

# ENERGY BUZZ

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Ministry of Communication,  
Works, Labour & Energy  
Brades, Montserrat, MSR1110

# FROM THE MINISTER'S CHAIR

For the upcoming financial year, the following projects are slated for the Energy Department, MCWLE.



## Ministry of Communications, Works, Labour & Energy

2022/23 Budget Speech

Investing today to secure our future:

Our Montserrat, Our People

Electricity Generation

### Capacity Building and Climate Resilience Project:

Funded by the CDB, via BNTF, 10 persons will undergo a certification program in the Installation of Solar PV. As a practical demonstration of this project, two (2) solar PV systems will be installed at two Health Centers to improve the climate resilience of these facilities.

### ReSEMBid Projects:

Approx. 600k Euro secured to implement two projects geared a reducing energy consumption.

- 1) Conducting energy audits and implementing energy retrofits based on said recommendations in public sector buildings.
- 2) Improving lighting efficient in the residential sector

### Geothermal Working Group:

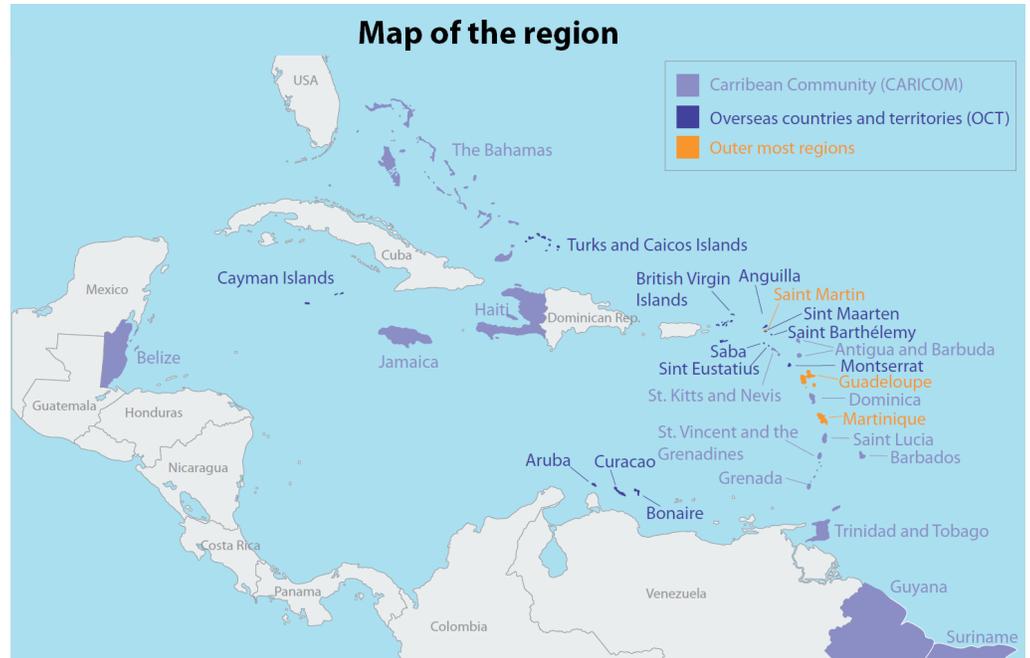
A multi-organistional working group comprising of members from The Government of Montserrat, The FCDO, The OECS and IRENA will be established to develop a pathway to fast-track the implementation of Geothermal Energy on Montserrat.

ENERGY  
DIVISION

# RESEMBID OVERVIEW

The Caribbean Overseas Countries and Territories Resilience, Sustainable Energy and Marine Biodiversity Programme (RESEMBID) supports the sustainable human development efforts within 12 Caribbean OCTs:

- Anguilla
- British Virgin Islands
- Cayman Islands
- Montserrat
- Turks and Caicos
- Aruba
- Bonaire
- Curaçao
- Saba
- Sint Eustatius
- Sint Maarten
- Saint Barthelemy



RESEMBID began its operations on 1st January 2019 and is slated to be implemented over a 58-month period. It has been financed under the EDF 11 Programme, and partners with the European Union, Expertise France, and GFDRR.

The main objective is to support development of Resiliency, Sustainable Energy and Marine Biodiversity in the participating OCTs. The three core objectives are therefore designed to support the effort of the OCTs to address or mitigate these vulnerabilities. They are:

1. To increase energy efficiency of infrastructure with high impact on energy consumption;
2. To improve protection and sustainable management of the OCTs marine biodiversity; and
3. To increase the resilience of Caribbean OCTs to adapt to extreme and recurrent natural events.



# POST COVID COST REDUCTION THROUGH ENERGY EFFICIENCY

The strategic objective of the Ministry of Communication, Works, Labor & Energy is to provide technical expertise in infrastructure services, labor force, sea and air access, energy services, information and communications technology (ICT), equipment & mechanical services, and transportation. Its main aim is to contribute to economic growth and development and to contribute to the national outcomes of Montserrat.

A considerable amount of the total annual recurrent budget is spent on electricity., and like many overseas countries and territories (OCTs), Montserrat is highly dependent on imported fossil fuels for electricity generation., This exposes the country to the volatility of fuel prices and shipment delays. With the cost of fuel forecasted to increase, energy conservation becomes one of the most effective means to reduce energy cost and is a key path to developing a sustainable energy future.



The Post-COVID Cost Reduction through Energy Efficiency project aims to gain a better understanding of the energy usage profile of public buildings and showcase the benefits of energy efficiency and retrofits. This will contribute to the achievement of Montserrat's short and long-term National Energy Policy Goals, improve the financial resiliency of the Government, while creating a stable financial framework for energy efficiency as an energy service leading to a further reduction energy consumption.

The project outputs are as follows:

1. Ten energy audit reports that will highlight areas of inefficiency and recommended retrofits required to improve energy consumption produced.
2. Ten retrofitted government-occupied buildings with energy conservation equipment, as recommended by the audit reports.
3. Ten Energy Department staff and select MCC students trained in Energy Auditing and Measurement and Verification (M&V) methods.
4. One draft policy that supports the development of a sustainable energy efficiency financial model for GoM produced.
5. One draft framework that supports the development of energy efficiency services in Montserrat developed.

# ENERGY EFFICIENT LIGHTING AND ENVIRONMENTALLY FRIENDLY DISPOSAL PROJECT

The Energy Efficient Lighting project was conceptualized due to the current energy usage of Montserrat residents. It is specifically aimed at increasing the efficiency of energy consumption within the residential sector through the installation of energy efficient lighting. The project is being implemented by the Energy Department within the Ministry of Communication, Works, Labour and Energy, with funding from the RESEMBID Programme in the amount of €154,560.00.

In 2020, domestic consumers accounted for 48% of the electricity consumed on Montserrat. Lights are among the biggest energy consumers in households accounting for 20%-35% of the monthly electricity bill. Hence, domestic lighting accounts for 9.6%-16.8% of the annual electricity consumption. With this in mind, the Energy Efficient Lighting & Environmentally Friendly Disposal Project was designed with the aim to reduce the electricity consumption of residential households while providing the public with information on energy efficiency and promoting the importance of environmental safety where it pertains to disposal of lamps with mercury components.

The project will look to build public awareness of affordable energy efficiency measures through various methods of public outreach. There will also be a capacity building aspect of the project for participating staff of the Environmental Health Department. These staff members will be trained in the usage of a Bulb Crusher, which is an integral tool needed to safely dispose of lamps. To future proof the project, a Cabinet paper will be drafted to adapt the lamp standards on island to those previously developed by CROSQ.



## Project Objectives:

- \* To improve the efficiency of electricity end-use on Montserrat
- \* To increase the island's energy security
- \* To develop a competitive energy sector with an energy aware consumer base
- \* Build capacity and energy awareness in the local energy sector
- \* Institutional Strengthening

If interested, please email Mr Oswen Carty at [cartyo@gov.ms](mailto:cartyo@gov.ms)



# ENERGY TASK FORCE

The Energy Task Force was commissioned by the Ministry of Communication, Works, Labour and Energy (MCWLE) in 2020 to propose how best to exploit the island's vast, indigenous renewable energy resources. Comprising stakeholders in the public and private sector, the task force was directed to recommend solutions to overcome potential economic, technical, regulatory, and other barriers to the rapid and expeditious development of local renewable energy resources. The Task Force recommends the targets below based on the current and medium term projection for implementing Renewable Energy systems onto the local grid.

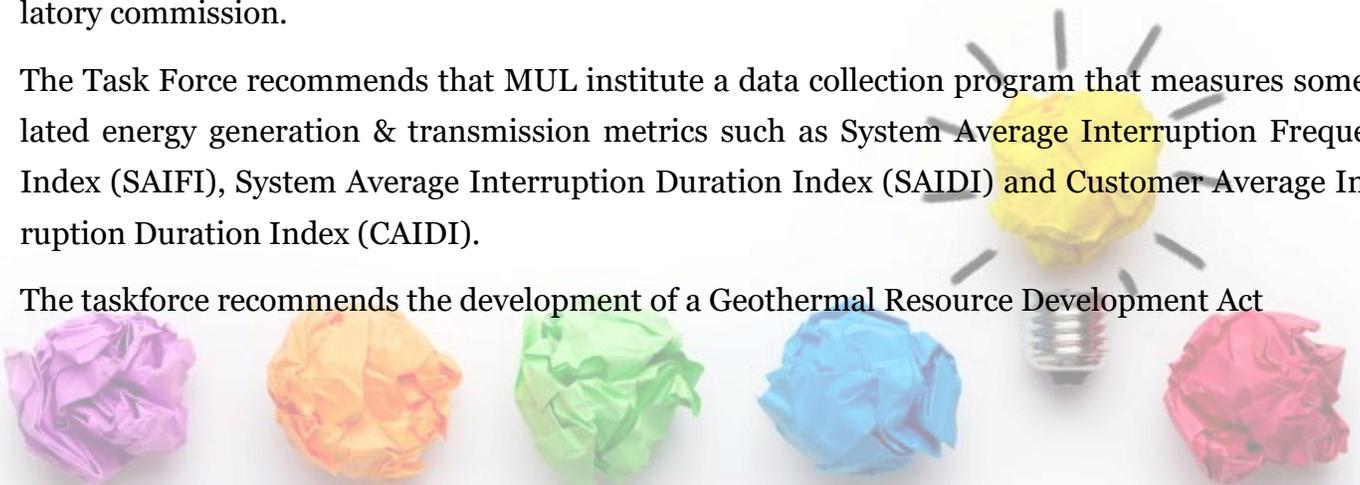
- ◆ 35% RE electricity generation penetration by 2025
- ◆ 60% RE electricity generation penetration by 2035
- ◆ 80% RE electricity generation penetration by 2040
- ◆ 100% RE electricity generation penetration by 2050



Cabinet has since adapted a more aggressive target of a 100% RE electricity generation by 2030

The key recommendations from the Energy Task Force final report were as follows:

- ◆ Improve and align energy generation, transmission infrastructure, and national energy policy as needed to attain renewable energy goals
- ◆ Establish a committee to investigate possible models for allowing distributed energy system (DES) on the national grid without adversely impacting MUL and the lower end ratepayers.
- ◆ The Task Force also recommends that a comprehensive plan be developed to address any inefficiencies that may exist within MUL to facilitate an optimized electricity rate.
- ◆ The Task Force recommends MUL implement a heat rate improvement program.
- ◆ The Task Force recommend the establishment of an independent and transparent electricity regulatory commission.
- ◆ The Task Force recommends that MUL institute a data collection program that measures some related energy generation & transmission metrics such as System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI) and Customer Average Interruption Duration Index (CAIDI).
- ◆ The taskforce recommends the development of a Geothermal Resource Development Act



## **Project financing options**

The task force review several financial options based on the present financial climate and would like cabinet to consider the following options:

### **Grant Funding**

The Task Force recommends GOM put forward a robust case showing the importance and time-sensitive nature of implementing the required energy transition, which aligns with the UK's commitment on climate change.

### **Debt financing**

The Task Force recommends GoM sound out different financial institutions to verify their appetite to provide financing for the preferred generation expansion project.

### **Private Public Partnership Option**

The Task Force recommends a TOR be issued publicly for interested parties to submit proposals for supplying electricity from a renewable energy source to MUL at a rate that will reduce the electricity cost on the island. The Task Force recommends that a Term of Reference (ToR) be written in a manner that encourages suppliers of different RE technologies

The Task Force recommends that a comprehensive PPP framework/policy is developed to take advantage of energy-related projects and take advantage of other government assets.

### **Blended financing**

Partial funding through FCDO, Private Sector and Debt financing.



# THE 10 ENERGY SOURCES

## RENEWABLE

Fuels that can be easily made or replenished; we can never use up renewable fuels.



### BIOMASS

Anything that is alive, or anything that was alive a short time ago is called biomass. Trees, crops, garbage, and animal waste are all biomass. Most of the biomass we use for energy today is wood.



### GEOTHERMAL

Geothermal energy is heat from inside the Earth. The inside of the Earth is very hot. Sometimes this heat comes near the surface. We can use this heat to warm our houses. We can generate electricity with it.



### HYDROPOWER

Hydropower is energy created by moving water. Moving water has a lot of energy. We use that energy to generate electricity.



### SOLAR

The sun provides lots of energy to the Earth. We call it solar energy. It travels from the sun to the Earth in rays. The energy from the sun makes rain fall, wind blow, and plants grow.



### WIND

Wind is moving air. We can use the energy in wind to do work.

## NONRENEWABLE

Fuels that cannot be easily made or replenished; we can use up nonrenewable fuels.



### COAL

Coal was formed millions to hundreds of millions of years ago from plants. Coal is often shiny, black rock. Coal is a fossil fuel that we burn for energy.\*



### NATURAL GAS

Natural gas is a mixture of gases you can't see, smell, or taste. We often add an odor to it so we can smell it. It has a lot of energy in it. You can burn it to make heat. Natural gas is a fossil fuel.\*



### PETROLEUM

Petroleum is a liquid that is found underground. Sometimes we call it oil. Oil can be as thick and black as tar or as thin as water. Petroleum is a fossil fuel\* that has a lot of energy we release when we burn it.



### PROPANE

Propane is the gas we use to fuel our backyard grills and operate machines in warehouses. You cannot see it, smell it, or taste it, but you can burn it to produce heat energy. Propane is fossil fuel.\*



### URANIUM

Uranium is a mineral found in rocks in the ground. We split uranium atoms to release energy in nuclear power plants.