

CARICOM

ENERGY REPORT CARD (ERC) FOR 2021



INTRODUCTION

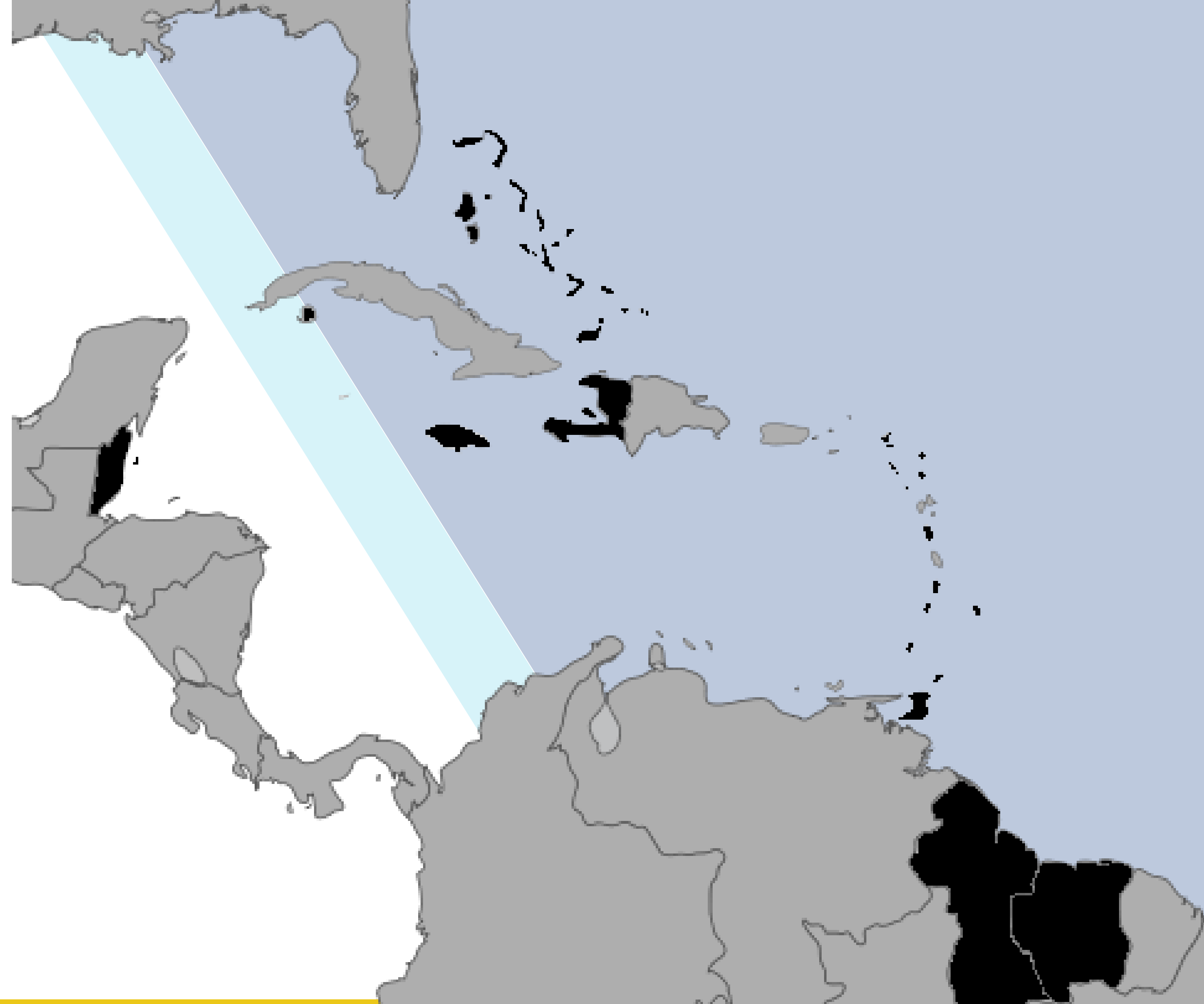
This document presents CARICOM's Energy Report Card (ERC) for 2021.

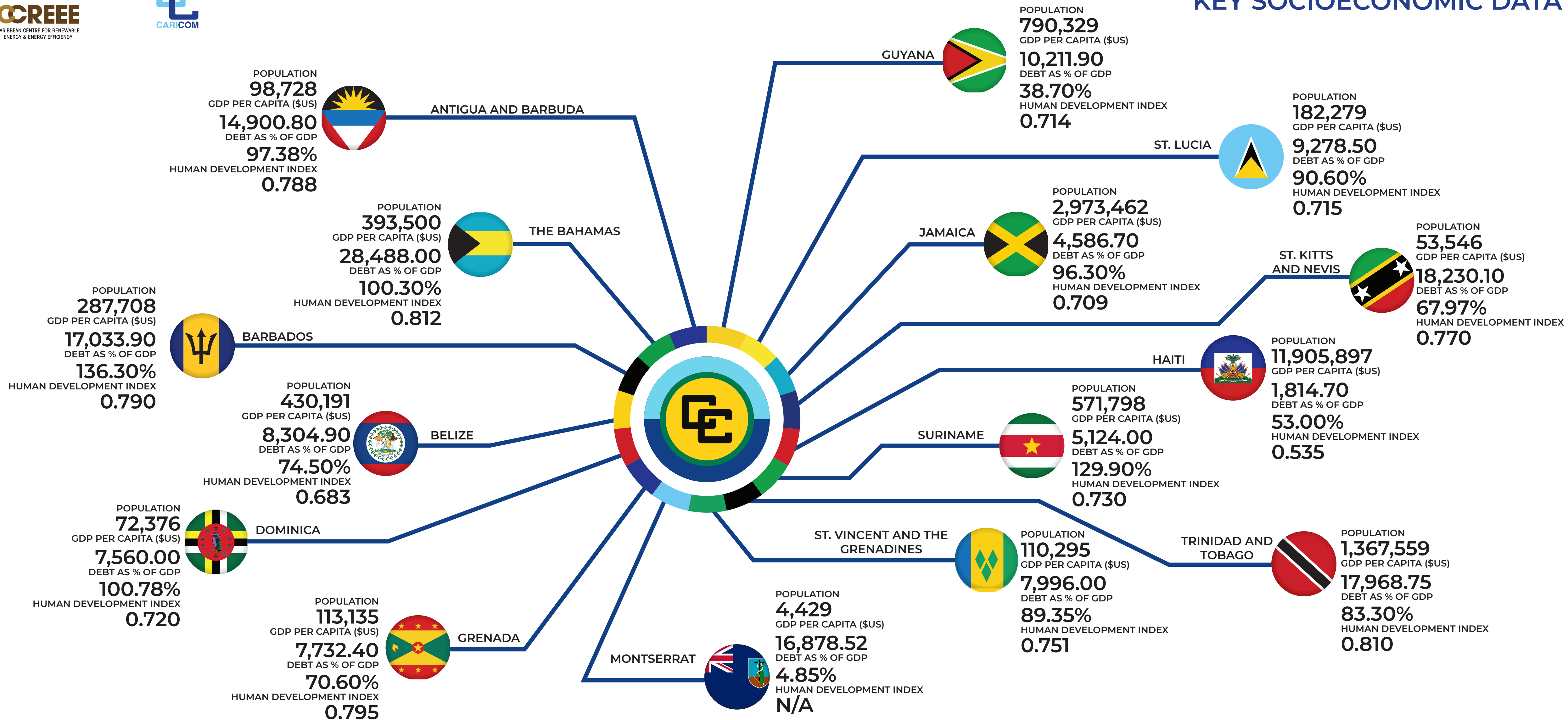
The ERC provides an overview of the energy sector performance in CARICOM. The ERC also includes energy efficiency, technical assistance, workforce, training and capacity building information, subject to the availability of data.

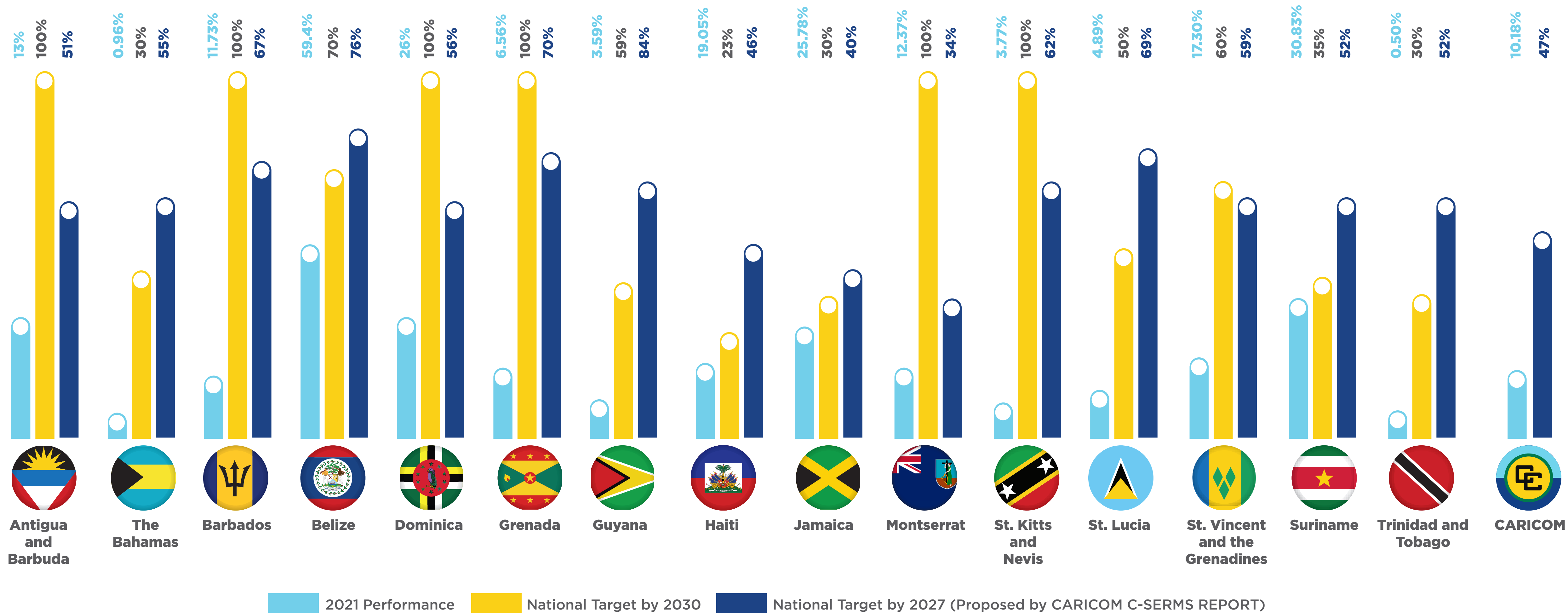
This ERC includes data and information that was provided by government ministries, agencies, or departments, with responsibility for energy, utilities, and statistical offices.

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

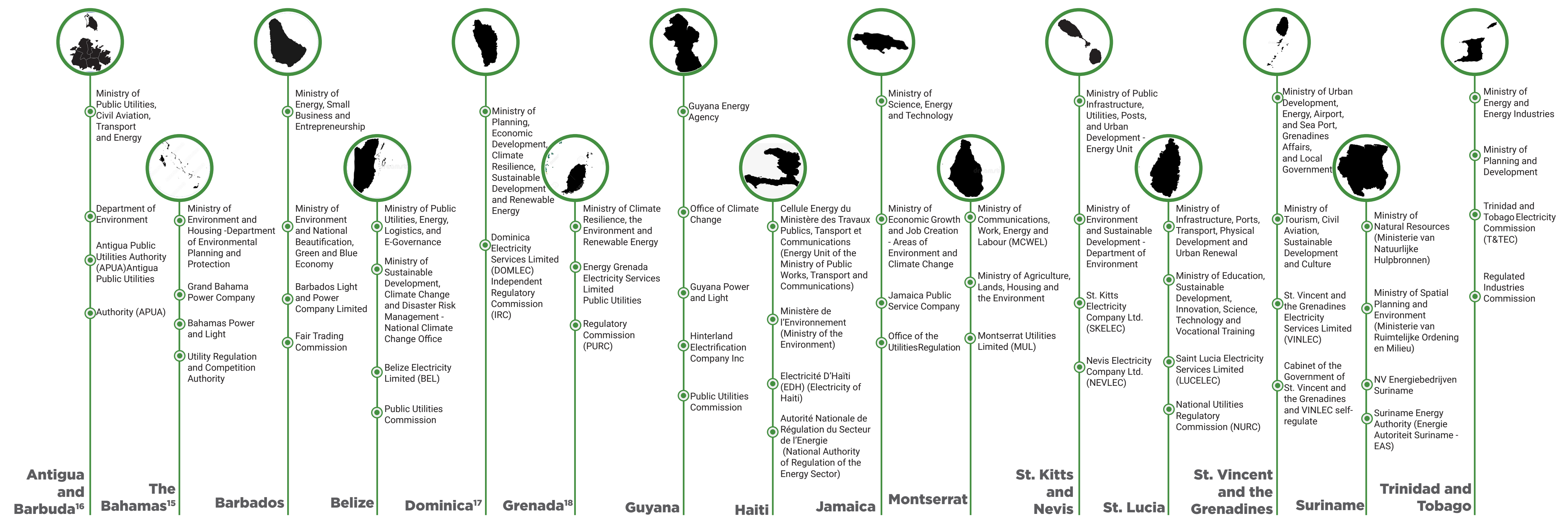
This data is a collection from a variety of public sources and, as such, is for general information only. It is not intended for decision-making purposes, and therefore reliance placed on the information herein is strictly at the user's risk.







1. The Government of Belize has committed to 70% renewable energy in gross electricity generation in Belize by 2030 [2]
 2. Guyana and St. Vincent and the Grenadines have national target dates of 2025.



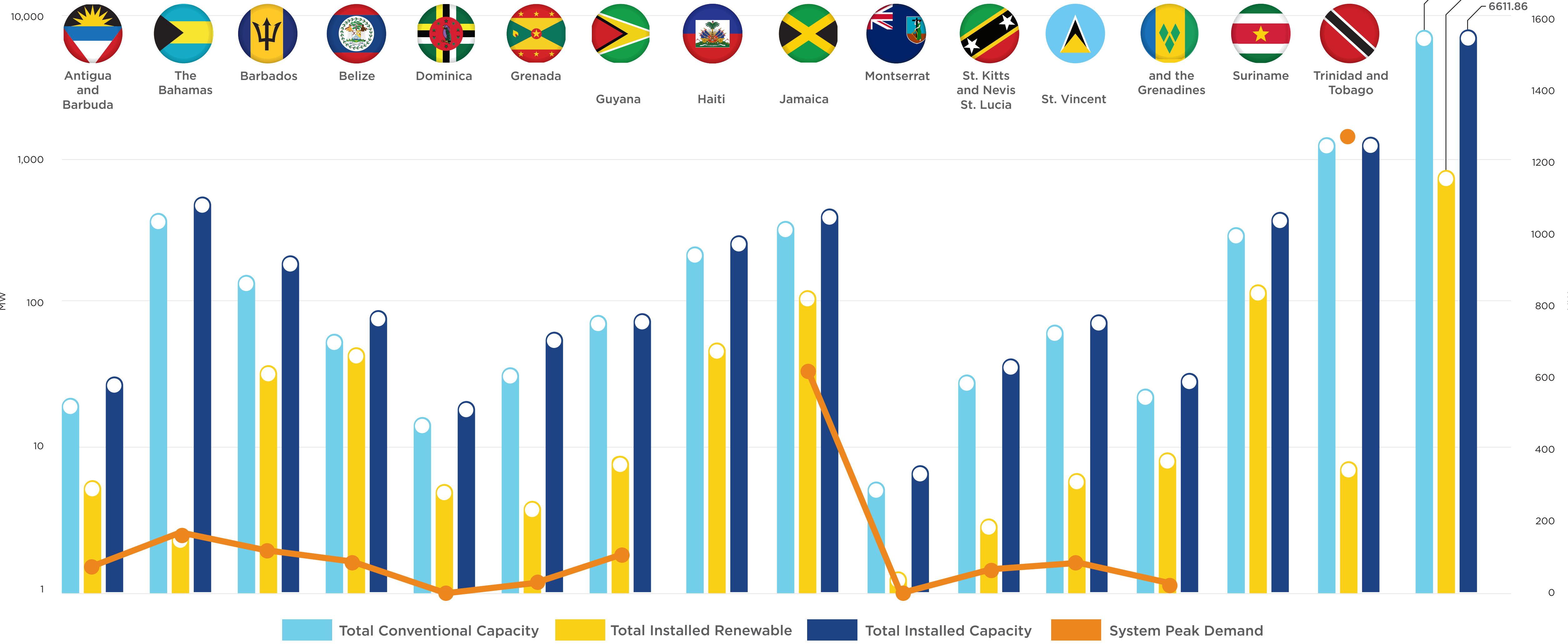
14. The Key Energy Stakeholders include the Energy Ministry, Climate Change Ministry, Electric Utility, Electric Regulator for each of the CARICOM Member States.
 15. Ministry of Environment and Housing - Department of Environmental Planning and Protection is responsible for Energy and Climate Change
 16. The Antigua Public Utilities Authority (APUA) is the Electric Utility and Electricity Regulator
 17. The Ministry of Planning, Economic Development, Climate Resilience, Sustainable Development and Renewable Energy is responsible for Energy and Climate Change.
 18. Ministry of Climate Resilience, the Environment and Renewable Energy is responsible for Energy and Climate Change.

	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:
Antigua and Barbuda	2010	2021	2019	1973	2017	2011		2015
The Bahamas	2013	2013		2009	2020	2020	2020	2015
Barbados	2019	2019	2019	2002	2010	2017	2019	
Belize	2012 ^[3]	2015	2015	2011				
Dominica	2021	2020		2006	2016	2016		2018
Grenada	2011	2017	2011	2016	2007	2007		
Guyana	2017			1999		2017		
Haiti		2015		2016	2016			
Jamaica	2009	2009	2009	1995	2016	2016		2010
Montserrat	2016	2020						
St. Kitts and Nevis	2011	2014				2015		
St. Lucia	2010	2015		2016	2009			
St. Vincent and the Grenadines	2010	2010			2019	2019	2019	2015
Suriname				2016				
Trinidad and Tobago		2021		2013		2011		

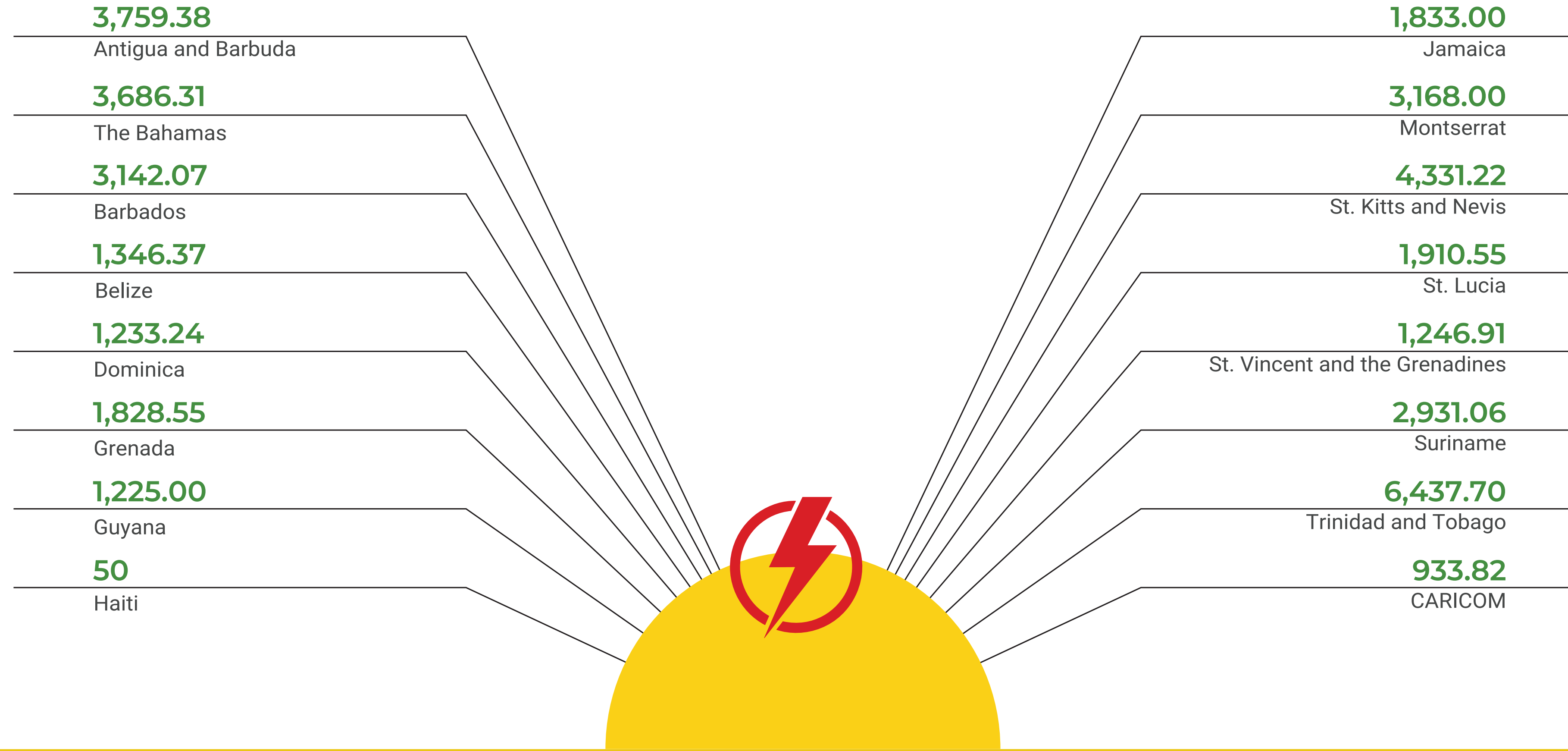
- Not Yet Established
- Draft in progress (Draft document being prepared)
- Draft (Document prepared & published)
- Completed
- Completed, updated draft in progress

ELECTRICITY & ENERGY EFFICIENCY [4] [5]

Electricity Data



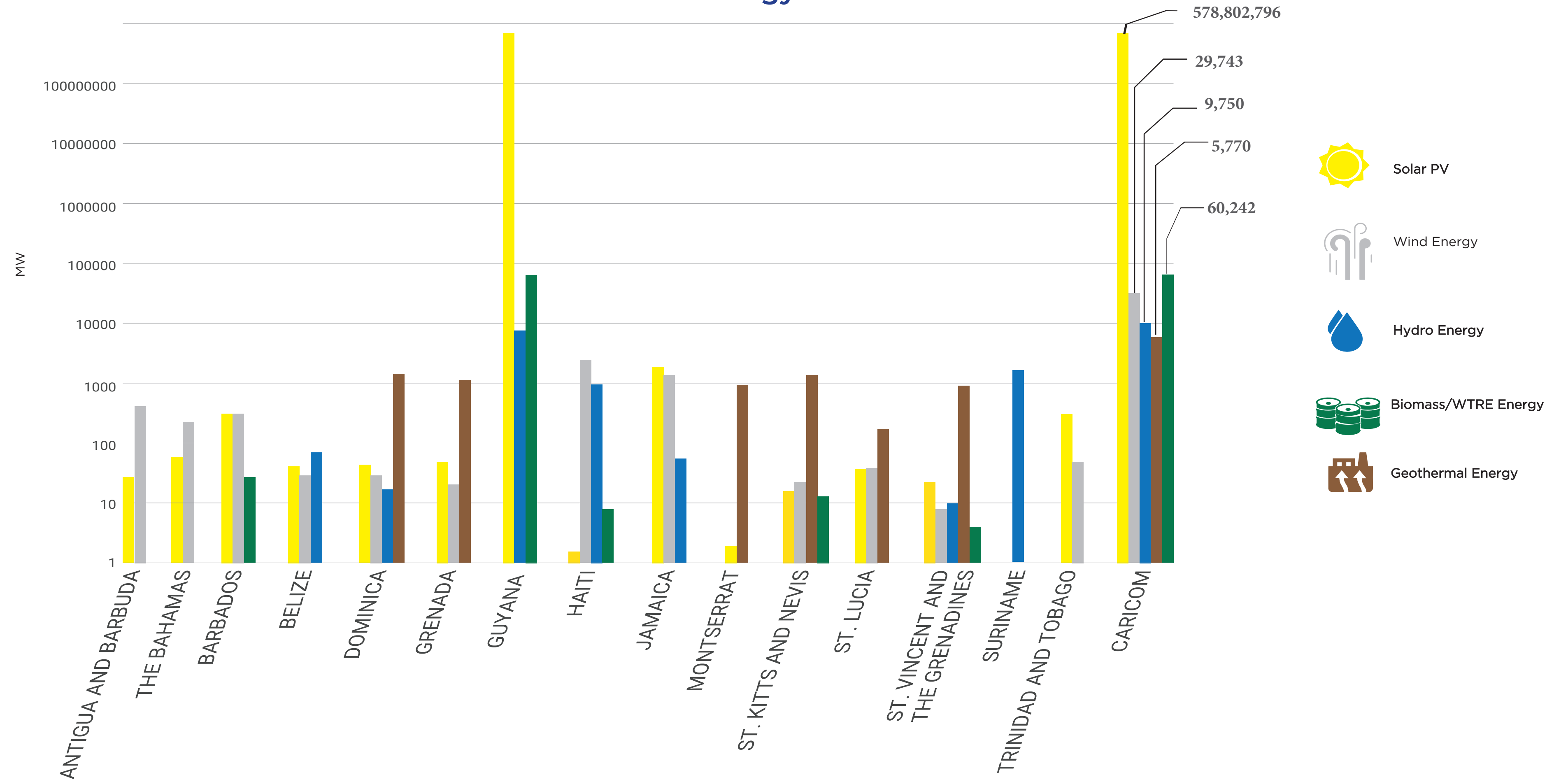
4. The peak demand for Haiti and Suriname were unavailable,
5. The total installed RE for Montserrat is 1 MW.



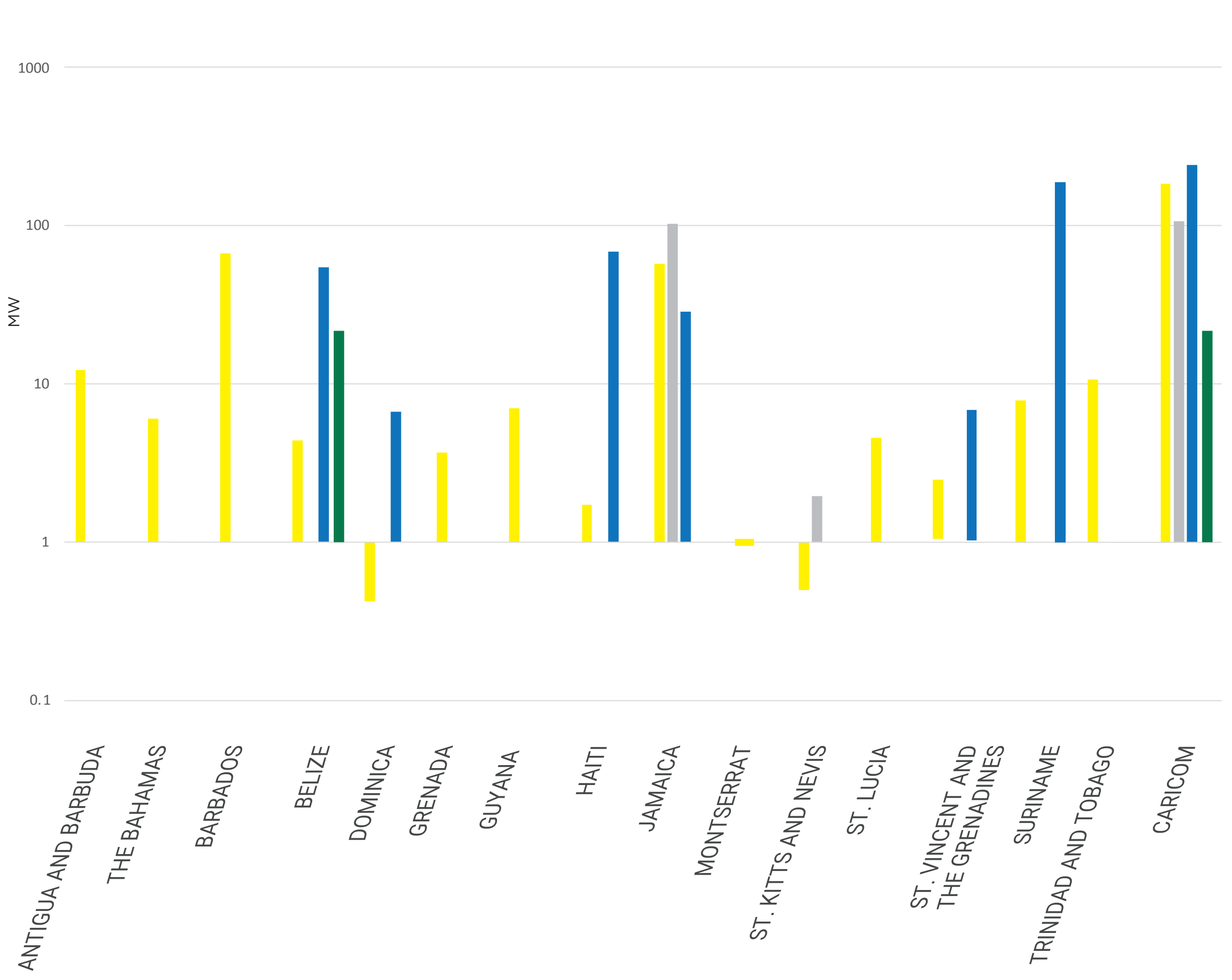
6. Access to electricity in Haiti is 45.4%. This contributes significantly to the rate of energy consumption.
7. Trinidad and Tobago has a significant amount of industrial activity which is reflected in a higher than average energy intensity.

RENEWABLE ENERGY POTENTIAL

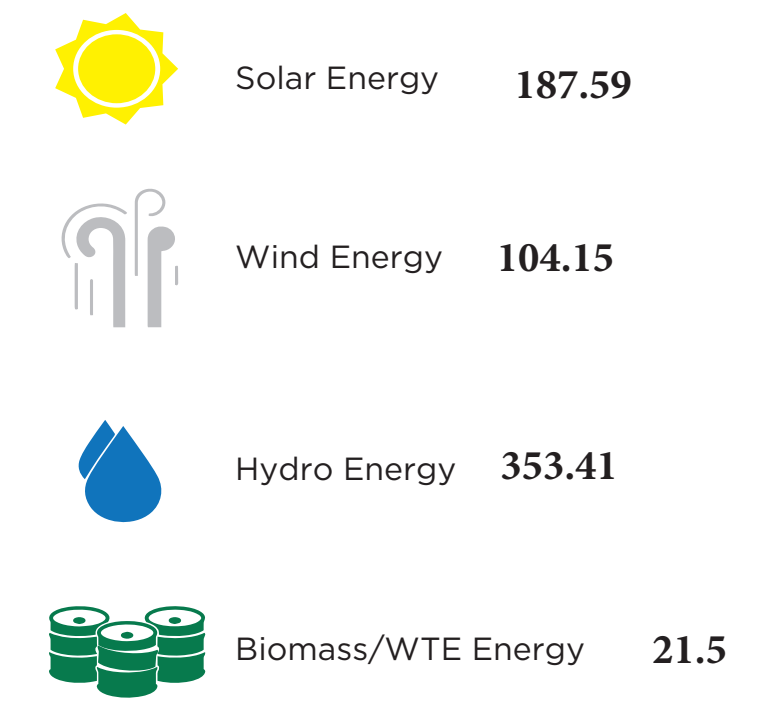
CARICOM Renewable Energy Potential



INSTALLED RENEWABLE ENERGY [8]



Country	Solar Energy (MW)	Wind Energy (MW)	Hydro Energy (MW)	Biomass/WTE Energy (MW)
ANTIGUA AND BARBUDA	12.2			
THE BAHAMAS	6.0			
BARBADOS	67.0			
BELIZE	4.40		54.50	21.5
DOMINICA	0.42		6.64	
GRENADA	3.66			
GUYANA	6.97			
HAITI	1.72		68.89	
JAMAICA	57.0	102.20	28.67	
MONTSERRAT	1.0			
ST. KITTS AND NEVIS	0.50	1.95		
ST. LUCIA	4.55			
ST. VINCENT AND THE GRENADINES	3.68		5.71	
SURINAME	7.90		189.0	
TRINIDAD AND TOBAGO	10.59			
CARICOM	187.59	104.15	353.41	21.5



8. There is no geothermal energy installed within CARICOM.

TERTIARY PROGRAMMES OFFERED

Types of Programmes

	NAME OF EDUCATION PROGRAMME PROVIDER	DIPLOMA	ASSOCIATE DEGREE	BACHELORS	POST GRADUATE CERTIFICATE	MASTERS	MPHIL/PHD	VOCATIONAL CERTIFICATE	PROFESSIONAL CERTIFICATE
Antigua and Barbuda	Antigua State College ⁹¹								
The Bahamas	University of the Bahamas		One programme	Two programmes					
	Bahamas Technical and Vocational Institute		One programme						
	Bahamas Technical and Vocational Institute & US solar institute							One programme	
	The Bahamas Agriculture and Marine Science Institute							One programme	
Barbados	University of the West Indies, Cave Hill Campus			Two programmes		One programme	Two Programmes		
	Samuel Jackman Prescod Institute of Technology							Five Programmes	
	Barbados Community College							One Programme	
	Barbados Vocational Training Board							One Programme	

9. The Antigua State College no longer offers the Green Engineering Degree or any other energy or climate programmes.

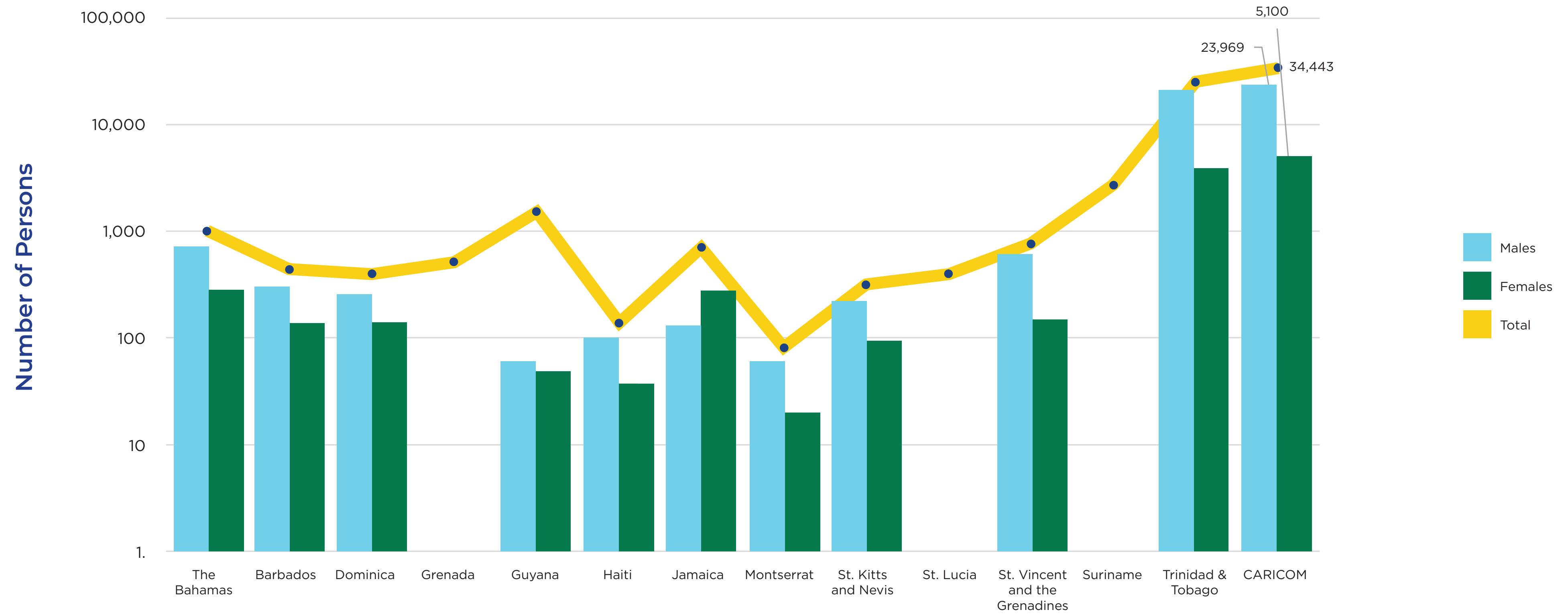
	NAME OF EDUCATION PROGRAMME PROVIDER	DIPLOMA	ASSOCIATE DEGREE	BACHELORS	POST GRADUATE CERTIFICATE	MASTERS	MPHIL/PHD	VOCATIONAL CERTIFICATE	PROFESSIONAL CERTIFICATE
Belize	Galen University			One programme					
	Sacred Heart Junior College		One Programme						
	Saint John's College Junior College		One Programme						
	University of Belize		One Programme	One Programme					
Dominica	Dominica State College		Two Programmes						
Grenada	Grenada Solar Energy Technical Research Institute (GSETRI)							One Programme	
Guyana	University of Guyana			Six Programmes	Three Programmes				
Haiti	Université d'Etat d'Haïti - State University of Haïti			One Programme					
	Quisqueya University			One Programme					

	NAME OF EDUCATION PROGRAMME PROVIDER	DIPLOMA	ASSOCIATE DEGREE	BACHELORS	POST GRADUATE CERTIFICATE	MASTERS	MPHIL/PHD	VOCATIONAL CERTIFICATE	PROFESSIONAL CERTIFICATE
	Université Lumière								
	GOC University			One Programme					
	The Vocational Training Centre of Haiti (CFPH) / Canado Technique		One Programme						
	Haiti Tec		One Programme						
	Université Américaine des Sciences Modernes d'Haïti (UNASMOH) - American University of Modern Sciences of Haiti			One Programme					
	Centre Technologique Modernes d'Haïti (CETEMOH) - Modern Technology Centre of Haiti		One Programme						
Jamaica	University of the West Indies, Mona			Two programmes		Two Programmes			
	University of Technology Jamaica			One Programme	Two Programmes	Two Programmes	One Programme		
	Excelsior Community College		One Programme						

	NAME OF EDUCATION PROGRAMME PROVIDER	DIPLOMA	ASSOCIATE DEGREE	BACHELORS	POST GRADUATE CERTIFICATE	MASTERS	MPHIL/PHD	VOCATIONAL CERTIFICATE	PROFESSIONAL CERTIFICATE
	Vector Technology Institute								One Programme
	HEART NTA / National Tool and Engineering Institute								One Programme
	Association Of Energy Engineers								One Programme
	University of the Commonwealth Caribbean		One Programme		One Programme				
	The Wigton Renewable Energy Training Lab								Eight Programmes
Montserrat	No Programmes conducted in country								
St. Kitts and Nevis	Clarence Fitzroy Bryant College (CFBC)		Two Programmes						
St. Lucia	Sir Arthur Lewis Community College		Three Programmes	One Programme				One Programme	
St. Vincent and the Grenadines	St. Vincent and the Grenadines Community College - Division of Technical Vocational Education		Three Programmes					One Programme	

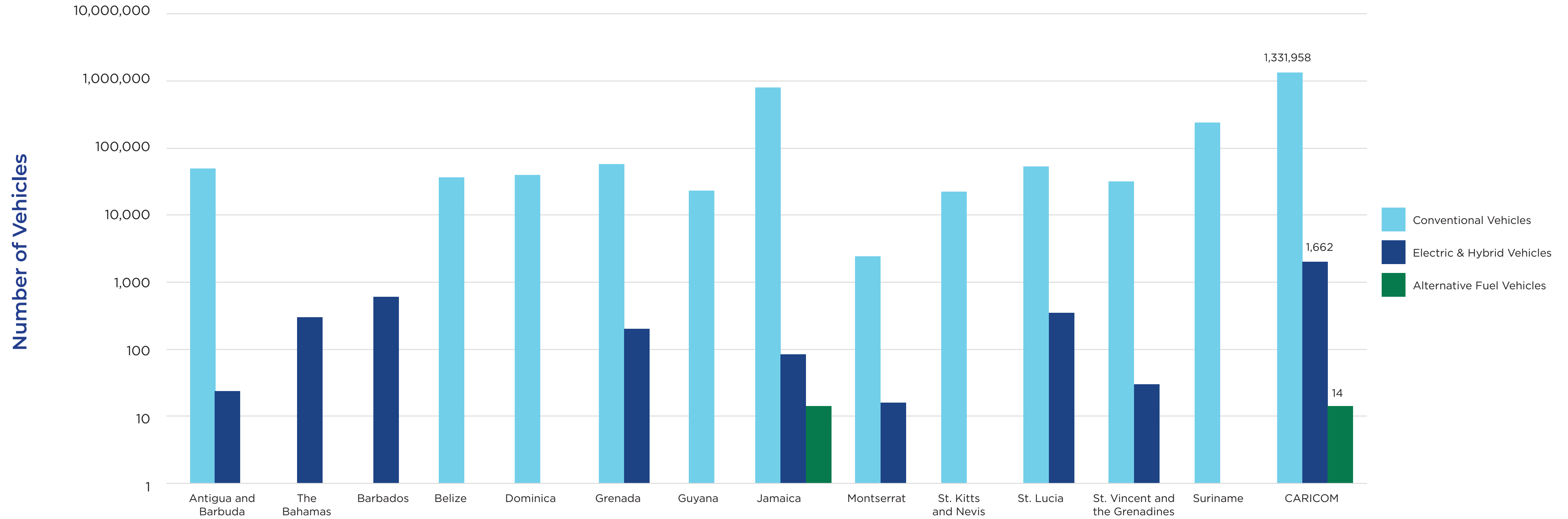
	NAME OF EDUCATION PROGRAMME PROVIDER	DIPLOMA	ASSOCIATE DEGREE	BACHELORS	POST GRADUATE CERTIFICATE	MASTERS	MPHIL/PHD	VOCATIONAL CERTIFICATE	PROFESSIONAL CERTIFICATE
	Sector Skills Development Agency		One Programme						
	SVG Adult and Continuing Education		One Programme						
Suriname	Anton de Kom University of Suriname					One programme			
	Polytechnic College Suriname			One Programme					
Trinidad and Tobago	The University of The West Indies St. Augustine Campus			Three Programmes		One Programme	One Programme		
	The University of Trinidad and Tobago	Two Programmes		One Programme		One Programme			
	School of Business and Computer Science							Four Programmes	
	CTS College of Business and Computer Science							One Programme	

Workforce



10. Workforce data in the energy sector were not provided for Antigua and Barbuda and Belize

Categories of Vehicles



11. No transport data was provided for Barbados, Haiti and Trinidad and Tobago for 2021.
 12. It was reported that there are more than 300 Electric Vehicles in the Bahamas.

Climate Change Framework

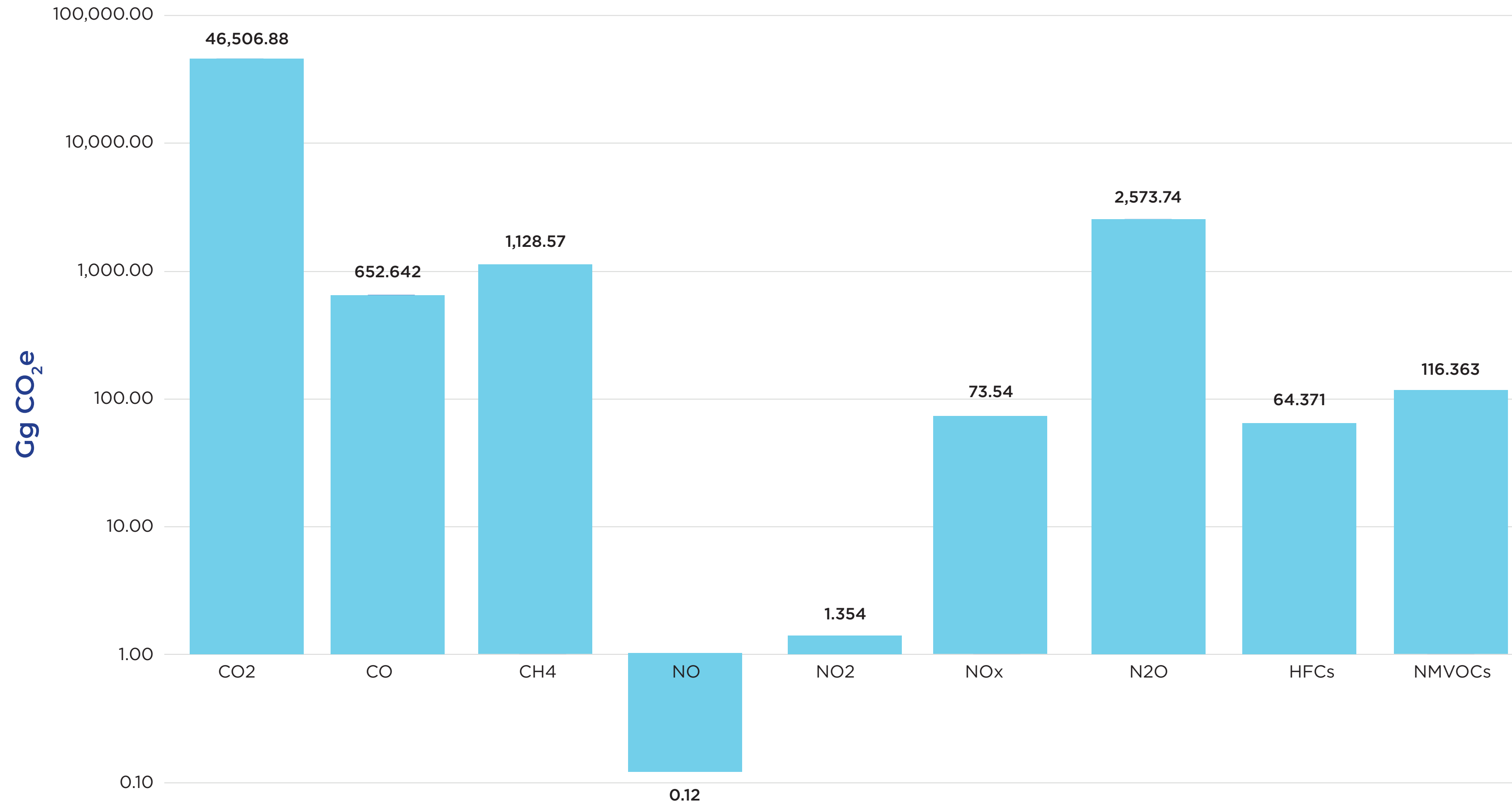
	CLIMATE CHANGE POLICY	NATIONAL DETERMINED CONTRIBUTIONS	EMISSION REDUCTION TARGET	PRIORITY SECTORS FOR NDC	NUMBER OF NATIONAL COMMUNICATION REPORTS TO UNFCCC
Antigua and Barbuda	Antigua and Barbuda Sustainable Energy Action Plan	<ol style="list-style-type: none"> 86% renewable energy generation from local resources in the electricity sector by 2030. 100% all new vehicle sales to be electric vehicles by 2030 Explore potential for emissions reductions in the waste sector by 2025 Explore potential for emissions reductions in the Agriculture, Forestry and Other Land Use (AFOLU) sector by 2030 	86% renewable energy generation in the electricity sector	<ul style="list-style-type: none"> Energy Sector Industrial Processes and Products Use Agriculture, Forestry and Other Land Use Waste Electricity Transportation 	3
The Bahamas	National Policy for the Adaptation to Climate Change	An economy wide reduction of GHG emissions of 30% when compared to is BAU scenario by 2030.	30% below 2010 levels by 2030	<ul style="list-style-type: none"> Forestry Energy 	2
Barbados	National Climate Change Policy (2012)	<p>Total absolute emissions in the base year (2008) have been restated at 2,123Gg CO₂e. The 2015 NDC inventory stated emissions at 1,816Gg CO₂e.</p> <ul style="list-style-type: none"> The absolute emissions reductions resulting from this 2021 NDC update conditional contribution below the 2008 base year are 705Gg CO₂e (2025) and 1,459Gg CO₂e (2030) respectively. Total economy wide BAU emissions projections are 1,881Gg CO₂e (2025) and 1,958Gg CO₂e (2030) respectively. 	<p>2025</p> <ul style="list-style-type: none"> 20% reduction relative to business-as-usual emissions in 2025 without international support (unconditional). 35% reduction relative to the business-as-usual emissions in 2025 conditional upon international support. <p>2030</p> <ul style="list-style-type: none"> 35% reduction relative to business-as-usual emissions in 2030 without international support (unconditional). 70% reduction relative to business-as-usual emissions in 2030 conditional upon international support. 	<ul style="list-style-type: none"> Energy, including transport Agriculture Industrial Processes and Product Use, Land-use Land Use Change and Forestry Waste 	2
Belize	National Climate Change Policy, Strategy, and Master Plan	A 63% increase in GHG removals related to the Agriculture, Forestry and Other Land Use (AFOLU) sector and an increase of renewable energy projects for grid connected electricity generation.	The mitigation actions included in the updated NDC are estimated to result in over 5.6 MTCO ₂ e in cumulative avoided emissions by 2030, and a reduction of 1.0 MTCO ₂ e in annual emissions by 2030 (not including additional deforestation targets)	<ul style="list-style-type: none"> Agriculture, Forestry and Other Land Use (AFOLU) Energy Transport Waste sectors 	

	CLIMATE CHANGE POLICY	NATIONAL DETERMINED CONTRIBUTIONS	EMISSION REDUCTION TARGET	PRIORITY SECTORS FOR NDC	NUMBER OF NATIONAL COMMUNICATION REPORTS TO UNFCCC
Dominica	National Climate Change Policy and Action Plan (2019-2024) Dominica Climate Resilience and Recovery Plan 2020 - 2030 (2020) National Resilience Development Strategy Dominica 2030	To reduce emissions by 45% below 2014 levels by 2030	To reduce emissions by 39% by 2025 and 45% by 2030 Energy Industries - 98.6% Transportation - 20% Shipping - 100% Agriculture - 50% Manufacturing and Construction - 8.8% Commercial /Institutional, Residential, Fishing - 8.1% Solid Waste - 78.6%	<ul style="list-style-type: none"> • Energy Industries • Transportation • Shipping • Agriculture • Manufacturing and Construction • Commercial/Industrial • Residential • Fishing, • Solid Waste 	3
Grenada	National Climate Change Adaptation Plan for Grenada, Carriacou and Petite Martinique	The Government of Grenada has committed itself at the COP 21 (Paris), with the submission of the Nationally Determined Contributions. The main aims of Grenada's NDC are as follows: Reduce carbon dioxide (CO2) emissions from the power sector by 40% by 2030. Reducing emissions from land transport 20% by 2025 Using methane capture technologies for reducing waste management emissions by over 90%. 7. Doubling carbon storage in areas for protected forest by for example, planting indigenous (Faster growing) species.	Reducing GHG emissions by 40% of the 2010 emissions levels by 2030.	<ul style="list-style-type: none"> • Electricity • Transport • Waste • Forestry 	2
Guyana	Draft National Climate Change Policy and Action Plan 2020-2030 Climate Resilient Strategy and Action Plan for Guyana (2015) Low Carbon Development Strategy (2030)	11% annually compared to historic levels from the timber industry. *(Note that Guyana is a net carbon sink)	70% emission reductions by 2030	<ul style="list-style-type: none"> • Forestry (including Avoided Deforestation) • Energy 	2

	CLIMATE CHANGE POLICY	NATIONAL DETERMINED CONTRIBUTIONS	EMISSION REDUCTION TARGET	PRIORITY SECTORS FOR NDC	NUMBER OF NATIONAL COMMUNICATION REPORTS TO UNFCCC
Haiti	Politique Nationale de Lutte contre les Changements Climatiques (PNCC) 2019	Réduction inconditionnelle de 6.32% par rapport au scénario de référence/Unconditional reduction of 6.32% compared to the baseline Réduction conditionnelle de 25.5% par rapport au scénario de référence/Conditional reduction of 25.5% compared to the baseline.	32% by 2030	<ul style="list-style-type: none"> • Agriculture • Fishing • Infrastructure • Forest • Water resources 	2
Jamaica	Climate Change Policy Framework for Jamaica (2021)	25.4% reduction relative to business-as-usual emissions in 2030 without international support (unconditional) 28.5% reduction relative to business-as-usual emissions in 2030 conditional upon international support		<ul style="list-style-type: none"> • Land-use and forestry • Agriculture • Waste to energy 	3
Montserrat	National Climate Change Policy for Montserrat (Draft)	Not Applicable	Not Applicable	Not Applicable	Not Applicable
St. Kitts and Nevis	St. Kitts and Nevis National Climate Change Policy	Transition to 100% renewable energy in power generation* Improve efficiency in transmission and distribution of electricity Electrification of 2% of the total vehicle Development of EV infrastructure *35 MW of renewable energy will be sourced from a solar farm that will be constructed through private capital, beyond which, all other interventions are conditional.	61% total CO2 emissions reduction against a 2010 base year by 2030	All sectors, with a focus on the energy sector (power generation and transportation)	2

	CLIMATE CHANGE POLICY	NATIONAL DETERMINED CONTRIBUTIONS	EMISSION REDUCTION TARGET	PRIORITY SECTORS FOR NDC	NUMBER OF NATIONAL COMMUNICATION REPORTS TO UNFCCC
St. Lucia	The Saint Lucia Climate Change Adaptation Policy (2015)	7% GHG emissions reduction in the energy sector relative to 2010, by 2030, equivalent to 37 GgCO ₂ eq.	The reduction of 16% and 23% of national greenhouse gas emissions by 2025 and 2030, respectively (relative to those in 2010)	Energy: Electricity generation and transportation	3
St. Vincent and the Grenadines	National Climate Change Policy of Saint Vincent and the Grenadines	60% by 2025	An unconditional, economy-wide reduction in greenhouse gas (GHG) emissions of 22% compared to its business as usual (BAU) scenario by 2025.	<ul style="list-style-type: none"> • Energy (including domestic transport) • Industrial processes and product use • Agriculture • Land use, land use change and forestry • Waste 	2
Suriname	National Climate Change Policy, Strategy and Action Plan (2014 - 2021)	Maintaining 93% forest cover; Renewable energy above 25 % by 2025 and above 35 % by 2030.	An estimated 70% of emissions from the following sectors: Forests, energy, agriculture, and transport.	<ul style="list-style-type: none"> • Forestry • Energy • Transportation • Agriculture 	3
Trinidad and Tobago	National Climate Change Policy (NCCP) (2011)	<p>Unconditional: 30% reduction in GHG emissions by December 31, 2030 in the public transportation sector compared to a business as usual (BAU) scenario (reference year 2013).</p> <p>Conditional: Additional reduction achievable under certain conditions which would bring the total GHG reduction to 15% below BAU emission levels by December 31, 2030.</p>	15% below BAU by 2030	<ul style="list-style-type: none"> • Power Generation • Transportation • Industry 	3

Total GHG Emissions for CARICOM by Gas



BIBLIOGRAPHY

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

CARICOM Energy Knowledge Hub CCREEE “2021 Energy Report Cards” 2021. [Online]. Available: <https://cekh.ccreee.org/?s=2021+energy+report+card>