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2017 ENERGY REPORT CARD CARICOM

This document presents CARICOM's Energy Report Card (ERC) for 2017. The ERC provides data and information on CARICOM's energy sector by focusing on two priority sub-sectors: Electricity and Transportation. The ERC also presents energy efficiency, climate change, training and capacity building information for the energy sector. Further details can be found in the relevant ERCs for the individual CARICOM Member States.

This ERC includes data and information that was provided by government ministries, agencies or departments with responsibility for energy within CARICOM countries, and which was supplemented by internet research, author calculations and inferences.

December 2018

Disclaimer

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SUMMARY OF ENERGY SECTOR PERFORMANCE, CARICOM

KEY SOCIOECONOMIC AND ENERGY DATA

Country	Population (2017)	GDP per capita in 2017 (USD)	Debt as % of GDP (2017)	Human Development Index (HDI) (2017)	Total installed capacity (MW)*	Fossil-fuel based capacity (MW)*	Renewable energy capacity (MW)*
Antigua & Barbuda (A & B)	**94,731**	26,400	86.8	0.78	112.2	108.0	4.2
Bahamas	**329,988**	32,400	54.6	0.807	536	536.0	0
Barbados	**292,336**	18,600	157.3	0.8	249	239.0	10
Belize	**360,346**	8,300	99	0.708	203.68	105.2	98.48
Dominica	**73,897**	11,000	82.7	0.715	27	20.1	6.64
Grenada	**111,724**	15,100	70.4	0.772	50.87	48.7	2.16
Guyana	**737,718**	8,100	52.2	0.654	404	347.0	57.4
Haiti	**10,646,714**	1,800	31.1	0.498	310	248.0	62
Jamaica	**2,728,864**	9,200	116	0.732	1021	869.9	151.12
Montserrat	**5,292**	12,044			5.44	5.44	0
St. Kitts & Nevis	**52,715**	28,200	62.9	0.778	58.9	55.7	3.2
St. Lucia	**164,994**	14,400	70.7	0.747	91.4	88.4	3
St. Vincent & the Grenadines (SVG)	**102,089**	11,500	73.9	0.723	52.4	45.8	6.59
Suriname	**591,919**	14,900	69.3	0.72	410	221.0	189
Trinidad &Tobago (T & T)	**1,218,208**	31,300	41.8	0.784	2094	2094.0	0.0044
TOTAL	**17,511,535**				**5,626**	**5,032**	**594**

**Various years over the period, 2011-2017; based on data availability || **2016 data*

FUEL IMPORTS, TOTAL ENERGY SUPPLY AND FINAL CONSUMPTION

Country	Total Fuel Imports (BOE)	Value of Imports as % of GDP	Total Energy Supply (BOE)	Total/Final Energy Consumption (BOE)
A & B	1,413,136	15.1% (2012)	1,413,136	1,215,530
Bahamas		11% (2015)		
Barbados	3,237,550	7%	3,467,500	2,110,065
Belize		7%	2,023,255	
Dominica	333,245	5%	296,709	237,360
Grenada	949,000	6%	1,016,525	734,015
Guyana	5,373,530	11%	6,598,265	
Haiti		4%	7,600,000	
Jamaica	20,899,170	11%	19,870,878	19,270,860
Montserrat		25%	60,292	
St. Kitts & Nevis	620,500	5%	711,568	440,008
St. Lucia	1,095,000	16%	1,117,265	581,080
SVG	547,500	9%	574,328	438,365
Suriname		10%	11,720,914	
T & T	21,900,000		183,230,000	98,185,000
TOTAL				

Data availability relating to fuel imports, supply and consumption varies across the region; data years vary. Current data on fuel imports (commodity types, quantities and costs), total energy supply and final consumption (including sectoral breakdowns) are needed to accurately assess performance. Sector definitions/how data is disaggregated need to be consistently defined and tracked across the region.

PERFORMANCE AGAINST TARGETS

Indicator	CARICOM Targets (C-SERMS)[1]	Indicative Progress
RE as % of installed Capacity	20% by 2017 28% by 2022 48% by 2027	

Performance against energy intensity target (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) and Power Sector CO_2 Emissions Reductions targets (18 % by 2017;32 % by 2022; 36 % by 2027) should also be tracked, however not enough data exists to determine progress.*

KEY ENERGY SECTOR STAKEHOLDERS: CARICOM

COUNTRY	Government Ministry with Responsibility for Energy Portfolio	Electric Utility	Electricity Regulator
ANTIGUA AND BARBUDA	Ministry of Public Utilities, Civil Aviation, Transport and Energy	Antigua Public Utilities Authorities	
BAHAMAS	Ministry of the Environment and Housing	Bahamas Electricity Corporation (BEC); Grand Bahama Power Company (GBPC)	Utilities Regulation & Competition Authority
BARBADOS	Office of the Prime Minister, Division of Energy and Telecommunications	Barbados Light and Power Company Ltd. (BL&P Co.)	Fair Trading Commission
BELIZE	Ministry of Finance, Public Service, Energy and Public Utilities	Belize Electricity Ltd. (BEL)	Public Utilities Commission
DOMINICA	Ministry of Public Works, Energy and Ports	Dominica Electricity Services Ltd. (DOMLEC)	Independent Regulatory Commission
GRENADA	Ministry of Finance, Planning, Economy, Energy and Cooperatives	Grenada Electricity Services Ltd. (GRENLEC)	
GUYANA	Guyana Energy Agency	Guyana Power and Light (GPL)	Public Utilities Commission
HAITI	Energy Cell, Ministry of Public Works, Transportation and Communications	Electricité d'Haïti (EDH)	
JAMAICA	Ministry of Science, Energy and Technology	Jamaica Public Service Company Ltd. (JPS)	Office of Utilities Regulation
MONTSERRAT	Ministry of Communications, Works and Labour	Montserrat Utilities Ltd. (MUL)	
ST. KITTS AND NEVIS	Ministry of Housing, Public Works, Energy and Public Utilities	St. Kitts Electricity Co. Ltd. (SKELEC); Nevis Electricity Company Ltd. (NEVLEC)	Public Utilities Commission
SAINT LUCIA	Ministry of Infrastructure, Ports, Energy and Labour	St. Lucia Electricity Services Limited (LUCELEC)	Ministry of Public Utilities
ST. VINCENT AND THE GRENADINES	Ministry of National Security, Air and Sea Port Development	St. Vincent Electricity Services Ltd. (VINLEC)	Utility provider VINLEC self-regulates
SURINAME	Ministry of Natural Resources	Energie Bedrijven Suriname (EBS)	
TRINIDAD AND TOBAGO	Ministry of Energy and Energy Industries	Trinidad and Tobago Electricity Commission (T&TEC)	Regulated Industries Commission

POLICY, LEGAL AND REGULATORY FRAMEWORK: CARICOM

Countries	Finalized Energy Policy/ Action Plan?	Renewable Energy (RE) /Energy Efficiency (EE)Targets?	RE/EE Act?	Net Metering/ Billing?	Independent Power Producers?	Feed-in-Tariff (FIT)	Interconnection Policy/ Standards
Antigua and	●	●	●	●	●	●	●
Bahamas	●	●		●		●	
Barbados	●	●		●	●	●	●
Belize	●	●			●		
Dominica	●	●		●	●		●
Grenada	●	●		●	●		●
Guyana	●	●			●		
Haiti	●	●			●		
Jamaica	●	●		●	●		●
Montserrat	●	●		●			
Saint Lucia	●	●		●	●		●
St. Kitts and Nevis	●	●			●		
SVG	●	●		●		●	●
Suriname	●				●	●	
Trinidad and Tobago	●	●		●	●		●

● In place /established ● draft/in development

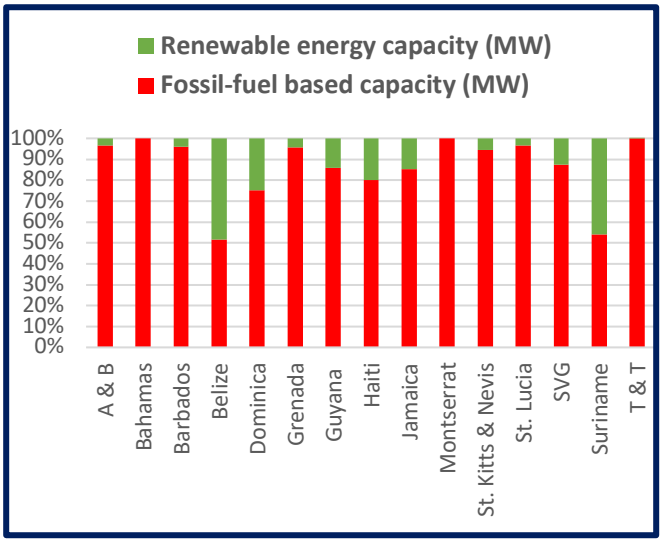
CLIMATE CHANGE FRAMEWORK: CARICOM

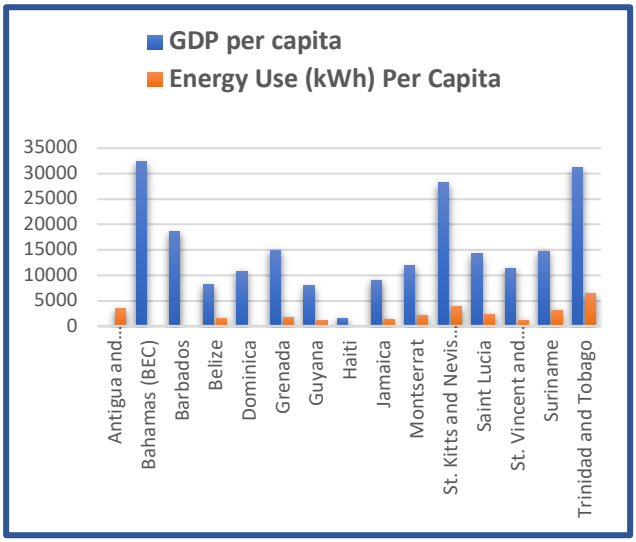
Countries	Climate Change Policy	National Communications (NC) to the UNFCCC	National Determined Contributions (NDC)?	Energy listed as priority sector for NDC?	Emissions Reduction Targets (as outlined in NDCs)
Antigua and Barbuda		NC1 (2001) NC2 (2011) NC3 (2016)	Yes	Yes	
Bahamas	Yes (2005)	NC1 (2001) NC2 (2015)	Yes	Yes	
Barbados	Yes (draft)	NC1 (2001) NC2 (2018)	Yes	Yes	23% below 2008 level (1,820 Gg CO_2e) by 2030
Belize	Yes (2014)	NC1 (2002) NC2 (2011) NC3 (2016)	Yes	Yes	
Dominica	Yes	NC1 (2001) NC2 (2012)	Yes	Yes	Reduction of 44.7% from 2014 levels
Grenada	Yes	NC1 (2000)	Yes	Yes	30% of 2010 levels (251,649 tons of CO_2) by 2025
Guyana		NC1 (2002) NC2 (2012)	Yes	Yes	
Haiti		NC1 (2002) NC2 (2013)	Yes		
Jamaica	Yes	NC1 (2000) NC2 (2011)	Yes	Yes	Reduction of 7.8% of emissions by 2030 versus business-as-usual (BAU)
Montserrat					
Saint Lucia	Yes	NC1 (2001) NC2 (2012) NC3 (2017)	Yes	Yes	Reduction of 23% (188 $GgCO_2$ – eq) by 2030 (against 2010 baseline: 643 $GgCO_2$-eq)
St. Kitts and Nevis	Yes	NC1 (2001) NC2 (2016)	Yes	Yes	22% and 35% against business as usual (BAU) scenario for 2025 and 2030 respectively
SVG		NC1 (2000) NC2 (2016)	Yes	Yes	Reduction in GHG emissions of 22% compared to BAU scenario by 2025.
Suriname		NC1 (2006) NC2 (2016)	Yes	Yes (RE)	
Trinidad and Tobago	Yes	NC1 (2001) NC2 (2013)	Yes	Yes	

Not all countries have quantified their emissions reductions targets. Additionally, the following is needed to accurately assess and track performance: data on baselines and regular monitoring and reporting of progress.

ELECTRICITY SUBSECTOR & ENERGY EFFICIENCY: CARICOM

INSTALLED CAPACITY AND ENERGY USE PER CAPITA



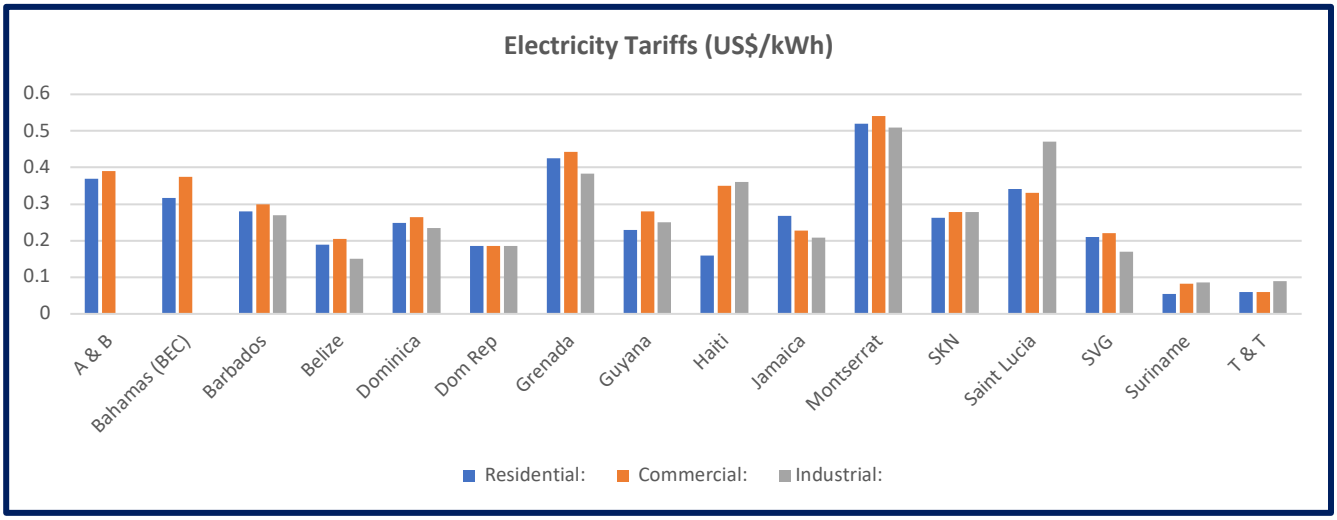


ELECTRICITY GENERATION

Country	Total Generation (MWh)	Total Sales (MWh)	Total Number of Customers	System Losses (%)
A & B	330,000	270,000	38,000	18%
Bahamas	1,930,000		114,000	12.3%
Barbados	967,800	915,200	129,000	6.2%
Belize	630,159	552,500	94,450	12%
Dominica	111.8	99.38	36,467	9%
Grenada	221,700	199, 320	50,019	8.12%
Guyana	809,411	555,643	188,664	29%
Haiti	875,000	413,638	245,300	15%
Jamaica	4,360,567	3,208,946	642,944	26.5%
Montserrat	12,282	11,557	3,590	8.7%
St. Kitts & Nevis	206,100			17% (St. Kitts); 20.3% (Nevis)
St. Lucia	400,300	359,654	66,784	8%
SVG	150,664	135,931	44,522	7%
Suriname	1,950,000	1,410,000	145,000	
T & T	9,318,244,000	8,311,688,789	487,877	11%
TOTAL	**9,331,088,095**	**8,319,521,957**	**2,286,617**	

Data availability varied by country and in several instances 2017 data was not available.

ELECTRICITY TARIFFS

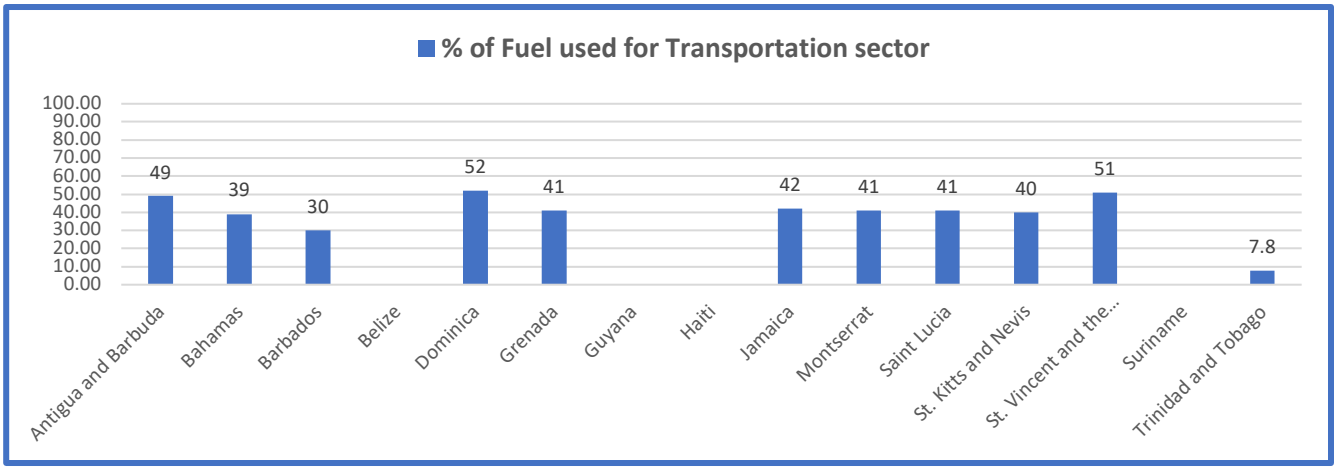


RENEWABLE ENERGY POTENTIALS

Countries	Hydro (MW)	Wind (MW)	Geothermal (MW)	Solar (MW)	Biomass/WTE (MW)
Antigua and Barbuda		400		27	
Bahamas		200		60	1
Barbados		40		39.7	23.5
Belize	70	20		42	40
Dominica	17	30	300	45	
Grenada	0.5	20	50	50	
Guyana	7000			575.8 million MWh/year	60.2GWh
Haiti	896.5	27.3GWh		1.7	8.2
Jamaica	33.4	122		650	192
Montserrat			940	1.5	
Saint Lucia	0.15	40	170	36	
St. Kitts and Nevis		23.5	1280	16	14
SVG	10	8	890	23	4
Suriname	1700				
Trinidad and Tobago		50		308	

These estimates need to be validated by resource assessments in addition to climate change impact on the resources.

TRANSPORTATION SUBSECTOR: CARICOM



Countries	Fuel (BOE) Used in Transportation Sector	Sustainable Transportation Target?	Indicative Number of Conventional Vehicles Registered	Indicative Number of Hybrid & Electric Vehicles
Antigua and Barbuda	595,319	●	17,344	
Bahamas		●		
Barbados	1,065,800	●		>100 (2015)
Belize	837,339	●		
Dominica	123,370		23,500	1
Grenada	304,775	●	26,387	
Guyana	1,931,609		172,708	
Haiti				
Jamaica	6,186,000	●	3,304,559	
Montserrat			2,642	
Saint Lucia	240,170			
St. Kitts and Nevis	173,740	●		
SVG	293,460	●	24,046	
Suriname		●		
Trinidad and Tobago		●		
TOTAL	**11,751,582**		**3,571,186**	

Data providing a breakdown on how fuel is used within the transportation subsector is not readily available and, in some instances, may not be tracked.
**Data years vary.*

WORKFORCE: ENERGY SECTOR, CARICOM

Number of Persons Employed in Energy Sector Institutions

COUNTRY	NAME OF ENTITY	NUMBER OF PERSONS EMPLOYED	BREAKDOWN BY GENDER AND EMPLOYMENT LEVEL	
Belize	Belize Electricity Limited	316 (2017)	**Females:** Managerial Level: Supervisor: Technical: Administrative:	**Males:** Managerial Level: Supervisor: Technical: Administrative:
Barbados	Barbados Light and Power	330 (2015)	**Females:** Managerial Level: Supervisor: Technical: Administrative:	**Males:** Managerial Level: Supervisor: Technical: Administrative:
Dominica	Dominica Electricity Services Limited	500 (2017)	**Females:300** Managerial Level: Supervisor: Technical: Administrative:	**Males:200** Managerial Level: Supervisor: Technical: Administrative:
Grenada	Grenada Electricity Services Limited	244 (2017)		
Guyana		100 (2017)		
St. Lucia	St. Lucia Electricity Services	252 (2015)	**Females:** Managerial Level: Supervisor: Technical: Administrative:	**Males:** Managerial Level: Supervisor: Technical: Administrative:

Number of Persons Trained in the Energy Sector in 2017

COUNTRY	NAME OF ENTITY	NUMBER OF PERSONS TRAINED	BREAKDOWN BY GENDER AND EMPLOYMENT LEVEL	
Antigua and Barbuda	• Antigua and Barbuda Bureau of Standards • Development Control Authority	18	**Females: 10** Managerial Level: Supervisor: Technical: Administrative:	**Males: 8** Managerial Level: Supervisor: Technical: Administrative:

Indicative Number and Type of Tertiary level and vocational training SE Programmes Offered in CARICOM

COUNTRY	Name of Education Programme Provider	Name of Programme	Number of persons enrolled	Type of Programme			
				Certificate	B.Sc	M.Sc	Ph.D

References

The data and information in this report was largely taken from the individual Energy Report Cards for the CARICOM Member States: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago.

[1] Worldwatch Institute. (2015). *Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS) Baseline Report and Assessment.* Retrieved from http://www.worldwatch.org/system/files/C-SERMS_Full_PDF.pdf