

## METROLOGY FOR SUSTAINABLE ENERGY TECHNOLOGIES AND THE ENVIRONMENT IN THE WESTERN HEMISPHERE (M4SET)

### M4SET Project Proposal and Application Package

Guidance for SIM and OAS Member States (National Metrology Institutes and Designated Institutes)

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#### Project Description

Developing the Western Hemisphere's sustainable energy technologies requires adequate metrology infrastructure, accurate traceability, calibration and measurement capabilities, and adherence to internationally recognized measurement standards. This project has been designed to support capacity building, research opportunities and collaborative activities to bridge the gap between technical capabilities and energy and environmental policies.

The M4SET project will improve the understanding and application of metrology in the fields of energy infrastructure, energy technologies, energy efficiency and environmental science through training and awareness of relevant high-ranking government officials and technical stakeholders. Training and technical support will be delivered through knowledge sharing, short-mid-term technical exchanges (minimum one week, maximum six month) and regional cooperation. These efforts will contribute to greater involvement of the metrology community in developing measurements needed to support energy technologies, and ultimately to contribute to economic growth in the Americas.

#### Project Proposals (Not to exceed US\$35,000.00. Includes travel, per diem, training materials, and other transportation expenses)

Applicants should demonstrate a well-developed understanding of the challenges or capabilities they are seeking to overcome or improve. Submissions must include detailed information on how the project will be organized, how financial support will be utilized, the expected outcomes, and how the activity will strengthen existing or develop new essential measurement services. The implementation of proposed activities should be coordinated with NIST and OAS. The latter will defray the costs related to the activities. Funds will not be transferred to the applicant.

Joint applications that bring together multiple beneficiaries will be prioritized. The rationale is to encourage potential applicants in the National Metrology Institutes (NMIs) to engage with their national counterparts in the ministries of energy, environment, normalization and accreditation bodies in ways that broaden the project's impact at the country or regional level. Similarly, applicants are encouraged to work with other SIM colleagues. Partners should discuss the roles and responsibilities of each Institute and detail these in the application (pg. 2 – 3).

#### Application Guidelines

Applications will be reviewed in the order they are received. OAS and NIST will review each application to ensure it meets the M4SET's objectives, and to determine viability based on resource requirements. Applicants may be asked to provide further clarifications regarding their submissions before a final determination is made. OAS and NIST may contact the applicant to discuss arrangements and begin coordination. Approvals are subject to the availability of financial resources.

If you have questions regarding the application or the program's objectives, please email Bibiana Serna ([BSerna@oas.org](mailto:BSerna@oas.org)), Magdalena Navarro ([magdalena.navarro@nist.gov](mailto:magdalena.navarro@nist.gov)) and Andrew Conn ([andrew.conn@nist.gov](mailto:andrew.conn@nist.gov)).

**M4SET**

**Annex I: Project Application**

Please submit your completed application to Bibiana Serna ([Bserna@oas.org](mailto:Bserna@oas.org)), Magdalena Navarro ([mnavarro@nist.gov](mailto:mnavarro@nist.gov)), and Andrew Conn ([andrew.conn@nist.gov](mailto:andrew.conn@nist.gov)). Please include the phrase “M4SET project” in your subject line.

<b>Project Title:</b>	<b>Study Tour and Benchmarking of Functioning Energy Efficiency Testing Programme</b>
<b>Project Type:</b> <input checked="" type="checkbox"/> Conference/Workshop <input type="checkbox"/> Training Course(s)/Webinar <input type="checkbox"/> Technical exchanges <input type="checkbox"/> Other* *If your proposal does not fit within one of the defined activity types above, please select ‘other’ and explain the activity in the summary section below.	
<b>Metrology Area of Impact:</b>	Three Day Study Tour of a Institute with Functioning Energy Efficiency Testing Programme
<b>Proposing Country or Countries:</b>	Jamaica, Trinidad & Tobago, Saint Lucia, Belize, CROSQ-Barbados
<b>Proposing Institute(s):</b> <i>Please indicate all institutes that will benefit from the proposed project</i>	<ul style="list-style-type: none"> <li>• CARICOM Regional Organization for Standards and Quality (CRSOQ)</li> <li>• Bureau of Standards Jamaica</li> <li>• Trinidad &amp; Tobago Bureau of Standards</li> <li>• Saint Lucia Bureau of Standards</li> <li>• Belize Bureau of Standards</li> </ul>
<b>Names of participating:</b>	<p><b>Coordinators:</b> Janice Hilaire David Tomlinson</p> <p><b>Participants:</b></p> <ol style="list-style-type: none"> <li>1. Janice Hilaire</li> <li>2. David Tomlinson</li> <li>3. Latoya Burnham</li> <li>4. Stephen Farquharson</li> <li>5. Fulgence St Prix</li> <li>6. Richard Lawrence</li> <li>7. Kathleen Gregory Jackson</li> <li>8. Renee Abass</li> <li>9. Doodnath Singh</li> <li>10. Jose Trejo</li> <li>11. Hubert Reynold</li> </ol>
<b>Expected start date (if applicable):</b>	15 May 2018
<b>Expected completion date (if applicable):</b>	17 May 2018

<p><b>Project summary:</b> <i>Briefly describe the project topic, planned activities, timing and other important details.</i></p>	<p>This project aims to educate the management staff at CROSQ, and regional NMIs on how to properly manage a successful energy efficiency testing programme. This will be done by a study tour attended by eleven (11) select regional managers who are currently, participating in the development of the regional energy efficiency testing programme. This study tour will last for three (3) days and during this time the team will:</p> <ul style="list-style-type: none"> <li>• Visit laboratories to observe testing in progress</li> <li>• Understand link with energy labelling programme if applicable to include how the programme is implemented</li> <li>• Meet with management staff of the institution to understand what are the lessons learned and challenges</li> <li>• Explore (if applicable) areas of cooperation including development of third party testing by the institution.</li> </ul>	
<p><b>Name(s) and Email address(es) for application representative(s):</b></p>	<p>Janice Hilaire, <a href="mailto:Janice.hilaire@crosg.org">Janice.hilaire@crosg.org</a> David Tomlinson, <a href="mailto:david.tomlinson@crosg.org">david.tomlinson@crosg.org</a></p>	
<p><b>Management Approval:</b> Signature NMI Director or Responsible institute.</p>	<p>Name: Deryck Omar Email: <a href="mailto:deryck.omar@crosg.org">deryck.omar@crosg.org</a></p>	
<p><b>Co-sponsor(s) Approval (If applicable):</b> CROSQ signature goes <b>here!</b></p>	<p>Name: Email:</p>	<p>Signature: </p>

## Activity Objectives and Organization

*In this section, please describe the expected impact the proposed activity will have on the participating NMIs and/or participating organizations. Please explain how the activity will be organized and the technical components to the activity.*

- 1) Relevance:** What problem does this proposal seek to address? How will this activity improve the services provided by those Institutes benefiting from the activity in the areas of energy and the environment? How does this project enhance your measurement capabilities to support your country's environmental efforts on air quality, renewable energy development, energy efficiency performance, sustainable energy technologies, or others related?

This activity is expected to give support to a Project which CROSQ is currently implementing entitled R3E Project which seeks to establish a regional energy efficiency labelling scheme for refrigerators, air conditioners and lighting equipment. One major activity of this project is the development of regional energy efficiency standards for the three appliances mentioned above and the developing of regional minimum performance standards for these appliances. Additionally CROSQ is seeking to develop the framework to support the labeling scheme by finding opportunities for building capacities (provision of training to laboratory technician among other factors) in two member states who will be intimately involved in testing of the appliances to ensure conformance to the standards. Details are given on the two countries where energy efficiency testing capabilities will be developed:

Energy Efficiency (EE) testing is a new activity for most English-speaking Caribbean countries. Jamaica was the only country that had an EE testing programme for refrigerated appliances based on the Jamaican standard JS178. This programme however stopped in 2011 due to the age of the testing laboratories and equipment. The Government of Jamaica using a loan from the World Bank decided to construct a new laboratory for the Bureau of Standards Jamaica with capabilities to support EE testing of refrigerators and air-conditioners in the entire Caribbean region. This laboratory was completed in October 2017 however, none of the management or technical team have any experience testing according to international requirements or going for accreditation in this area. As a result, there are both technical and administrative weaknesses in getting this programme running.

Additionally, the Trinidad and Tobago Bureau of Standards recently purchased equipment for the EE testing of compact fluorescent lamps. This equipment will be used to support the regional EE testing programme for lighting. The same management weaknesses that exist in Jamaica also exist in Trinidad & Tobago. In addition to the two testing facilities pointed out arrangements are currently being put in place to pilot the regional energy efficiency testing programme three countries, these are Belize, Jamaica (also a testing country) and Saint Lucia.

Taking into consideration the importance of the labelling programme to the region and the limitations in experience of the administrators in this area his project will therefore seek to allow eleven (11) regional managers to key an understanding of how a successful programme is run.

- 2) Technical Objectives and Expected Outcomes:** Please explain the technical aims of the project and how those objectives will be met. How would the activity organizers define a successful outcome?

This activity is aimed at providing all the key management staff within the National Metrology Institutes and CROSQ with an understanding of how labelling and testing programmers function, lessons learned, key success factors and risks. At the end of the activity administrators should have an understanding of how a labelling programme (to include testing requirements) is implemented, best modality of implementation i.e. mandatory vs voluntary and engagement of stakeholders specifically retailers, policy makers/regulators and consumers.

- 3) Organization and Arrangements:** How will the activity be executed? If the project includes multiple partners and beneficiaries, please explain what role each benefiting member will play in the success of the activity.

CROSQ will have general oversight and responsibility for this project. All logistics arrangements will be handled by CROSQ and participants will be required to return home and prepare an action plan for EE testing and support framework in their respective

country. This action plan will be supported by the CROSQ/PTB Renewable Energy Project to ensure the follow-up is properly resourced.