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AN INSTITUTION OF CARICOM

2019 ENERGY REPORT CARD

JAMAICA

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CARICOM | TAPSEC TECHNICAL ASSISTANCE PROGRAMME FOR SUSTAINABLE ENERGY IN THE CARIBBEAN | Co-Funded by the European Union | german cooperation DEUTSCHE ZUSAMMENARBEIT

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INTRODUCTION

This document presents Jamaica's Energy Report Card (ERC) for 2019.

The ERC provides an overview of the energy sector performance in Jamaica. The ERC also includes energy efficiency, projects, technical assistance, workforce, training and capacity building information, subject to the availability of data.

This ERC includes data and information that was provided by government ministries, agencies, or departments, with responsibility for energy, utilities, and statistical offices.

The data collected was supplemented by internet research, author calculations and inferences.

This data is a collection from a variety of public sources and as such, is for general information only. It is not intended for decision-making purposes and therefore reliance placed on the information herein is strictly at the user's risk.

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ENERGY SECTOR SUMMARY

Key Data and Information - Energy Sector	
Population (2018 Estimate)	2,726,667 [1]
GDP (USD) Per Capita	5,843 [2]
Debt as % of GDP	96.4% [3]
Human Development Index (2018)	0.734 [4]
National Development Plan/Overall Country Development Strategy	Jamaica Vision 2030 [5]
National Energy Policy	Jamaica's National Energy Policy 2009-2030 [6]
Renewable Energy (RE) Policy	Draft National Renewable Energy Policy 2009 – 2030: Creating a Sustainable Future [7]
RE Target	20% by 2030 [6]
Energy Performance Standards/Appliance Labelling	The labelling of commodities. Part 21: Energy labelling of Appliances and Products [8]
No. of Persons Employed in Energy Sector	Not available
Total Oil Import (BOE) per day (2018)	60,986.87 [9]
Total Oil Export (BOE) per day	None
Total Installed Capacity (MW)	1,143 [10]
Total Installed RE (MW)	188 [10]
Electricity System Losses (%)	26.1% [11]
Energy Use (kWh) Per Capita	1,200 [10]
Energy Intensity (BTU/$1)	10,650 [10]
Fuel and Oil Imports as % of GDP	10.84% [12]
Climate Change Policy	Green Paper: Climate Change Policy Framework and Action Plan (2013) [13]
Electric Vehicle Stock	26 [14]
National Determined Contributions (NDC)	25.4% by 2030 (unconditional)/ 28.5% by 2030 (unconditional) [15]
National Repository for Energy Data	None

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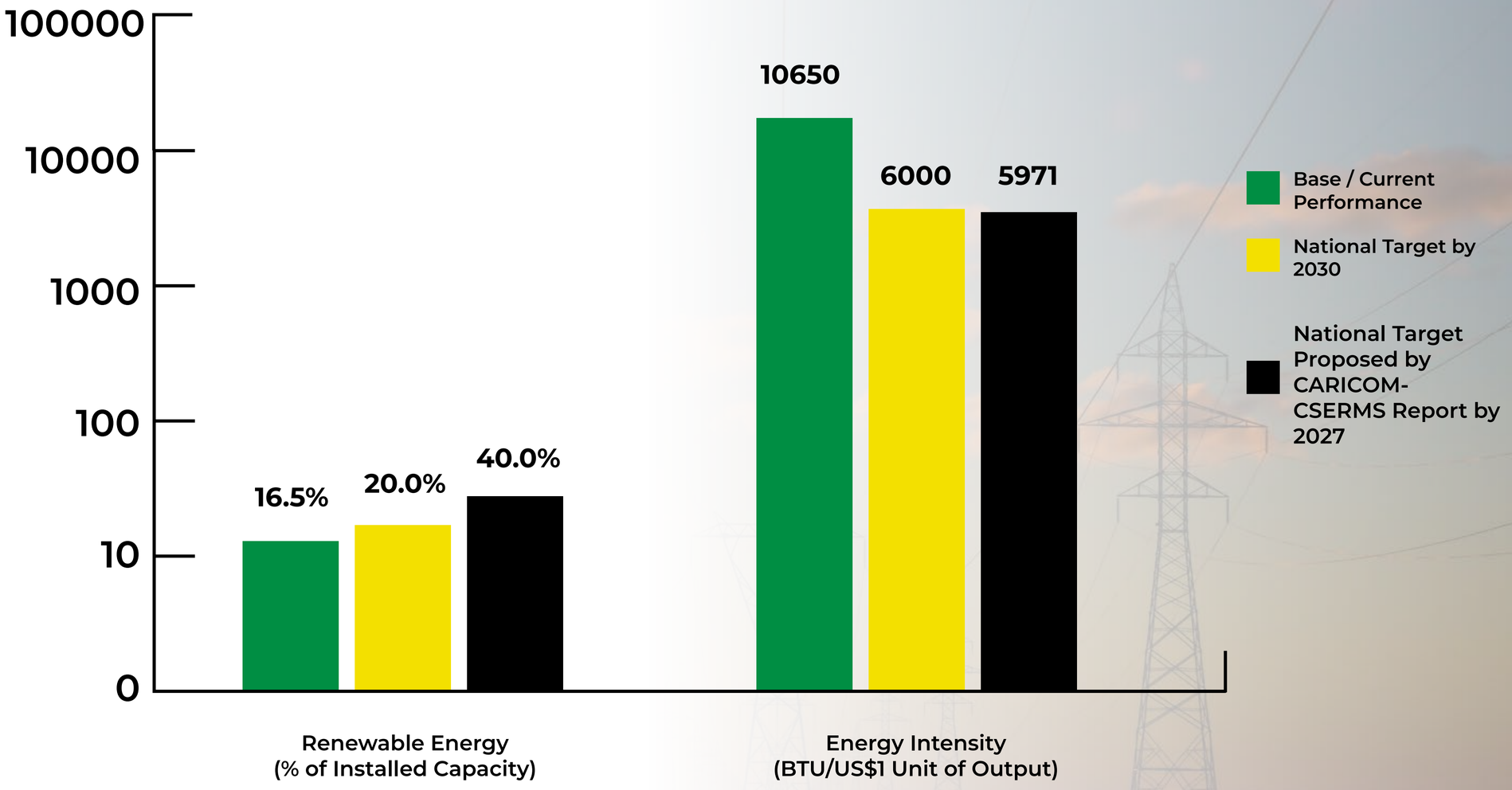
ENERGY SECTOR PERFORMANCE AGAINST TARGETS



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KEY ENERGY STAKEHOLDERS

Government Ministries, Departments and Agencies

- Ministry of Science, Energy & Technology
- Petroleum Corporation of Jamaica
- Government Electrical Inspectorate

Fuel Importers & Suppliers

- Petrojam Ltd
- Petrojam Ethanol Ltd
- Marketing companies: Rubis, Texaco, Total

Electric Utility

- Jamaica Public Service Company (JPSCo)

Independent Power Producer(s)

- Jamaica Private Power Company
- Jamaica Energy Partners
- Wigton Wind Farm
- Jamaica Aluminum Company Limited
- Content solar
- BMR Energy
- Paradise Park solar farm
- West Kingston Power Partners (WKPP)

Electricity Regulator

- Office of Utilities Regulation

Transportation

- Ministry of Transport & Mining
- Transport Authority of Jamaica

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ELECTRICITY SECTOR: POLICY, LEGAL AND REGULATORY (PLR) FRAMEWORK

	Completed	Draft	In Progress	Not Completed
Energy Policy and Energy Action Plan	✓			
RE Target	✓			
EE Target	✓			
Electricity Regulator	✓			
Net Billing / Net Metering	✓			
Interconnection Policy/Standards	✓			
Feed-in-tariff				✓
RE/EE Act		✓		

KEY ACHIEVEMENTS: PLR FRAMEWORK TIMELINE FOR ELECTRICITY SECTOR

Name	Year
Electricity (Frequency Conversion) Act (Last Amendment)	1970 [16]
Electricity Development Act (Last Amendment)	1971 [17]
Electric Lighting Act (Last amendment)	1977 [18]
Electricity Act	2015 [19]
Office of Utilities Regulation (Last Amendment)	2015 [20]

Policies and Legislation Relevant to the Energy Sector

Policies:
- Jamaica's National Energy Policy 2009-2030 (2009) [6]
- (Draft/Green Paper) Energy & Conservation Policy (2010) [21]
- Draft National Renewable Energy Policy 2009 – 2030 … Creating a Sustainable Future (2010 [7]

Legislation:
- Petroleum and Oil Fuel (Landing and Storage) Act November 13, 1925 Last Amendment January 1, 1990 [22]
- Petroleum (Quality Control) Act May 17, 1990 Last Amendment: January 1, 2001 [23]
- Petroleum Act June 15, 1979 Last Amendment: January 1, 2006 [24]

Policies and Legislation Relevant to the Transportation Sector

Policies:
- National Road Safety Policy (2001)
- National Transport Policy (2007)

Legislation & Regulation:
- Public Passenger Transport (Rural Area) Act August 25, 1970 Last Amendment: January 1, 2005 [25]
- The Road Traffic Act April 1, 1938 Last Amendment: January 1, 2005 [26]
- Public Passenger Transport (Kingston Metropolitan Transport Region) Act April 24, 1947 Last Amendment: January 1, 2010 [27]
- The Transport Authority Act January 1, 1988 Last Amendment: January 1, 2014 [28]

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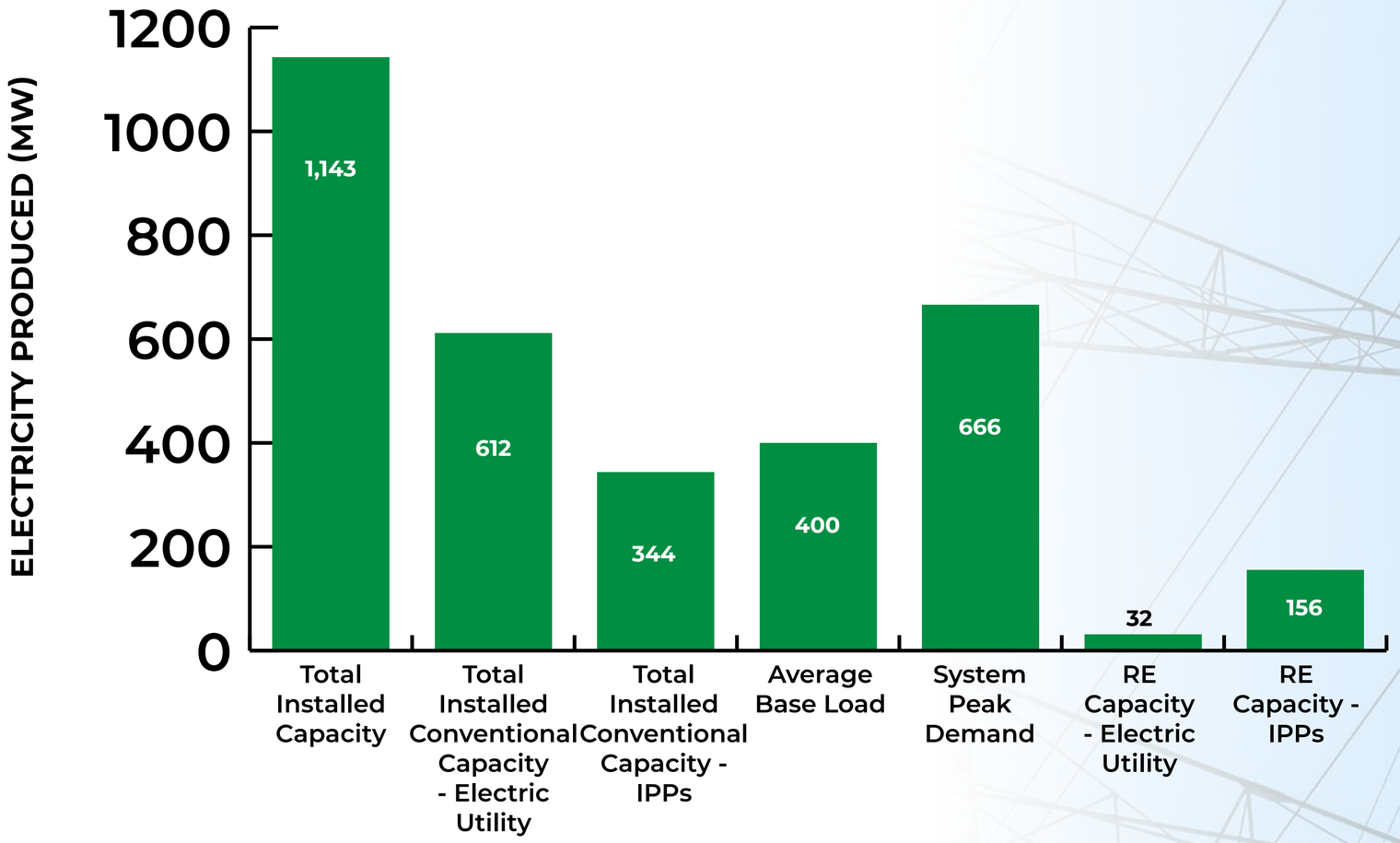

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TARRIFS

Class	Monthly Consumption / Demand	Customer Charge USD/ Month	Energy Charge USD/kWh	Demand USD/kVA			
				Std.	Off Peak	Part Peak	On Peak
Rate 10 LV (Residential)	<=100kW	3.32	0.07				
Rate 10 LV (Residential)	>100kW	3.32	0.17				
Rate 20 (Small Commercial)	<25kVA	7.39	0.14				
Rate 40[1] LV - Std (Large Commercial)	<25kVA	52.08	0.04	13.34			
Rate 40[2] LV - TOU (Large Commercial)	<25kVA	52.08	0.04		0.56	5.87	7.51
Rate 50 MV - Std (Small Industrial)	≥25kVA	52.08	0.04	11.95			
Rate 50 MV - TOU (Small Industrial)	≥25kVA	52.08	0.04		0.53	5.20	6.67
Rate 70 MV - Std (Large Industrial)	>2MVA	52.08	0.03	11.37			
Rate 70 MV - TOU (Large Industrial)	>2MVA	52.08	0.03		0.51	5.01	6.44
Rate 60 LV (Street Lights)		21.00	0.18				

EFFICIENCY

Electricity System Heat Rate (kj/kWh)	11,317
EE Target (BTU/USD by 2030)	6,000
Electricity System Losses (%)	26.1
Energy Use (kWh) Per Capita	1.20
Energy Intensity Index (BTU/US$1 Unit of output)	10,650

[1] Standard
[2] Time of Use

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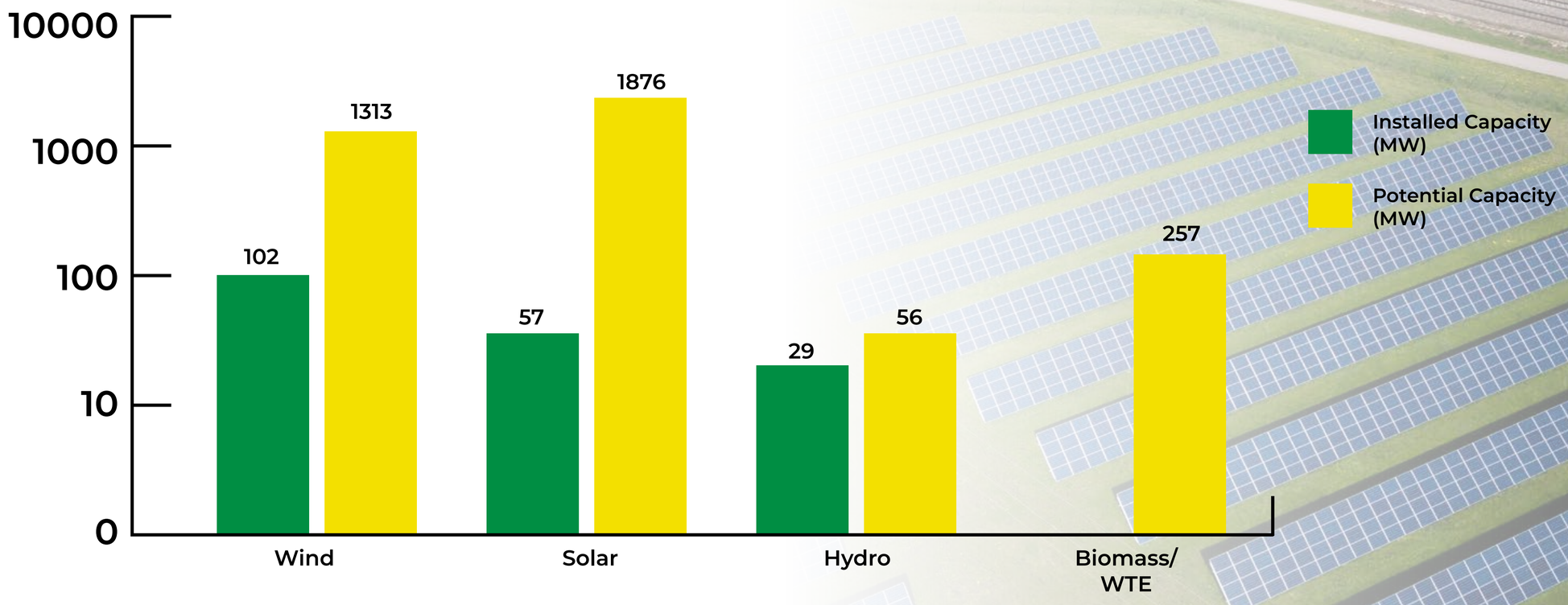
RENEWABLE ENERGY RESOURCES



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TECHNICAL ASSISTANCE PROJECTS

Project Name	Donor Organization & Banks	Technical Assistance Providers	Implementing Agency	Funding Awards	Year
Energy Efficiency and Conservation Program	Inter-American Development Bank	Inter-American Development Bank	Ministry of Science, Energy & Technology	USD 20,000,000	2019
Supporting Sustainable Transportation Through the Shift to Electric Mobility in Jamaica	Global Environment Facility/ United Nations Development Programme	Global EV Programme	Ministry of Economic Growth & Job Creation; Ministry of Transport, Works & Mining	USD 1,784,862	2019
Mitigating the Impacts of Climate Change Through the Albion Heights Green Community Project	Global Environment Facility/ United Nations Development Programme Small Grants Programme		Jamaica Climate Change Youth Council; Caribbean Maritime University	USD 65,000	2019
Jamaica's Energy Management and Efficiency Programme	Japan International Cooperation Agency /Inter-American Development Bank/European Union			USD 15,000,000	2017

ENERGY EFFICIENCY PROJECTS

Energy Efficiency		Change in Old/Existing Infrastructure Expected in Upcoming Calendar Year (Number/Size)	Expected Change in Technology
Street Lighting	JPS Smart LED Street lighting Programme	The replacement of 105,000 street lights to LED Lights by 2020; 41,574 bulbs changed as of July 2018	
	Mitigating the Impacts of Climate Change Through the Albion Heights Green Community Project	Installation of at least 10 solar streetlights and additional solar lighting infrastructure by 2021	Use of renewable energy for lighting streets and households rather than dependence on fossil fuel based generation
Public Buildings	Energy Efficient Air Conditioning Retrofits at Several Divisions of the Jamaica Constabulary Force		

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Name of Education Programme Provider	Types of Programme			Programme Link
	Vocational Certificate	B.Sc.	M.Sc.	
University of Technology, Jamaica (Caribbean Sustainable Energy & Innovation Institute (CSEII))			Sustainable Energy and Climate Change	https://www.utech.edu.jm/academics/cseii/events/master-of-science-in-sustainable-energy-and-climate-change#:~:text=The%20Masters%20of%20Science%20in,innovation%20and%20green%20business%20development.
HeartTrust/NTA's National Tool and Engineering Institute (NTEI)	Renewable Energy and Efficiency Technology (REET)			
The University of the West Indies, Mona Campus		Renewable Energy Management (Minor)		https://www.mona.uwi.edu/physics/minor-renewable-energy-management
The University of the West Indies, Mona Campus		Energy and Environmental Physics		https://www.mona.uwi.edu/physics/programmes/view/1817
The University of the West Indies, Mona Campus			Renewable Energy Management	https://www.mona.uwi.edu/physics/master-science-renewable-energy-management

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WORKFORCE

Data on the workforce in the energy sector was not available.

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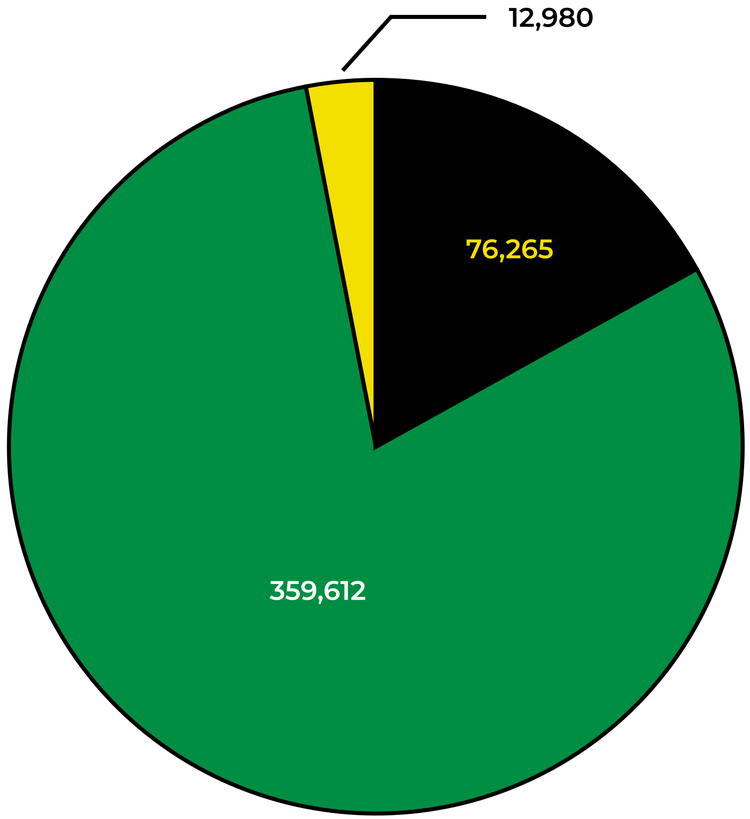
TRANSPORTATION SECTOR

REGISTERED VEHICLE STOCK



Cars
Buses
Trucks

There are also:
11 Alternative fuel vehicles (CNG, LNG, LPG) and 26 Electric Vehicles

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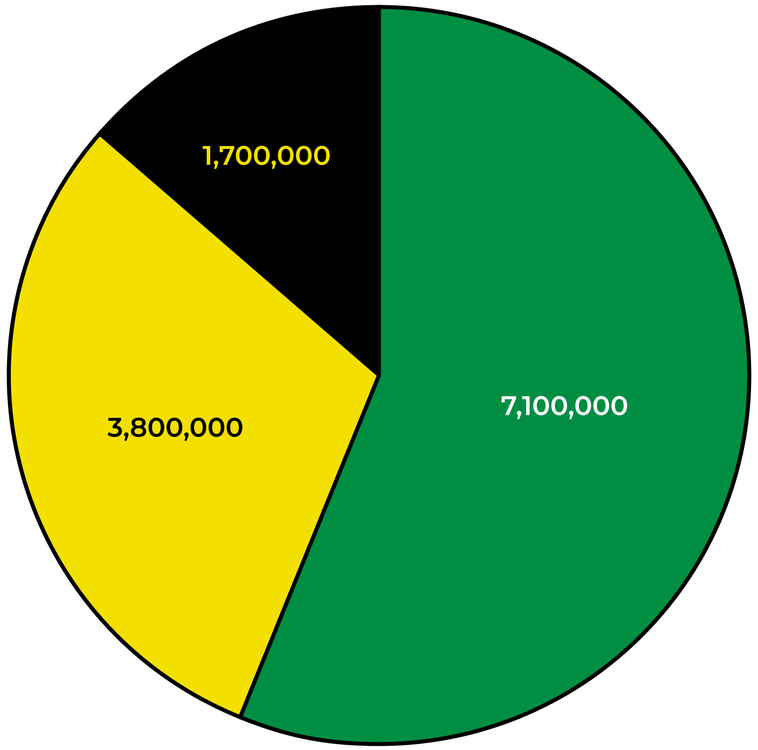
TRANSPORTATION FUEL CONSUMPTION (BOE)



Road
Marine
Aviation

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CLIMATE CHANGE FRAMEWORK

Climate Change Policy	Green Paper: Climate Change Policy Framework and Action Plan (2013) [13]
National Determined Contributions	25.4% by 2030 (unconditional)/ 28.5% by 2030 (unconditional) [15]
Emissions Reduction Target	7.8% below BAU by 2030 (unconditional) 10% below BAU by 2030 (conditional) [29]
Priority Sectors for NDC	Forestry, Agriculture and Fisheries, and Energy sectors [29]
National Communications (NC) to the UNFCCC	The First National Communication of Jamaica to the United Nations Framework Convention on Climate Change [30]
	The Second national Communication of Jamaica to the United Nations Framework Convention on Climate Change [31]
	Third National Communication of Jamaica to the United Nations Framework Convention on Climate Change [32]

GREENHOUSE GAS (GHG) INVENTORY [32]

Greenhouse Gas Source and Sink Categories	CO_2 (Gg CO_2)	CH_4 (Gg CO_2eq)	N_2O (Gg CO_2eq)	NOx (Gg NO_2)	NMVOC (Gg NMVOC)	CO (Gg CO)	SO_2 (Gg SO_2)
Energy	6909.33	1.41	0.24	69.06	33.58	9.88	15.99
Industrial Processes	436.56	0	0	0	0	3.08	0
Solvent and Other Product Use	0	0		0	0	14.01	0
Agriculture	12.87	20.88	0	8.07	10.09	1.67	0
Land-Use Change & Forestry	-1625.88	0	0	0	0	0	0
Waste	38.62	26.3	0.15	5.33	0.31	1.01	0.01
International Bunkers	1365.79	0.06	0.04	1.97	19.12	0.63	4.23
Biomass	586.92	0	0	0	0	0	0

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ENERGY SECTOR SUMMARY

ENERGY SECTOR PERFORMANCE AGAINST TARGETS

KEY ENERGY STAKEHOLDERS

ELECTRICITY SECTOR: POLICY, LEGAL AND REGULATORY (PLR) FRAMEWORK

ELECTRICITY & ENERGY EFFICIENCY

PROJECTS IN THE PIPELINE

NUMBER AND TYPE OF TERTIARY LEVEL & VOCATIONAL TRAINING SUSTAINABLE ENERGY PROGRAMMES OFFERED

WORKFORCE

TRANSPORTATION SECTOR

CLIMATE CHANGE FRAMEWORK

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