CCREEE
CARIBBEAN CENTRE FOR RENEWABLE ENERGY & ENERGY EFFICIENCY

CARICOM

2018 ENERGY REPORT CARD
JAMAICA

This document presents Jamaica's Energy Report Card (ERC) for 2018. The ERC provides an overview of 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 and was supplemented by internet research, author calculations and inferences.

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"AT-A-GLANCE"

Summary of the Energy Sector

KEY DATA & INFORMATION – ENERGY SECTOR	
Population	2,727,503 [1]
GDP (USD) Per Capita	$ 9,299 [2]
Human Development Index	0.732 [3]
National Energy Policy	Yes [4]
Renewable Energy (RE) Policy	Yes [4]
RE Target	20 % by 2030.[4]
Energy Performance Standards/Appliance Labelling	Yes[4]
Total Oil Imports (BOE) per day	60,796.59 [5]
Total Oil Export (BOE) per day	9,710.2 [5]
Total Installed Capacity (MW)	1283 (2017) [4]
Total Installed RE (MW)	151 [4]
Fuel & Oil Imports as % of GDP	11 % (2017) [6]
Electric vehicle stock	Yes
National Repository for Energy Data	Energy Database Management Information System (EDMIS) [4]

ENERGY SECTOR PERFORMANCE AGAINST TARGETS

Indicator	Base /Current Performance (Year)	National Target	National Target (Proposed by CARICOM – CSERMS Report)[7]
RE as % of Installed Capacity	11.8 % [11]	20% by 2030[4]	40 % by 2027
*Energy Intensity (BTU/US$1 Unit of output)			

Indicative RE Oil Displacement[8,9] Potential Annually**

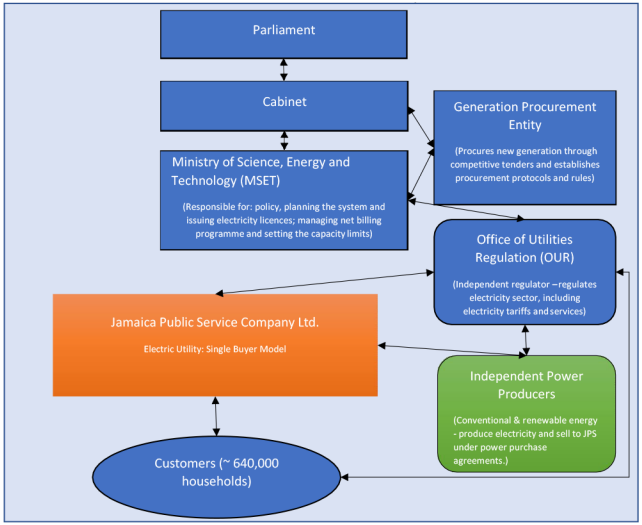
- *1 MW wind displaces 1,760 barrels of oil equivalent (BOE)*
- *1 MW hydro displaces 3,300 BOE*
- *1 MW solar displaces 1,210 BOE*

Energy Intensity (EI)[10]:

- *EI measures how energy benefits the economy and is calculated by taking the ratio of total primary energy use (all of the fuels and flows that a country uses to get energy) to GDP (the total money made in a country). EI indicates how effectively an economy uses their fuels and flows.*

*The energy efficiency target for CARICOM is 33% reduction in energy intensity by 2027, compared to a reference of Average Annual Energy Intensity of ~13,000 BTU per USD of GDP in 2015.
**Based on capacity factors of 0.32 for wind. 0.6 for hydro and 0.22 for solar.

KEY ENERGY SECTOR STAKEHOLDERS



KEY STAKEHOLDERS: ROAD TRANSPORTATION [12]

Ministry of Transport and Mining

Ministry of Local Government Community Development

Petroleum Corporation of Jamaica

Petrojam; Petrojam Ethanol

Island Traffic Authority

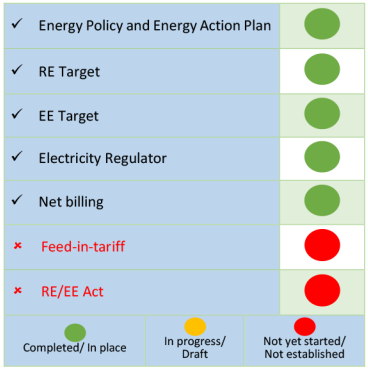
Jamaica Urban Transit Company

Transport Authority

Jamaica Gasoline Retailers Association

POLICY, LEGAL AND REGULATORY FRAMEWORK

Electricity Sector : Policy, Legal and Regulatory (PLR) Framework [4]



Policies and Legislation Relevant to the Transportation Sector [12]	
Policies	• Vision 2030 National Development Plan • Vision 2030 Transport Sector Plan 2009–2030 • National Transport Policy • National Energy Policy, 2009-2030 • National Biofuels Policy
Legislation & Regulation	• The Transport Authority Act • Petroleum Oil Fuel (Landing and Storage Act) • Petroleum (Quality Control) Act

ELECTRICITY & ENERGY EFFICIENCY

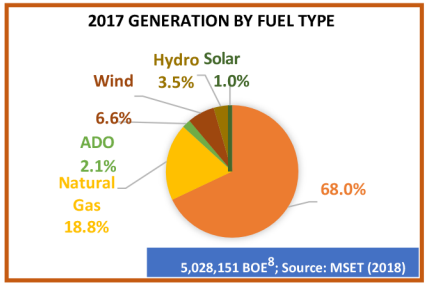
KEY DATA & INFORMATION	
1. Fuel Consumption – Electricity Subsector (BOE)	5,028,151 (2017) [6]
2. Installed Conventional Capacity – Electric Utility (MW)	902 [13]
3. Installed Conventional Capacity – IPPs (MW)	380 [13]
4. Base Load (MW)	425 [13]
5. System Peak Demand (MW)	655 [13]
6. Total Generation (MWh)	4,355,535 [13]
7. Total Sales (MWh)	3,202,650 [13]
8. Total Number of Customers	657,997 [13]

TARIFFS	
9. Residential Tariff (US$/kWh)	0.30 [13]
10. Commercial (US$/kWh)	0.04 – 0.14 [14]
11. Industrial/Large Power (US$/kWh)	0.04 [14]
12. Street Lights (US$/kWh)	
EFFICIENCY	
13. EE Target	6 000 BTU/US$ by 2030 [4]
14. Electricity System Losses (%)	26.5 % [13]
15. Energy Use (kWh) Per Capita	1809 [13]
16. EE Initiatives[15]	Energy Efficiency and Conservation Programme (EECP) Bureau of Standards Jamaica Energy Efficiency Testing and Labelling Programme Energy Security and Efficiency Enhancement Project (ESEEP)

ELECTRICITY & ENERGY EFFICIENCY

RE Resource	Installed Capacity (MW) [4]
Wind	102
Solar	20
Hydro	29
Geothermal	
Biomass/ WTE	
Total	151

RE as % of installed Power Capacity = 11.8%



RE Resource Potentials	Potential Capacity (MW) [4]
Wind	122
Solar PV	650
Hydro	33.4
Geothermal	
Biomass; WTE	192; 65
Total	1062.4

TRANSPORTATION SECTOR: JAMAICA

Key Transportation Data and Information	
Fuel Consumption, Transportation (BOE)	6,605,400
Energy-related transportation targets?	
Sustainable /Alternative fuels used?	E10-87 and E10-90 (2017)
Total Imports for Alternative Fuels	
Conventional Vehicle Stock/Vehicle Registration	
Trucks	310, 206 (2017)
Cars	1, 120, 025 (2017)
Buses	
SUVs	
Hybrid vehicle stock	Yes
Electric vehicle stock	Yes
Fuel Quality Standards?	Yes

Breakdown of Fuel Use in the Transportation Sector		
Type of Fuel/s	**Quantity (BOE)**	**Purpose** (Road, Railway, Aviation, Marine)
Gasoline	5,470,146 (2017)	Road and Railway
Diesel		
Turbo Fuel	10,068 (2017)	Aviation
HFO Bunker and ADO Bunker	97,274 (2017)	Marine

Source: Ministry of Science, Energy and Technology (2019)

PROJECTS IN THE PIPELINE

Renewable Energy Source	Resource and Project Capacity	Development Partner	Funding Source
Solar Photo-Voltaic	Paradise Park Westmoreland- 51 MWp /37 MW. Total estimated cost: USD 64 million.	MPC Capital, Eight Rivers Energy Company Limited and Neoen International SAS-Private	Proparco-Subsidary of French Agency of Development

Source: Jamaica Public Service Company Limited (2018)

NUMBER AND TYPE OF TERTIARY LEVEL SUSTAINABLE ENERGY PROGRAMMES OFFERED

Name of Education Programme Provider	Name of Programme	Type of Programme		
		B.Sc	M.Sc	Ph.D Level
The University of the West Indies, Mona, Jamaica	Alternative Energy	X		X
	Energy and Environmental Physics	X		
	Renewable Energy Management		X	
	Renewable Energy Technology		X	
	Renewable Energy Management (Post Graduate Diploma)			X
University of Technology, Jamaica	Renewable Energy Engineering		X	
	Sustainable Energy and Climate		X	
Caribbean Maritime University, Jamaica	Mechanical Engineering with Renewable Energy and Energy Efficiency	X		

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[11]Calculated

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[14]Office of Utilities Regulation: Jamaica Public Service Company Limited Annual Review 2018 https://www.our.org.jm/ourweb/sites/default/files/documents/sector_documents/jps_2018_annual_review_upload_request.pdf

[15]Jamaica Bureau of Standards https://www.bsj.org.jm/articles/energy-efficiency-programme

[16]Rapid Scan Assessment of the Capacity Requirements for Sustainable Energy Development for CARICOM Countries (Professor Dr. Olav Hohmeyer, International Energy Consulting) (2019)