CARICOM

ENERGY REPORT CARD (ERC) FOR 2022

CCREEE
CARIBBEAN CENTRE FOR RENEWABLE ENERGY & ENERGY EFFICIENCY

AN INSTITUTION OF CARICOM

INTRODUCTION

This is the Energy Report Card (ERC) for 2022 for CARICOM.

The ERC provides an overview of the energy sector performance, highlighting the following areas:

- Installed Conventional and Renewable Power Generation Capacity
- Annual Electricity Generation, from Conventional and Renewable Plants
- Other Electricity Sector Metrics, such as Losses, Consumption, and Tariffs
- Renewable Energy Targets
- Renewable Energy Resource Potential

The ERC also includes sectoral data and information on policies and regulations; workforce; training and capacity building; and related areas.

The data and information that are available in the ERC were mostly provided by the government ministries, agencies, and departments, that have responsibility for statistics and planning, in general, and the energy sector and electricity subsector including the electric utilities, *in particular*. The data and information collected was supplemented by desk based research and, in instances, information was generated from calculations and analyses that were performed by the CCREEE.

Quality Assurance

The collection and treatment of data and information that is produced for the ERC is consistent with the International Recommendations for Energy Statistics (IRES), which provides a comprehensive methodological framework for the collection, compilation, and dissemination of energy statistics in all countries irrespective of the level of development of their statistical system. The ERC is produced in accordance with these performance standards that seek, as far as is possible, to ensure the quality (i.e., objectivity, utility, and integrity) of data and information that it disseminates to the public.

The CCREEE strives for transparency on the information and methods that are used within the production of the ERC, with a view to improve understanding on how the information should be treated and to facilitate reproducibility of the information. Nevertheless, the Centre recognizes that quality may be limited by the nature and source of the data and information disseminated.

Disclaimer

The ERC includes data and information that is contained in a variety of public sources and, though every effort is made to validate the accuracy and validity of the contents, reliance on the information herein is strictly at the user's risk. The 2022 CARICOM Energy Report Card includes information and data from all of the CARICOM member states. The Turks & Caicos Islands, an associate member of CARICOM and a member of the CCREEE, has been included in the 2022 CARICOM Energy Report Card. CARICOM averages do not include the Turks & Caicos Islands.

Correction of Errors

If a substantive error is detected after the ERC is disseminated, the CCREEE will make correction and issue an errata notice, or other notification as appropriate. Also, the information contained within the ERC may be revised, after initial dissemination to reflect more complete information or other significant changes in the underlying data. The ERC may, from time to time, include information that is preliminary and is expected to be revised, or information that is revised from previously disseminated versions. In such instances, those cases are clearly noted.

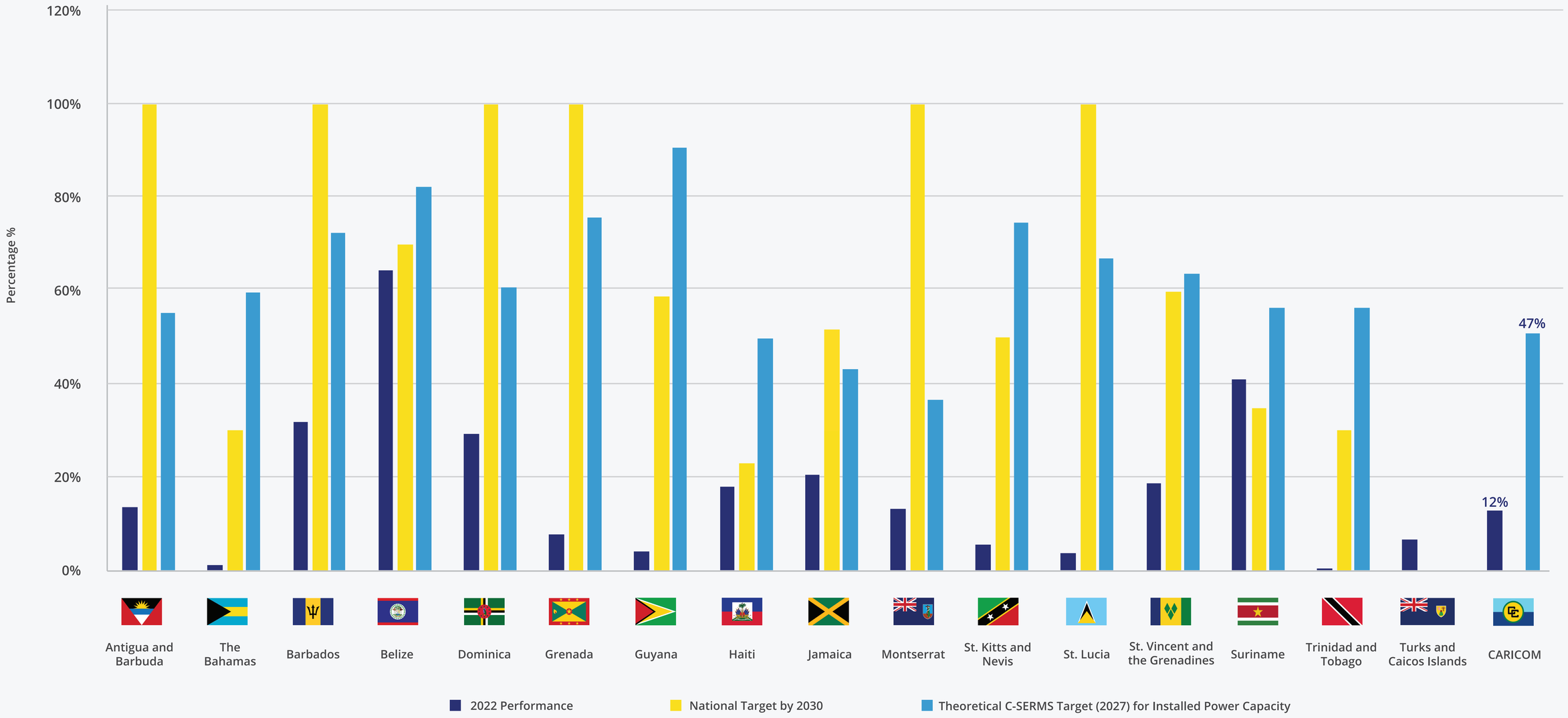
Requests for Correction

The CCREEE has established administrative mechanisms to allow persons to seek and obtain, where appropriate, legitimate correction(s) to information maintained and disseminated through the ERC. . Any request for corrections should be sent to: energyreportcard@ccreee.org, under the subject: **REQUEST FOR CORRECTION TO ERC 2022 FOR CARICOM.**

ENERGY SECTOR SUMMARY

Country	Population	GDP	GDP per Capita ($US)	Debt as % of GDP	GNI	Human Development Index
Antigua and Barbuda	100,967	$1,457,368,534.05	$14,466.12	79.56%	$19,050.00	0.788
The Bahamas	399,314	$12,897,442,886.00	$32,299.00	90.00%	$30,851.00	0.812
Barbados	267,800	$11,371,599,434.00	$42,463.03	123.60%	$15,540.00	0.790
Belize	441,471	$2,929,250,000.00	$6,585.52	46.20%	$6,630.00	0.683
Dominica	74,289	$548,410,000.00	$8,580.00	104.30%	$8,460.00	0.720
Grenada	114,272	$1,191,700,407.36	$10,428.63	64.75%	$9,340.00	0.795
Guyana	775,800	$14,221,019,124.00	$18,330.78	24.60%	$15,050.00	0.714
Haiti	11,584,996	$20,254,048,506.80	$1,748.30	100.00%	$1,610.00	0.535
Jamaica	2,738,100	$16,564,245,474.00	$6,049.54	83.60%	$5,670.00	0.709
Montserrat	4,433	$187,320,005.73	$42,255.81	4.67%	Not Applicable	Not Applicable
St. Kitts and Nevis	50,287	$973,328,017.02	$19,355.46	60.28%	$18,584.70	0.770
St. Lucia	183,251	$2,330,696,168.60	$12,718.60	69.80%	$11,160.00	0.715
St. Vincent and the Grenadines	110,872	$960,861,100.80	$8,666.40	87.77%	$9,110.00	0.751
Suriname	624,900	$3,497,565,300.00	$5,597.00	122.30%	$4,880.00	0.730
Trinidad and Tobago	1,365,805	$29,894,822,846.51	$22,005.50	66.50%	$16,190.00	0.810
Turks and Caicos Islands	47,720	$1,140,000,000.00	$25,985.00	Not Available	$24,160	Not Applicable
CARICOM	18,836,557					

ENERGY SECTOR PERFORMANCE AGAINST TARGETS [1] [2]



1. The Government of Belize has committed to 70% renewable energy in gross electricity generation in Belize by 2030 (Government of Belize, 2021)
2. Guyana and St. Vincent and the Grenadines have national target dates of 2025.

KEY ENERGY STAKEHOLDERS

Country	Energy Ministry	Climate Change Ministry	Electric Utility	Electricity Regulator
Antigua and Barbuda	Ministry of Public Utilities, Civil Aviation, Transport and Energy[3]	Ministry of Health, Wellness and the Environment - Department of Environment[4]	Antigua Public Utilities Authority (APUA)	Antigua Public Utilities Authority (APUA)
The Bahamas	Ministry of Environment and Natural Resources	Ministry of Environment and Natural Resources	Grand Bahama Power Company Bahamas Power and Light	Utility Regulation and Competition Authority
Barbados	Ministry of Energy, Small Business and Entrepreneurship	Ministry of Environment and National Beautification, Green and Blue Economy	Barbados Light and Power Company Limited	Fair Trading Commission
Belize	Ministry of Public Utilities, Energy, Logistics, and E-Governance	Ministry of Sustainable Development, Climate Change and Disaster Risk Management - National Climate Change Office	Belize Electricity Limited (BEL)	Public Utilities Commission
Dominica	Ministry of Foreign Affairs, International Business, Trade and Energy	Ministry of Environment, Rural Modernisation, Kalinago Upliftment and Constituency Empowerment	Dominica Electricity Services Limited (DOMLEC)	Independent Regulatory Commission (IRC)
Grenada Guyana	Ministry of Climate Resilience, the Environment and Renewable Energy Guyana Energy Agency	Ministry of Climate Resilience, the Environment and Renewable Energy Office of Climate Change	Grenada Electricity Services Limited Guyana Power and Light Hinterland Electrification Company Inc	Public Utilities Regulatory Commission (PURC)
Haiti	Cellule Energy du Ministère des Travaux Publics, Tansport et Communications (Energy Unit of the Ministry of Public Works, Transport and Communications)	Ministère de l'Environnement (Ministry of the Environment)	Electricité D'Haïti (EDH) (Electricity of Haiti)	Autorité Nationale de Régulation du Secteur de l'Energie (National Authority of Regulation of the Energy Sector)
Jamaica	Ministry of Science, Energy and Technology [5]	Ministry of Economic Growth and Job Creation - Portfolio Areas of Environment and Climate Change	Jamaica Public Service Company	Office of the Utilities Regulation
Montserrat	Ministry of Communications, Work, Energy and Labour (MCWEL)	Ministry of Agriculture, Lands, Housing and the Environment	Montserrat Utilities Limited (MUL)	None
St. Kitts and Nevis	Ministry of Public Infrastructure, Utilities, Posts, and Urban Development - Energy Unit	Ministry of Sustainable Development, Environment, Climate Action and Constituency Empowerment	St. Kitts Electricity Company Ltd. (SKELEC) Nevis Electricity Company Ltd. (NEVLEC)	None
St. Lucia	Ministry of Infrastructure, Ports, Transport, Physical Development and Urban Renewal	Ministry of Education, Sustainable Development, Innovation, Science, Technology and Vocational Training	Saint Lucia Electricity Services Limited (LUCELEC)	National Utilities Regulatory Commission (NURC)
St. Vincent and the Grenadines	Ministry of Urban Development, Energy, Airport, and Sea Port, Grenadines Affairs, and Local Government	Ministry of Tourism, Civil Aviation, Sustainable Development and Culture	St. Vincent and the Grenadines Electricity Services Limited (VINLEC)	Cabinet of the Government of St. Vincent and the Grenadines and VINLEC self-regulate
Suriname	Ministry of Natural Resources (Ministerie van Natuurlijke Hulpbronnen)	Ministry of Spatial Planning and Environment (Ministerie van Ruimtelijke Ordening en Milieu)	NV Energiebedrijven Suriname	Suriname Energy Authority (Energie Autoriteit Suriname - EAS)
Trinidad and Tobago	Ministry of Energy and Energy Industries	Ministry of Planning and Development	Trinidad and Tobago Electricity Commission (T&TEC)	Regulated Industries Commission
Turks and Caicos Islands	Ministry Of Public Safety and Utilities - Energy and Utilities Department	Ministry of Tourism, Agriculture, Fisheries, Heritage and the Environment - Department of the Environment and Coastal Resources	Fortis TCI	Ministry Of Public Safety and Utilities - Energy and Utilities Department

3. Renamed to the Ministry of Information, Communication Technologies (ICT's), Utilities and Energy in January 2023.
4. Renamed to the Ministry of Health, Wellness, Social Transformation & The Environment in January 2023
5. Renamed to the Ministry of Science, Energy, Telecommunications and Transport in May 2023.

POLICY, LEGAL AND REGULATORY (PLR) FRAMEWORK

Country	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	2011	2021	2019	1973	2017	2011		2015
The Bahamas	2013	2013		2009	2018	2020	2022	
Barbados	2019	2019		2002	2012	2017	2019	
Belize	2012	2021	2021	1999				
Dominica	2021	2021		2006	2016	2016		2018
Grenada	2011	2017		2016	2021	2007		
Guyana	2017	2022		1990	2022	2017		
Haiti	2012	2015		2016	2016			
Jamaica	2009	2022	2009	1995	2016	2016		
Montserrat	2016	2016						
St. Kitts and Nevis	2011	2021				2018		
St. Lucia	2010	2015		2016	2017	2017	2017	
St. Vincent and the Grenadines	2010	2010	2010		2019	2019	2019	2019
Suriname	2012	2020		2016		2018	2018	
Trinidad and Tobago		2021		1998		2011		
Turks and Caicos Islands		2019		2021				

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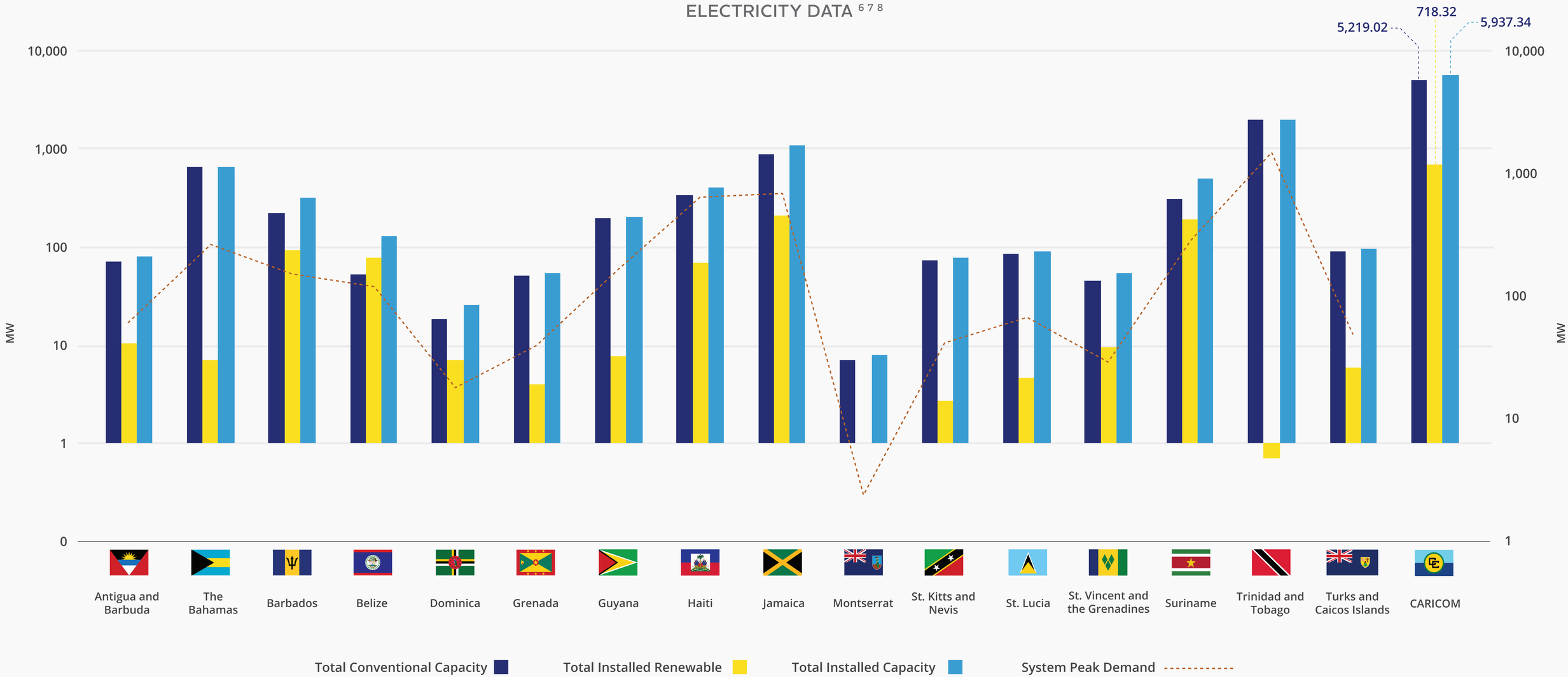
ELECTRICITY AND ENERGY EFFICIENCY

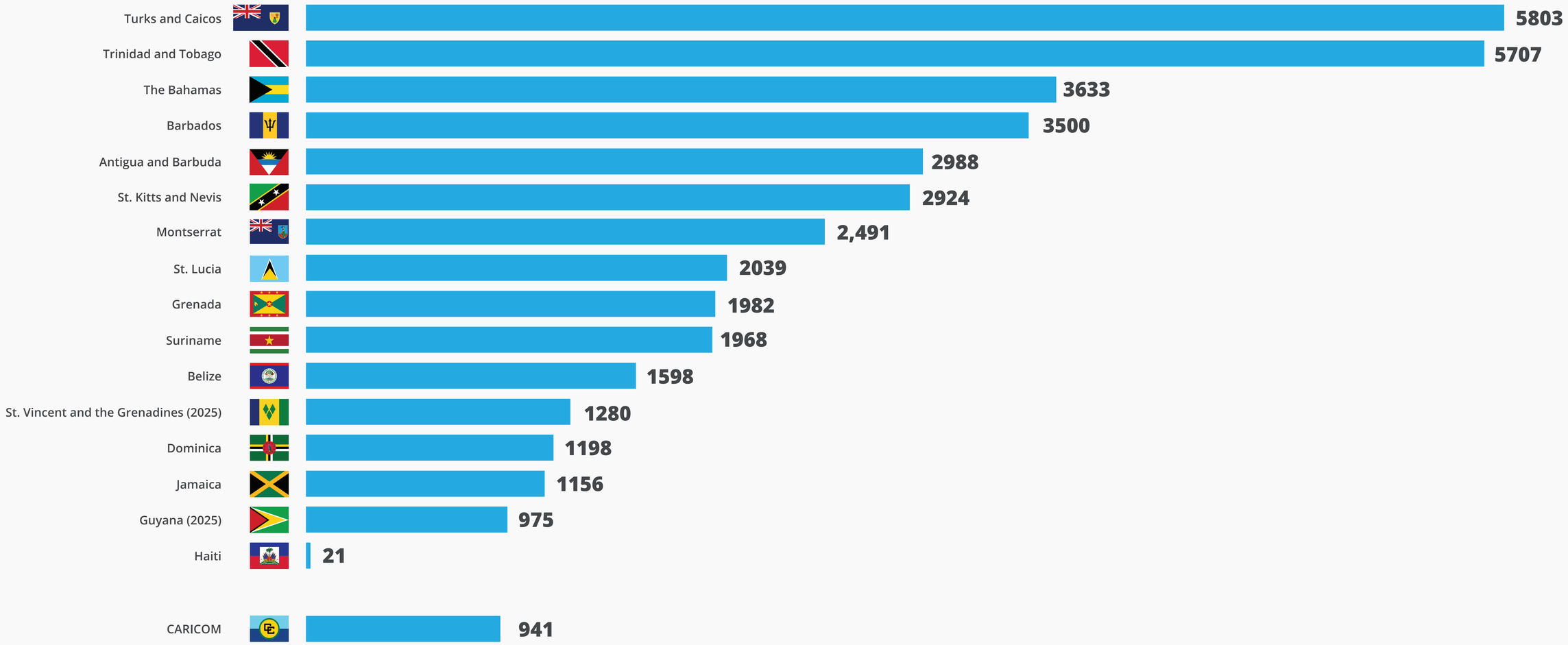
ELECTRICITY DATA [6] [7] [8]



6. For The Bahamas the 2021 Total Conventional Installed Capacity and System Peak Demand were used.
7. The Total Installed Renewable Capacity for the Bahamas and Barbados is as of June 2023.
8. For Montserrat the 2021 System Peak Demand was used.

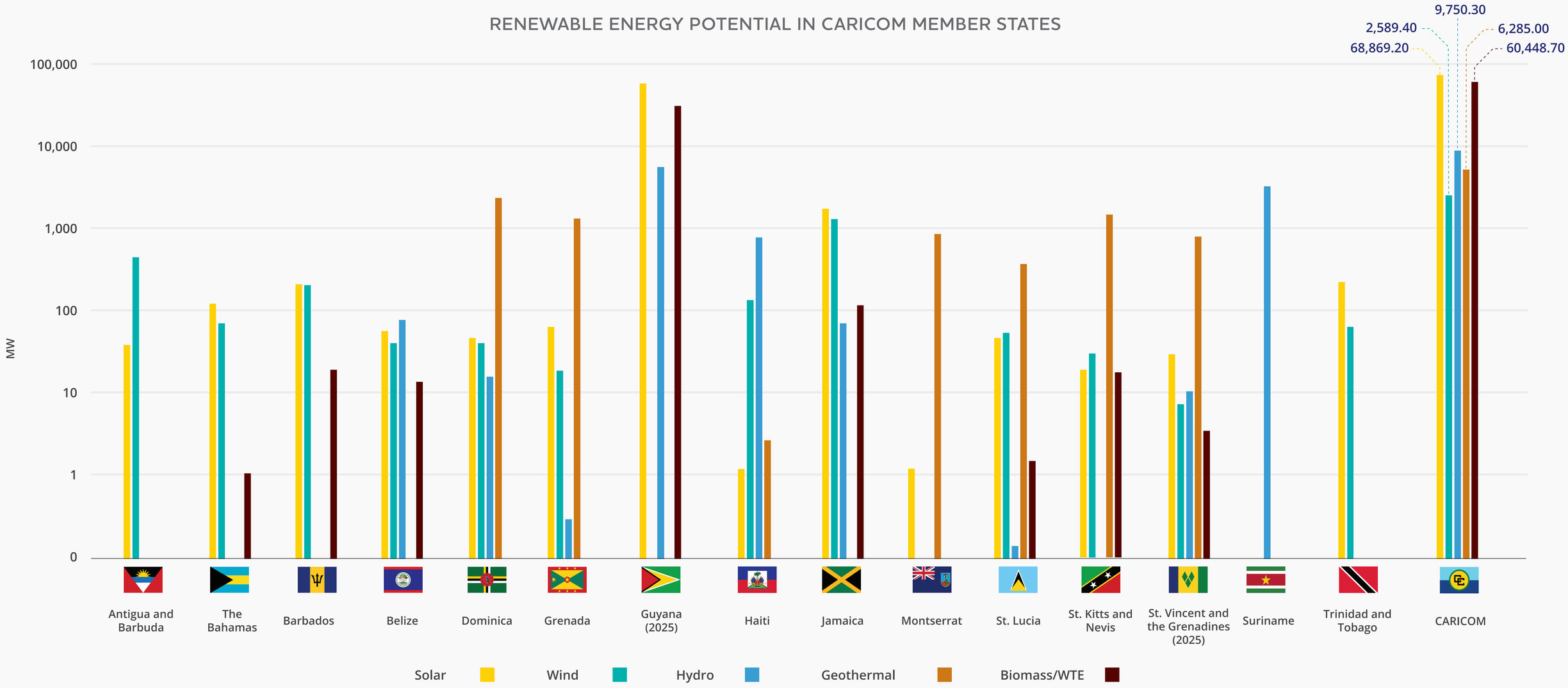
ENERGY USE PER CAPITA [9] [10] [11] [12]

ENERGY USE (KWH) PER CAPITA



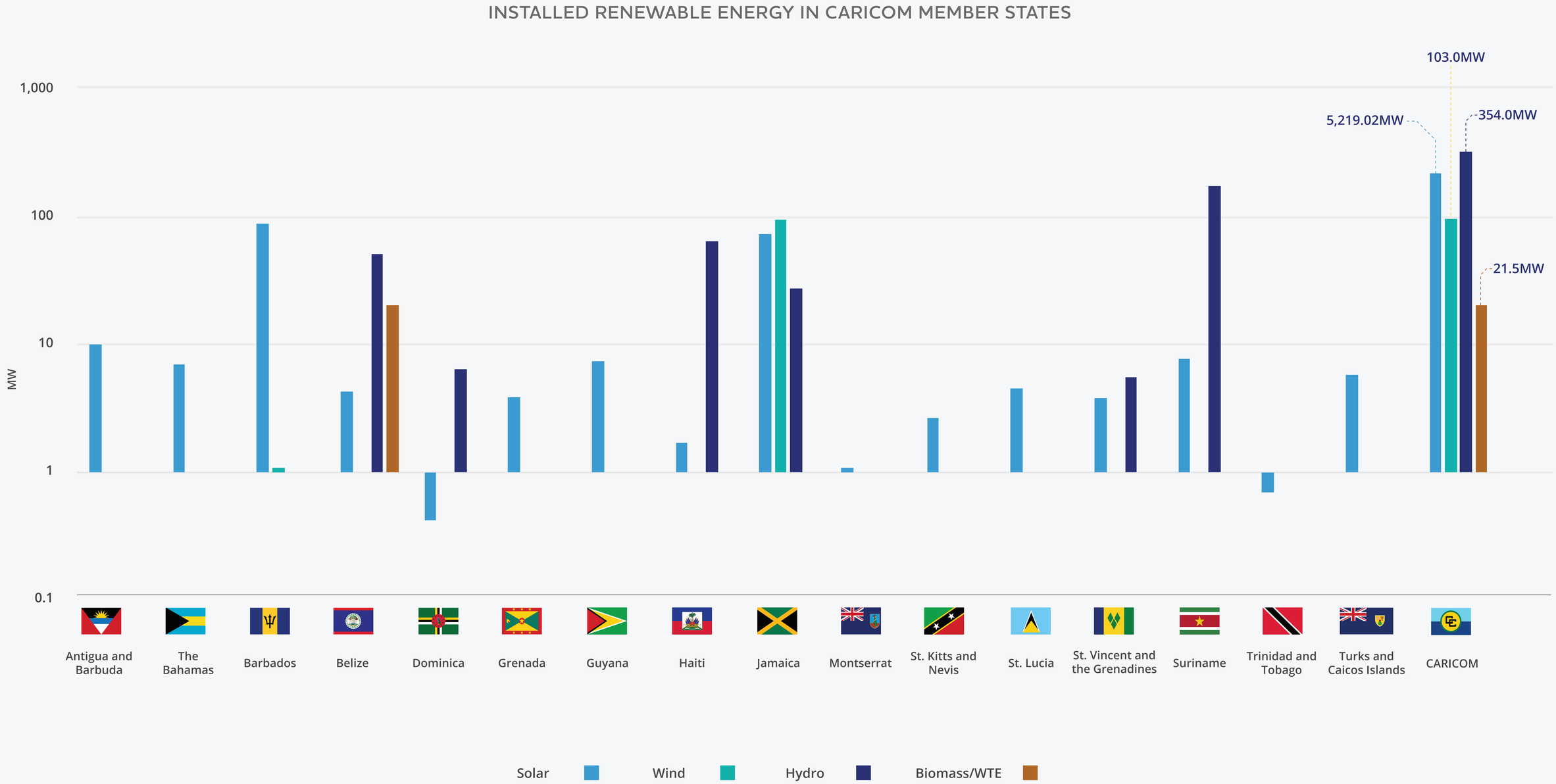
11. The Energy Use per Capita for Trinidad and Tobago is higher than other CARICOM Member States because 51% of all energy is allocated to Industrial sector; 11% to Commercial and Business Sector; 36% to Residential Sector; and 2% to Streetlighting
12. Access to electricity in Haiti is 45.4%. This contributes significantly to the rate of energy consumption.
13. The Energy Use per Capita was calculated using the estimated mid-year population.
14. The Energy Use per Capita for the Bahamas and Montserrat was calculated using the Total Sales from 2021.

RENEWABLE ENERGY POTENTIAL IN CARICOM MEMBER STATES[13]



13. For Barbados the total solar potential is a result of centralised and distributed results and the total wind potential is a combination of offshore and onshore wind.

INSTALLED RENEWABLE ENERGY IN CARICOM MEMBER STATES



TERTIARY PROGRAMMES OFFERED

Country	Name of Education Programme Provided	Typers of Programmes							
		Diploma	Associate Degree	Bachelors	Post Graduate Certificate	Masters	Mphil/PhD	Vocational Certificate	Professional Certificate
Antigua and Barbuda	The Antigua State College		One Programme						
The Bahamas			Two Programmes	Three Programmes					
	University of the West Indies, Cave Hill Campus			Two programmes		One programme	Two Programmes		
Barbados	Samuel Jackman Prescod Institute of Technology							Six Programmes	
	Barbados Community College							One Programme	
	Galen University		One programme						
Belize	Sacred Heart Junior College	One Programme							
	Saint John's College Junior College	One Programme							
	University of Belize	Two Programmes	One Programme						
	Cayo Centre for Employment Training (CET)							Teo Programmes	
	Institute for Technical and Vocational Education and Training (ITVET)							One Programme	
Dominica	Dominica State College		One Programme						
Grenada	T.A. Marryshow Community College		One Programme					Two Programmes	

TERTIARY PROGRAMMES OFFERED

Country	Name of Education Programme Provided	Typers of Programmes							
		Diploma	Associate Degree	Bachelors	Post Graduate Certificate	Masters	Mphil/PhD	Vocational Certificate	Professional Certificate
Guyana	University of Guyana		One Programme	Six Programmes	Six Programmes				
	Nations School of Business and Management							One Programme	
	Nations School of Technology							Five Programmes	
	Nations School of Law					One Programme			
Haiti	Texila American University								
	Université d'Etat d'Haïti - State University of Haïti			One Programme					
	Quisqueya University			One Programme					
	Université Lumière			One Programme					
	Université G.O.C (GOC University)			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 Center of Haiti	One Programme							
Jamaica	University of the West Indies, Mona			Eight programmes		Two Programmes			
	University of Technology Jamaica			One Programme	Two Programmes	Two Programmes	One Programme	One Programme	
	Excelsior Community College		One Programme						
	Vector Technology Institute							One Programme	
	HEART NTA / National Tool and Engineering Institute							Two Programmes	
	University of the Commonwealth Caribbean		One Programme		One Programme				
	The Wigton Renewable Energy Training Lab							Eight Programmes	Eight Programmes

TERTIARY PROGRAMMES OFFERED

Country	Name of Education Programme Provided	Typers of Programmes							
		Diploma	Associate Degree	Bachelors	Post Graduate Certificate	Masters	Mphil/PhD	Vocational Certificate	Professional Certificate
Montserrat	No Programmes conducted in country								
St. Kitts and Nevis	Clarence Fitzroy Bryant College (CFBC)		One Programme						
St. Lucia	Sir Arthur Lewis Community College	One Programme	Three Programmes					One Programme	
St. Vincent and the Grenadines	St. Vincent and the Grenadines Community College - Division of Technical Vocational Education		Three Programmes					One Programme	
	Sector Skills Development Agency	One Programme							
Suriname	Anton de Kom University of Suriname			One Programme		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	
Turks and Caicos Islands	No Programmes conducted in country								

CLIMATE CHANGE FRAMEWORK

Country	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	• 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 (2013)	Energy Sector Industrial Processess and Products Use Agricultutre, Foresty and Other Land Use Waste Electricity Transportation	3
The Bahamas	National Policy for the Adaptation to Climate Change (2005)	• Reducing its GHG emission by 30% compared to its BaU scenario. This covers gases and sectors included in The Bahamas National Inventory4 • Having at least 30% of renewables in the country's energy mix. • Electric and hybrid vehicles represent 35% and 15% of total vehicle sales, respectively	Absolute economy-wide emissions target expressed as a single-year target (2030)	Energy Transportation Industrial Processes and Produce Use (IPPU) Land-Use, Land-Use Change and Forestry (LULUCF) Waste	2
Barbados	National Climate Change Policy (2012)	• 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. • 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.	2025 • 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. 2030 • 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.	Energy, including transport Agriculture Industrial Processes and Product Use, Land-use Land Use Change and Forestry Waste	2

CLIMATE CHANGE FRAMEWORK

Country	Climate Change Policy	National Determined Contributions	Emission Reduction Target	Priority Sectors for NDC	Number of National Communication Reports to UNFCCC
Belize	National Climate Change Policy, Strategy, and Master Plan (2021)	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 MTCO2e in cumulative avoided emissions by 2030, and a reduction of 1.0 MTCO2e in annual emissions by 2030 (not including additional deforestation targets)	Agriculture, Forestry and Other Land Use (AFOLU) Energy Transport Waste sectors	4
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%	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 (2017-2021) 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.	Electricity Transport Waste Forestry	2

CLIMATE CHANGE FRAMEWORK

Country	Climate Change Policy	National Determined Contributions	Emission Reduction Target	Priority Sectors for NDC	Number of National Communication Reports to UNFCCC
Guyana	National Climate Change Policy and Action Plan 2020-2030 (2019) (Draft) Climate Resilient Strategy and Action Plan for Guyana (2015) Low Carbon Development Strategy (2030) (2022)	11% annually compared to historic levels from the timber industry. *(Note that Guyana is a net carbon sink)	70% emission reductions by 2030	Forestry (including Avoided Deforestation) Energy	2
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	Agriculture Fishing Infrastructure Forests Water resources	3
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	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 The National Climate Change Adaptation Strategy for Saint Christopher and Nevis	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

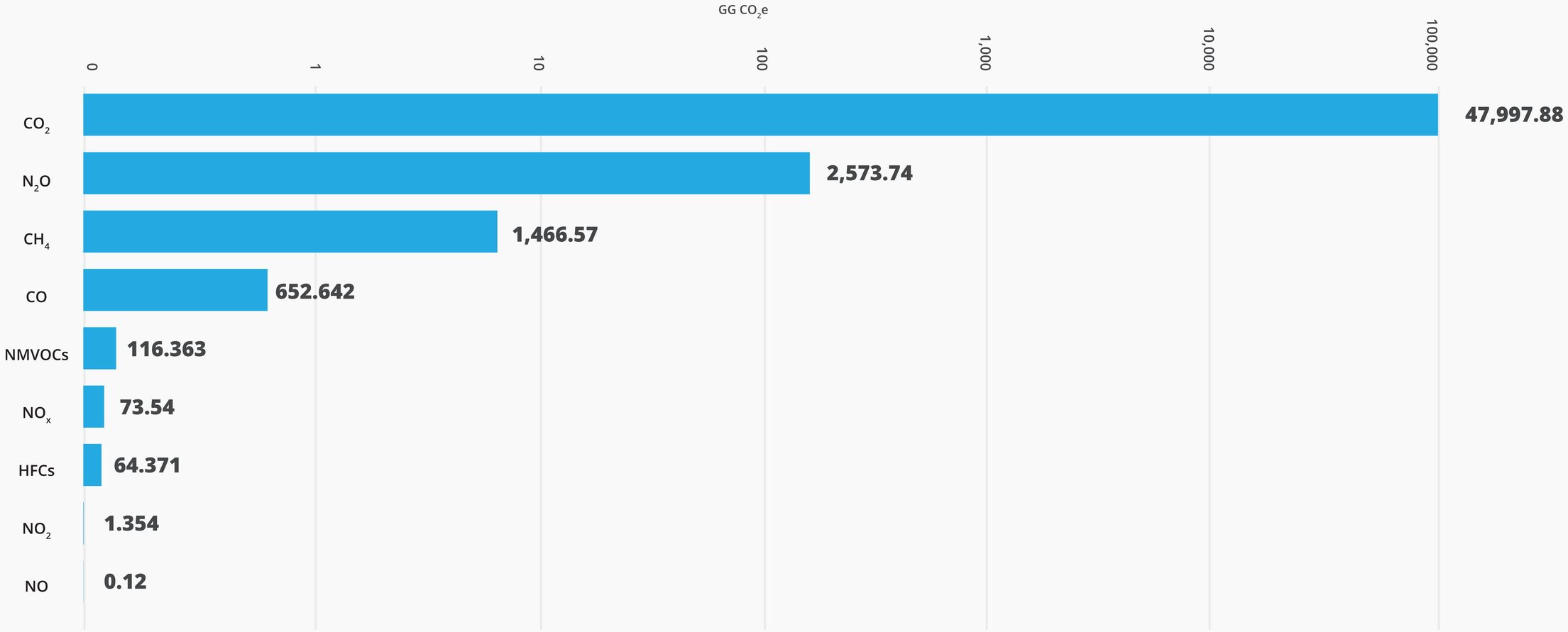
CLIMATE CHANGE FRAMEWORK

Country	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 (2018)	7% GHG emissions reduction in the energy sector relative to 2010, by 2030, equivalent to 37 GgCO2 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 (2019)	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.	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.	Forestry Energy Transportation Agriculture	2[14]
Trinidad and Tobago	National Climate Change Policy (NCCP) (2011)	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). Conditional: Additional reduction achievable under certain conditions which would bring the total GHG reduction to 15% below BAU emission levels by December 31, 2030.	15% below BAU by 2030	Power Generation Transportation Industry	3
Turks and Caicos Islands	Turks and Caicos Islands Climate Change Charter	Not Applicable	Not Applicable	Not Applicable	Not Applicable

14. In 2023 the Government of the Republic of Suriname updated their National Communication report - United Nations, "Republic of Suriname Third National Communication to the United Nations Framework Convention on Climate Change" April 2023. [Online]. Available: (Government of the Republic of Suriname, 2023).

GREENHOUSE GAS INVENTORY

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.