for submission of items to be tested. Each NSB will be responsible for submitting payment documentation in a timely manner before testing.

All regional Clients will be responsible for their administrative and logistical arrangements for submission of items to be tested. Each client will be responsible for submitting payment documentation in a timely manner before testing.

2.2 Safety and Precautions

Items shall be packaged in such a manner to prevent damage or breakage, with proper signage to be placed on package (e.g., Fragile, handle with care etc.), and shipped following the manufacturer instructions for handling and storage.

3 Methodology

3.1 Procedure for Testing

The following processes are to be followed when Lighting Products are being arranged to be sent from CARICOM and Latin American countries to the TTBS for Testing:

1. The Client shall first contact the regional testing facility (TTBS) via email at (doodnath.singh@ttbs.org.tt) with details for the intent to submit testing items for energy efficiency testing.
2. The TTBS shall respond via email to the Client with a "Request for Quotation Form" to be filled by the Client with the relevant information. This form is to be returned via email to TTBS's contact personnel for processing.
3. Subsequent to the receipt of the "Request for Quotation", the TTBS shall provide via email the "Laboratory Service Order Contract" which will include the item's information, the cost for testing and turnaround time.
4. The LSOC shall be confirmed by the Client with the information provided for approval. Once approved, the LSOC shall be signed and the company stamp placed in the area assigned along with proof of payment information (Purchase Order). This document shall be returned via email for processing. All payments shall be made in USD and the wire transfer information (TTBS's USD Account) will be provided to the Client upon request.
5. Upon receipt of the Laboratory Service Order Contract (LSOC) with payment information, the TTBS shall schedule items for testing. These items shall be received five (5) working days before the scheduled date for testing.
6. The Client shall make arrangements with their customs broker or customs authority for the shipping of items to be tested at TTBS. All shipping arrangements is held solely with the Client to the point of collection at the TTBS. Along with the shipping documents, the Client shall provide an Invoice (with invoice number and date) from their respective company or organization for the items being submitted for testing.
7. When test items are received at TTBS, the EE Lighting Laboratory personnel or his designate shall inspect all incoming items for quantity; that all items are a representative batch size; damage and defects before it is accepted for testing. If any anomalies are found

via the aforementioned inspection, this shall be logged through the TTBS's Quality Management System and the associated Client will be communicated as soon as possible by means of telephone or email.

8. All items submitted for testing shall be in their respective packaging as the information on both packaging and item are critical for analysis and evaluation of results.
9. If during testing issues arise with test items or test equipment, the EE Lighting Laboratory personnel or his designate shall notify the Client of the situation and a decision shall be taken for an amendment to LSOC.
10. Reporting of results shall be issued two (2) working days after the completion of testing.

After testing, disposal shall be conducted by TTBS. These samples shall be disposed in a manner that meets all chemical or other safety requirements.

3.2 Duration for testing of Lighting Products:

- The duration for testing of LED lamps extends to four (4) working days.
- The duration for testing of CFL lamps extends to seven (7) working days.

3.3 Sample Size required for testing:

- CFLs – 10 samples with and additional of 2-3 samples for any damage
- LEDs – 20 samples with and additional of 2-3 samples for any damage

3.4 Cost:

- USD 450.00 (LED Lamps)
- USD 500.00 (CFL Lamps)

3.5 Records/Documentation:

1. Request for Quotation
2. Laboratory Services Order Contract
3. Test Report
4. Wire Transfer Transmittal
5. Invoice

ANNEX III – LIST OF FLOW CHARTS

Flowchart for Product Registration

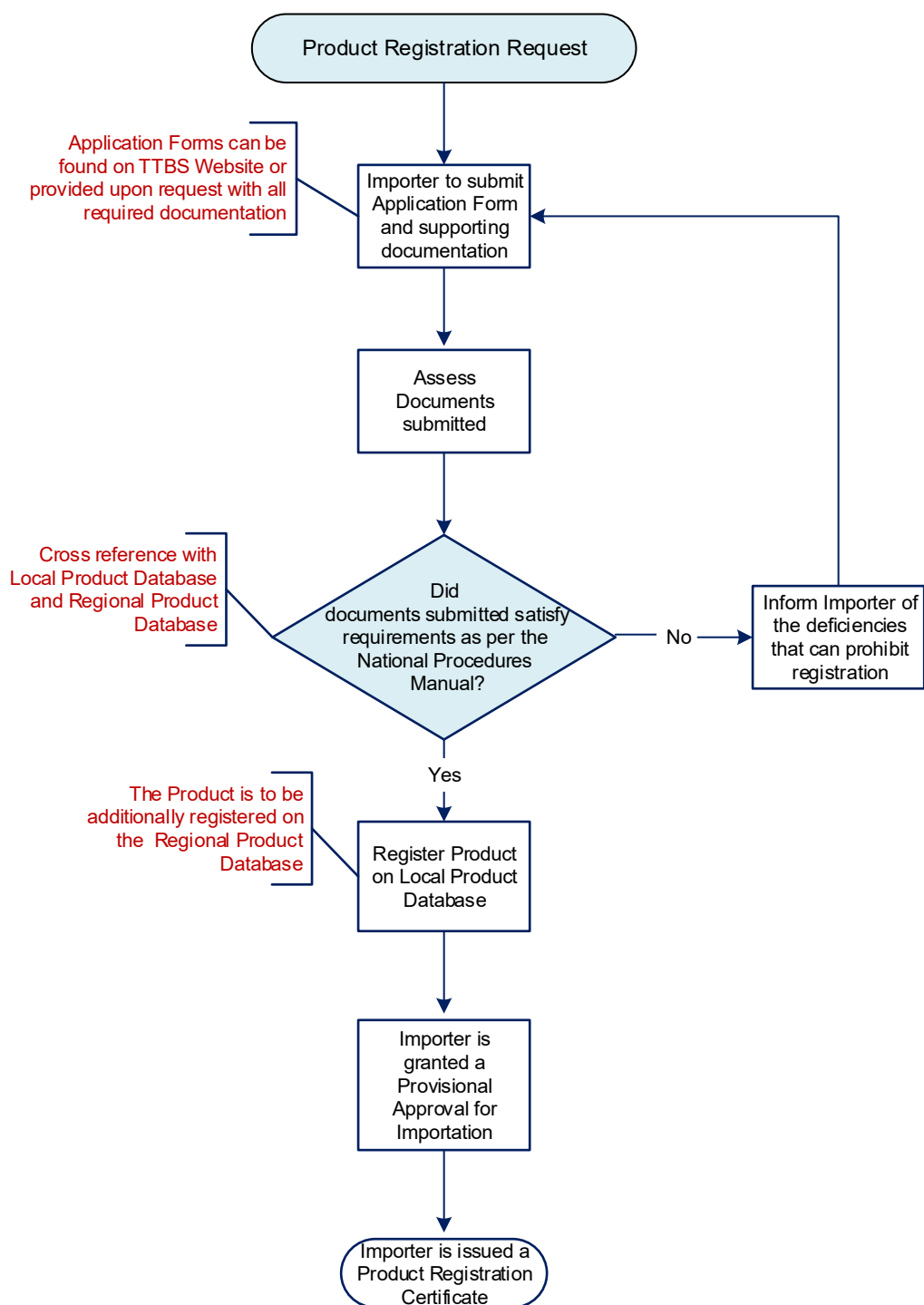
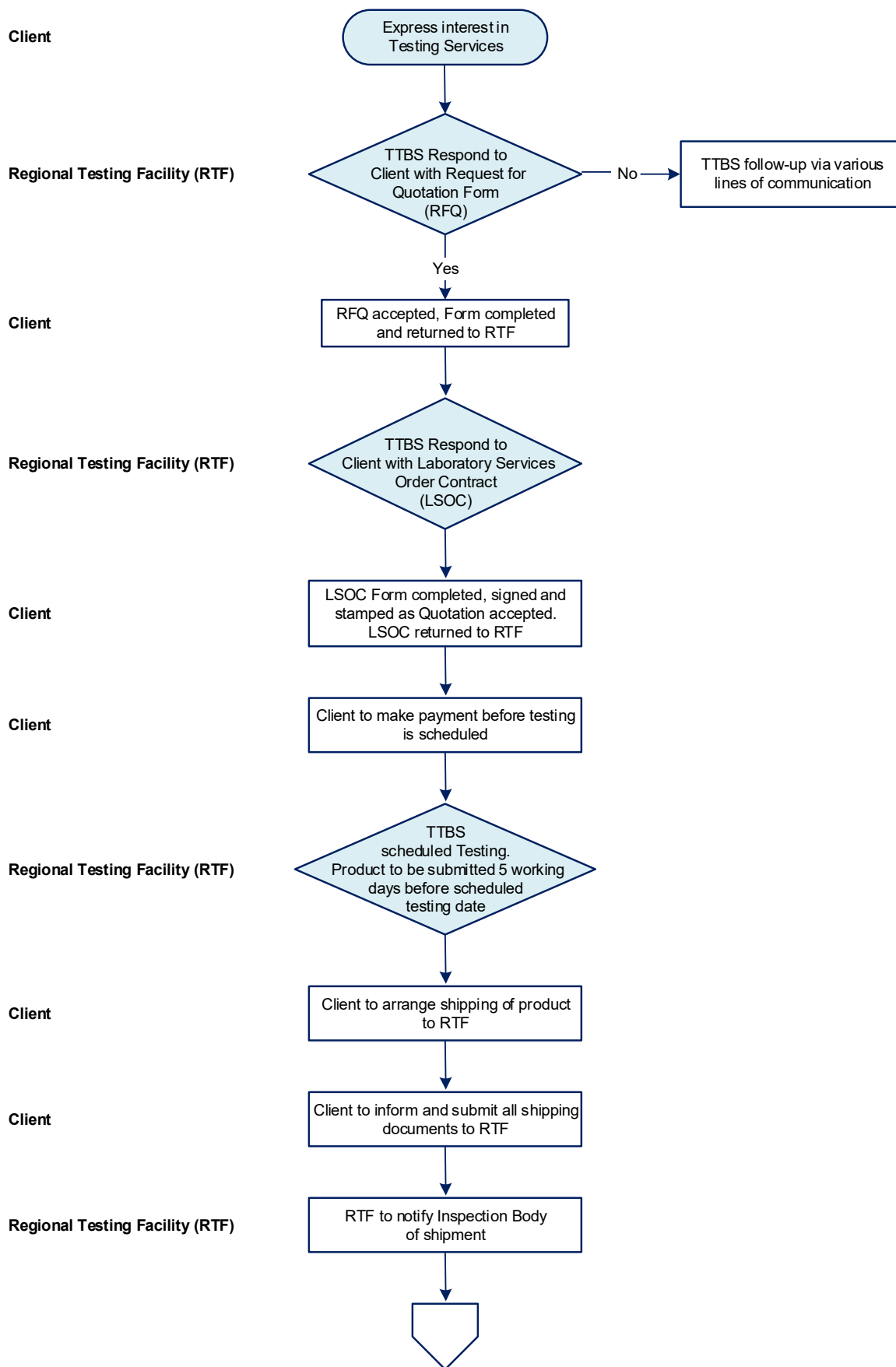


FIGURE 1. – FLOWCHART FOR PRODUCT REGISTRATION

Flowchart for the Procedure for Testing CFL and LED Bulbs



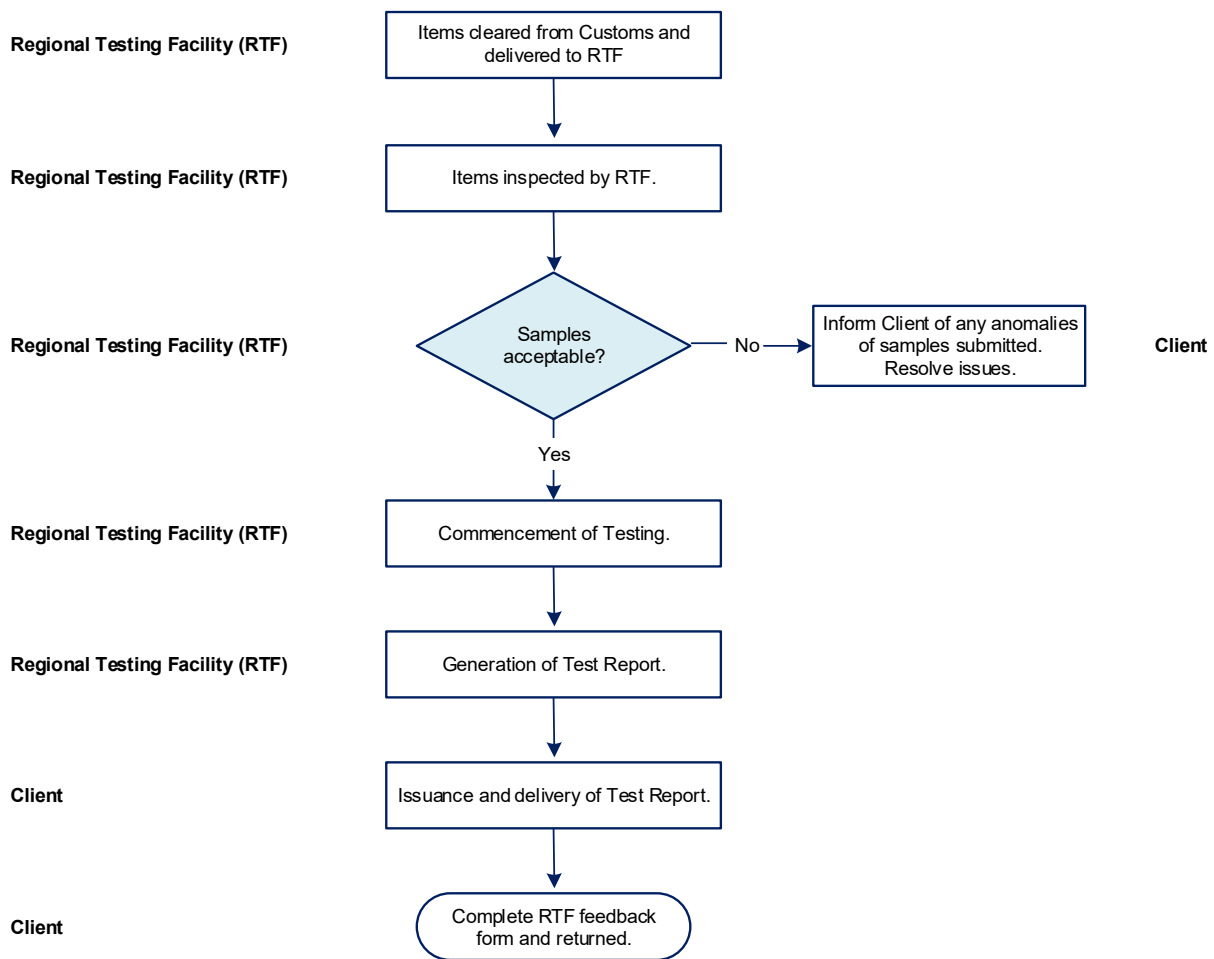


FIGURE 1.1– FLOWCHART FOR THE PROCEDURE FOR TESTING CFL AND LED BULBS

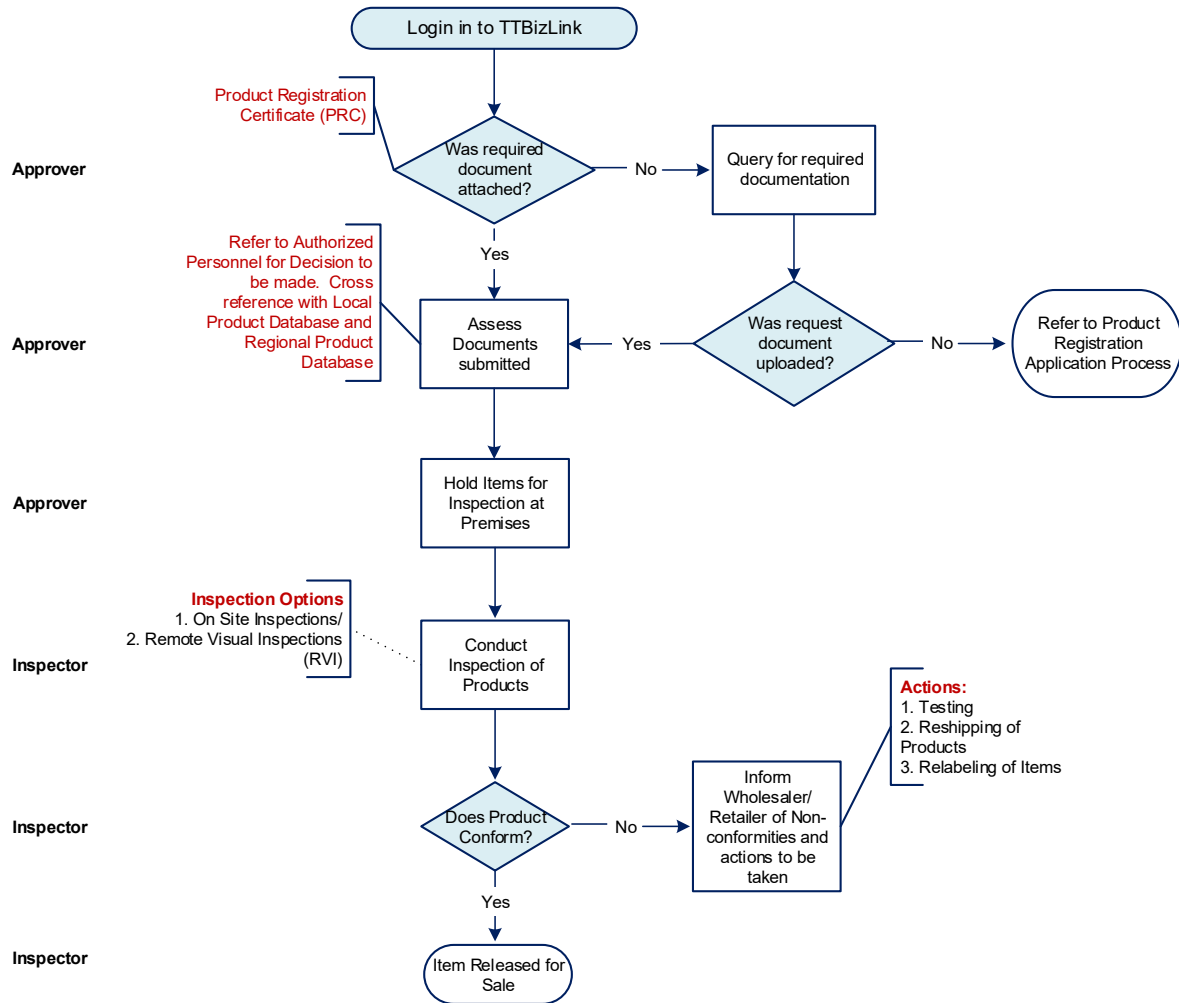


FIGURE 1.2 – FLOWCHART FOR PROCESSING DECLARATIONS WITH RAC PRODUCTS, CFL AND LED BULBS

