

JAMAICA

Bureau of Standards Jamaica (BSJ)

Building national energy policy in Jamaica

Overview

As the world moves to address the challenge of climate change, Jamaica remains committed to making its own contribution with a new energy efficiency building code and energy labelling programme. In line with the requirements of the Paris Agreement, the country has increased its ambitions for the mitigation component of its Nationally Determined Contribution (NDC). This increase comprises both a broader sectoral scope and the delivery of greater emissions reductions following the identification of new opportunities to cut emissions in the energy sector.

The Jamaica National Energy Policy 2009-2030 aims to design and implement cost-saving measures to boost energy efficiency and conservation in the country. This strategic document places priority and emphasis on the development of renewable energy sources, such as solar and hydroelectricity, relative to economic feasibility, carbon abatement and the diversification of fuels based on efficiency and environmental considerations.

Jamaica adapted the International Code Council's Energy Conservation and Efficiency Code (IEECBC) in 2009 through a partnership between the Bureau of Standards Jamaica (BSJ) and the Jamaica Institution of Engineers (JIE). The process of adaptation began in 2003, and in 2019 the IEECBC was updated for Jamaica.

As a member of the CARICOM Regional Organisation for Standards and Quality (CROSQ), Jamaica participated in the work of the Regional Project Team for the Development of the CARICOM Energy Efficiency Building Code (EEBC) in 2018. The project started with a meeting at the BSJ offices in March 2017. The Code, which is based on the IEECBC, mandates design and installation specifications to reduce heat loads in buildings, thus reducing the energy requirements for cooling and improving the energy efficiency of residential and commercial buildings using a mix of recommendations for the building envelope. Minimum energy performance standards are included for forced ventilation systems such as central air-conditioning units.

The project was funded by the Global Environment Facility through UNEP (United Nations Environment Programme), with additional support from The Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH. Once completed, the Regional Energy Efficiency Building Code (REEBC) must

be adopted by each territory for application within its jurisdiction. Jamaica will be pursuing the adoption process until June 2022.

Another initiative involved the creation in 2017 at BSJ of a regional energy efficiency testing laboratory under World Bank funding. The laboratory's testing chambers have the capability for testing room air-conditioning units, domestic refrigerators, freezers and wine chillers. Three regional energy efficiency standards were also developed under the project, which set out the test methods to be employed for each appliance, as well as a labelling standard to complement the testing. Jamaica intends to adopt these standards within the next six months. The standards will be referenced under the Jamaica Standards Act.

A mandatory Energy Labelling Programme is being implemented by the National Compliance and Regulatory Authority (NCRA) based on the energy-labelling standard. The monitoring programme, which is expected to be fully implemented by January 2022, will see NCRA inspectors check the ports of entry and the domestic marketplace to ensure that all energy appliances bear the Jamaican energy label that informs customers of their energy use and potential annual use cost. Information on the energy labels is determined using the tests conducted by the BSJ testing laboratory.

Jamaica imports approximately 80 % to 85 % of its energy needs in the form of fossil fuels, primarily heavy fuel oils. According to the Jamaica Public Service Company, the 2020 breakdown of electricity generation by energy supply (fuel) type was: natural gas – 59 %, heavy fuel oil – 27 %, renewable energies – 13 % and light fuel oil (diesel) – 1 %. High energy cost as well as inefficient use of energy thus have the effect of forcing industries, jobs and wealth out of the country. The efficient use of energy and energy diversification are the most immediate solutions to the energy crisis facing Jamaica. An energy efficiency building code is therefore essential to implement these solutions for all building types (hotels, apartment complexes, offices, other commercial properties and residences) across the island since buildings consume as much as 55 % of the total electrical energy generated.

The implementation of the Regional EEBC and the Energy Efficiency Testing and Labelling Programme will be monitored by the municipal authorities and the NCRA respectively.

Outcomes and benefits

Key stakeholders involved in the development of the building codes included:

- Jamaica Institution of Engineers (JIE)
- Jamaica Institution of Architects (JIA)
- Bureau of Standards Jamaica (BSI)
- Ministry of Local Government
- University of the West Indies, Mona
- University of Technology, Jamaica
- Incorporated Masterbuilders Association of Jamaica (IMA)
- Ministry of Science, Energy & Technology (MSET)

Technical representatives from these organizations participated in committees facilitated by BSJ to review the International Code Council's code documents and develop country-specific applications. A new National Building Act was enacted in January 2019 which made the Codes mandatory for the country. The Building Act also empowered BSJ with the authority to determine which version of the Code was applicable in Jamaica. The aim of the Codes under the Act is to provide the framework in which Jamaica can attain its energy goals under the National Energy Policy (2009) to reduce its dependence on fossil fuels and high-energy costs while improving its carbon footprint.

Jamaica is a signatory to the Paris Agreement and submitted its Intended Nationally Determined Contribution (INDC) in November 2015. It subsequently ratified its commitment to the Paris Agreement in 2017, paving the way for the INDC to become the country's first Nationally Determined Contribution (NDC). After identifying opportunities to deepen its emissions reductions in the energy sector, Jamaica updated its NDC in 2020.

The opportunities identified are part of an increasingly comprehensive approach to decarbonize the sector that covers both the electricity generation and energy use sub-sectors. As a result, Jamaica's latest NDC is significantly more ambitious. By 2030, it foresees an emissions reduction for these two sectors of between 25.4 % (unconditional) and 28.5 % (conditional) relative to a business-as-usual scenario (which takes into account policies in place since 2005). This implies that emissions in these sectors would be 1.8 MtCO₂e to 2.0 MtCO₂e lower than they otherwise would be, compared with a range of 1.1 MtCO₂e to 1.5 MtCO₂e in its previous NDC.

The implementation of the Energy Efficiency Building Code and Energy Labelling Programme will contribute to Jamaica's attainment of its NDC. It is estimated that a 30 % savings on energy use (electricity) by the residential consumer can be achieved from implementing the REEBC when compared to the traditional construction methods on the island.

Partners involved

Requesting organization:

- Government of Jamaica

Supporting organizations:

- Ministry of Science, Energy and Technology (MSET)
- Ministry of Industry, Investment and Commerce (MIIC)
- CARICOM Regional Organization for Standardization and Quality (CROSQ)
- United Nations Development Programme (UNDP) Jamaica

Timeline

The Jamaica National Energy Policy was developed in 2009. This policy, in conjunction with the country's energy management framework, will support the implementation of Vision 2030 Jamaica – National Development Plan, particularly its National Outcome #10 – Energy Security and Efficiency.

The policy contains seven national energy goals and a strategic action plan to achieve them by 2030. It also aims to increase the percentage of renewables in the energy mix with proposed targets of 12.5 % by 2015 and 20 % by 2030.

Goal 1 of the Policy states that “Jamaicans use energy wisely and aggressively pursue opportunities for conservation and efficiency”. To achieve this goal, Jamaica will:

- Adapt the CARICOM Regional Energy Efficiency Building Code, scheduled to be published by June 2022
- Implement the energy efficiency testing programme for room air conditioners, wine chillers, freezers and refrigerators by January 2022
- Implement an updated National Building Code by March 2022

References

- CRS 57:2018, *Energy labelling – Refrigerating appliances – Requirements*
- CRS 58:2018, *Energy labelling – Compact fluorescent lamps & light emitting diodes lamps – Requirements*
- CRS 59:2019, *Energy labelling – Air conditioners – Requirements*
- Third National Communication (TNC) of Jamaica to the United Nations Framework Convention on Climate Change
- Jamaican Application Document for the International Energy Conservation Code (2019)
- 2018 CARICOM Regional Energy Efficiency Building Code
- Jamaica’s National Energy Policy 2009-2030