TAPSEC
Technical Assistance Programme for Sustainable Energy in the Caribbean

UWI MONA CAMPUS:

A CENTRE OF EXCELLENCE IN THE SMART GRID TECHNOLOGY

Investing in Caribbean-grown Centres of Excellence for Research and Learning in Sustainable Energy

With a thrust of supporting the institutional strengthening of regional universities, the University of the West Indies, Mona Campus was identified as a key pillar for the first phase of TAPSEC's capacity development support.

Given the predominance of solar PV technology across CARICOM member states, and its easy integration into the sustainable energy mix for most jurisdictions within the Community, there is a need to provide support to the UWI, Mona Campus in the positioning of this academic institution as a centre of excellence for renewable base microgrid training. By doing this, the UWI Mona Campus will serve as a centre of excellence for SMART grid training within the Northern Caribbean.

The Discovery Bay Marine Laboratory (DBML) is a facility of the University of the West Indies, Mona Campus dedicated to supporting research and the teaching of biology, chemistry, ecology, geology, hydrology and geography.

With the integration of the 40 kW micro-grid system into the DBML facility, it is expected that the newly upgraded laboratory will also serve as a teaching and research centre for engineering and renewable energy technology.

Students enrolled in the university's Environmental Physics and Alternative Energy courses will be able to use the facility as a teaching, research and testing centre for SMART grid technology.

To further build the sustainable energy-capacity of the UWI as a whole, the TAPSEC will support the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE) in the identification of the appropriate strategies and programmes to be developed to position the UWI's Cave Hill and St Augustine campuses for solar thermal technology and e-mobility, respectively.

DISCOVERY BAY AT A GLANCE:

The Discovery Bay Marine Lab of the University of West Indies' Mona campus currently has 2 Solar PV Systems installed:

10kW PV System and System 2, and

10kW PV System

… with a power generation capacity of approximately 4,400 kWh per month. The current system will be upgraded with the integration of a 40 kW micro-grid system. It is expected that the newly upgraded system will generate 96,349 kWh/year:

41,642kW from the existing 30kw and

54,707kW from the soon to be installed 40kw

Savings from the 40-kW plant will approximate US$14,300 per year. This upgraded system will also mitigate between 90 to 100 metric tonnes of CO2 per year assisting in the reduction of the carbon footprint of the laboratory.

CARICOM
CCREEE Caribbean Centre for Renewable Energy & Energy Efficiency
Gobierno de la República Dominicana Energía y Minas
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IMPACT

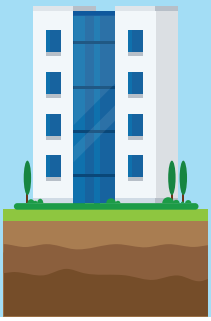
- As a Centre of Excellence, the UWI Mona campus's DBML will facilitate practical teaching and research space for sustainable energy technologies
- All of CARICOM will benefit from research and training opportunities emerging from the Centre of Excellence
- Through the micro-grid system, the DBML's overall prominence will increase as carbon emissions decrease while providing reliable energy supply during shortages in renewable energy sources.

PROJECT PARTNERS

- CARICOM Secretariat, Energy Unit
- CCREEE
- GIZ

BENEFICIARIES

Government Ministries, agencies and/or departments with responsibility for energy planning.

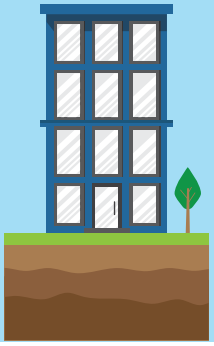


The UWI Mona Campus-Discovery Bay Marine Laboratory

Electric Utilities

Prospective regional and international students

The Engineering and Environmental Faculty of the UWI Mona Campus



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CARICOM

CCREEE
CARIBBEAN CENTRE FOR RENEWABLE ENERGY & ENERGY EFFICIENCY

GOBIERNO DE LA REPÚBLICA DOMINICANA
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