



2019 ENERGY REPORT CARD

GUYANA



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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

INTRODUCTION

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

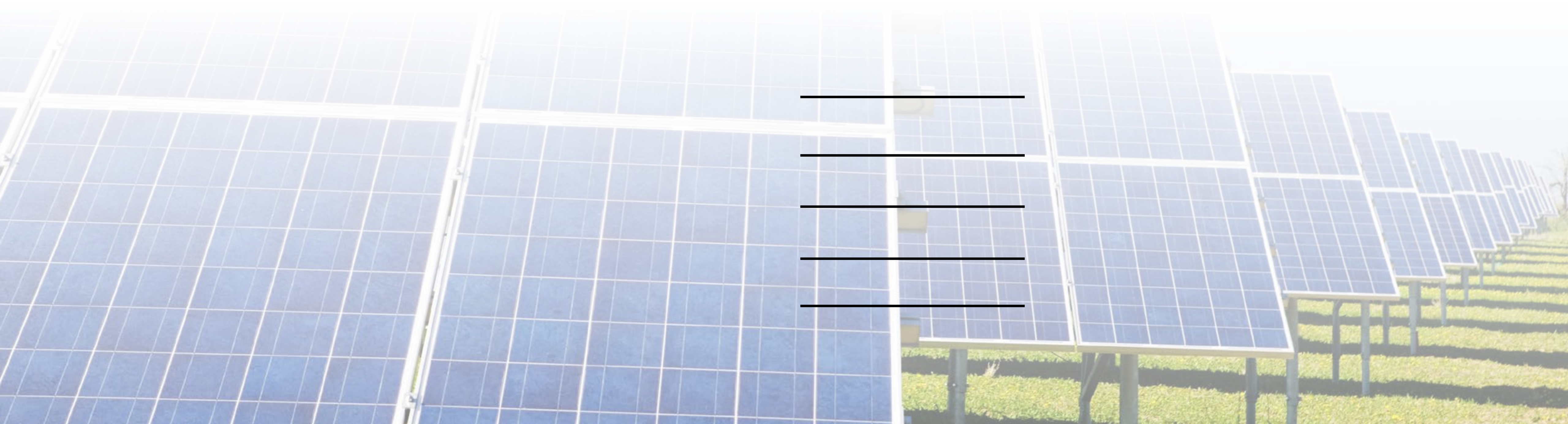
The ERC provides an overview of the energy sector performance in Guyana. The ERC also includes energy efficiency, projects, technical assistance, workforce, training and capacity building information, subject to the availability of data.

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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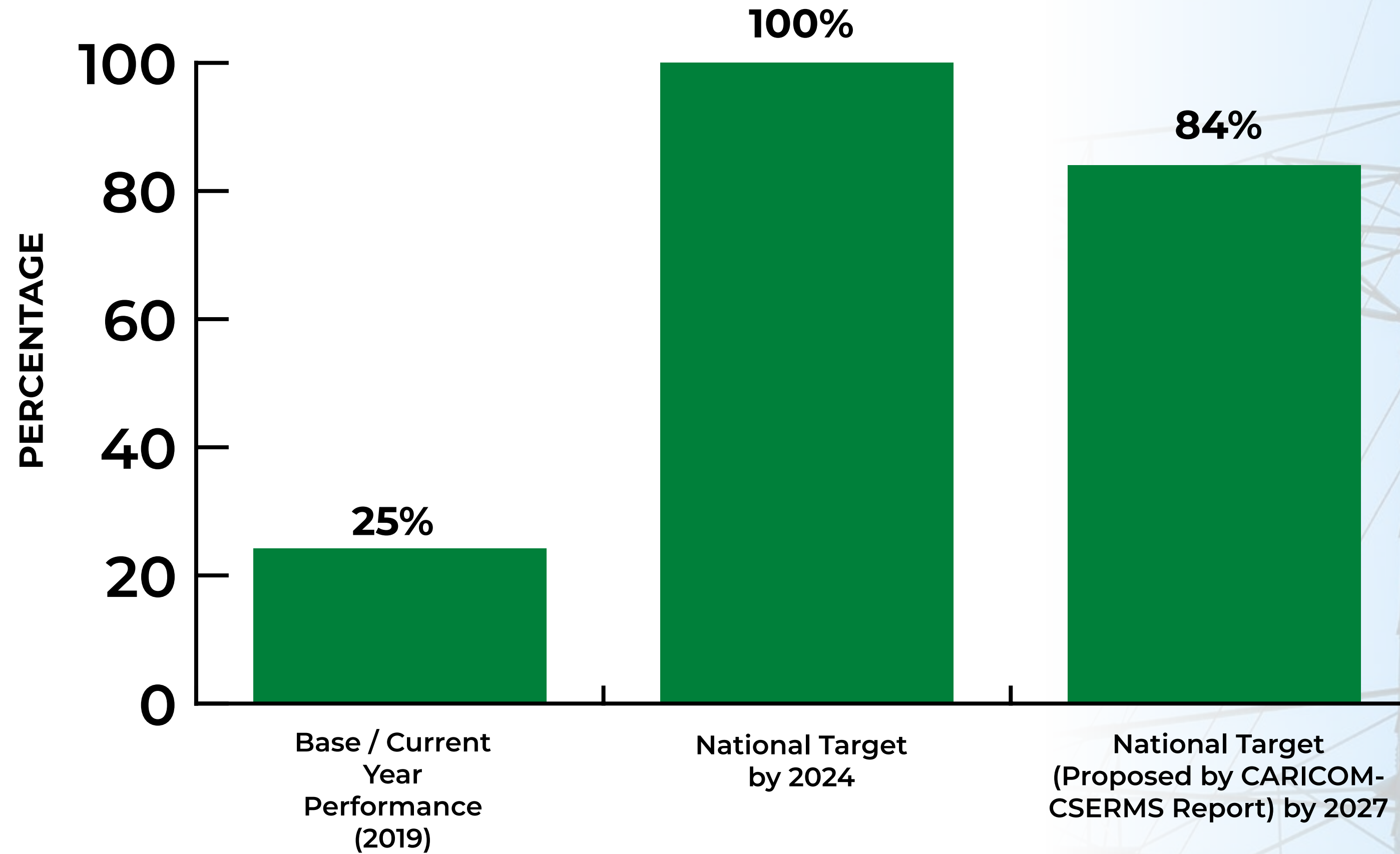
ENERGY SECTOR SUMMARY

Key Data and Information - Energy Sector	
Population	782,766 [1]
GDP (USD) Per Capita	4,159.61 [2]
Debt as % of GDP	40.9 [3]
Human Development Index (2018)	0.682 [4]
National Development Plan/Overall Country Development Strategy	Green State Development Strategy: Vision 2040 [5]]
National Energy Policy	National Energy Policy (1994) National Energy Policy - Green Paper (2016) [6]
Renewable Energy (RE) Policy	None
RE Target	100% [5]
Energy Performance Standards/Appliance Labelling	None
No. of Persons Employed in Energy Sector (Guyana Energy Agency and Guyana Power and Light)	1,655 [7] [8]
Total Oil Import (BOE) per day	17,298 [8]
Total Oil Export (BOE) per day	0 [8]
Total Oil Production per year	0 [8]
Total Installed Capacity (MW)	203 [9]
Total Installed RE (MW)	48 [10]
Electricity System Losses (%)	27% [9]
Energy Use (kWh) Per Capita	790.5 [9]
Fuel and Oil Imports as % of GDP	16.3% [11]
Climate Change Policy	Draft National Climate Change Policy and Action Plan 2020-2030 [12]
National Determined Contributions (NDC)	<ul style="list-style-type: none"> • 11% annually compared to historic levels from the timber industry • Switch to 100% renewables by 2025 (Note that Guyana is a net carbon sink) [13]
National Repository for Energy Data	Guyana Energy Agency [14]



ENERGY SECTOR PERFORMANCE AGAINST TARGETS

RENEWABLE ENERGY AS A PERCENTAGE OF INSTALLED CAPACITY





KEY ENERGY STAKEHOLDERS

Government Ministries, Departments and Agencies

- Guyana Energy Agency (GEA)

Fuel Importers & Suppliers

- GUYOIL
- SOL
- RUBIS

Electric Utility

- Guyana Power and Light (GPL)
- Linden Power Company (Bosai)
- Hinterland Electrification Company Inc. (HECI):
 - Lethem Power Company
 - Mabaruma Power Station
 - Mahdia Power Station
 - Matthew's Ridge Power Station
 - Kwakwani Power Station
 - Port Kaituma PoweStation

Independent Power Producer(s)

- None

Electricity Regulator

- Public Utilities Commission (PUC)

Transportation

- Ministry of Public Infrastructure

Other

- Office of Climate Change (OCC)
- Ministry of Natural Resources
- Guyana Geology and Mines Commission
- Institute of Applied Sciences and Technology



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

	Completed	Draft	In Progress	Not Established
Energy Policy and Energy Action Plan	✓	Revision Drafted		
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
National Energy Policy	1994 [15]
Low Carbon Development Strategy (LCDS)	2009 [16]
Revision of LCDS	2013 [17]
Hydroelectric Power Act and Regulations (amendment)	2013 [18]
Guyana Power Generation Expansion Study	2016 [6]
Revision of 1994 National Energy Policy	2017 [6]
Guyana Power Generation Expansion Study (update)	2018 [19]

Policies and Legislation Relevant to the Energy Sector

Policies:

- National Energy Policy, 1994 [15]
- Draft National Energy Policy of Guyana - Green Paper, 2017 (update to 1994 Policy) [6]
- Climate Resilience Strategy and Action Plan (CRSAP), 2015 (draft) [20]

Legislation:

- Energy Sector (Harmonization of Laws) Act, 2002 [21]
- Guyana Energy Agency Act, 1997 (as well as the 2004, 2005 and 2011 amendments) [22]
- Public Utilities Commission Act 1999 (and 2016 amendment) [23]

Policies and Legislation Relevant to the Transportation Sector

Policies:

- Draft National Energy Policy of Guyana - Green Paper, 2017 (update to 1994 Policy) [6]
- Climate Resilience Strategy and Action Plan (CRSAP), 2015 (draft) [20]
- National Energy Policy, 1994 [15]

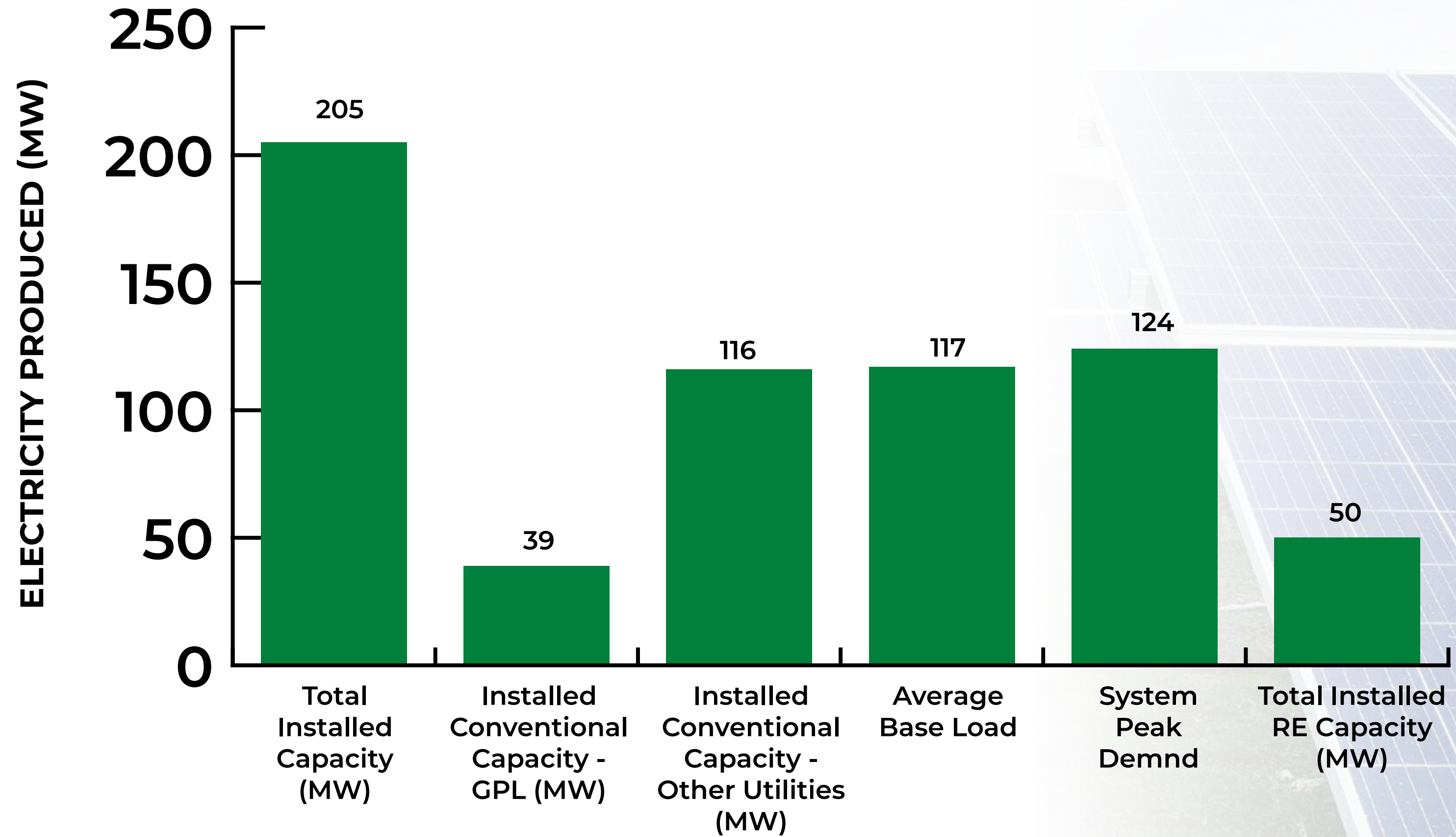
Legislation & Regulation:

- Guyana Energy Agency Act, 1997 (amended in 2004, 2005 and 2011) [22]
- Energy Sector (Harmonization of Laws) Act, 2002 [21]
- Customs (Amendment) Act; Value Added Tax Act (Last Amendment 2018) [24] [25]
- Petroleum and Petroleum Products Regulation 2014 [26]



ELECTRICITY & ENERGY EFFICIENCY

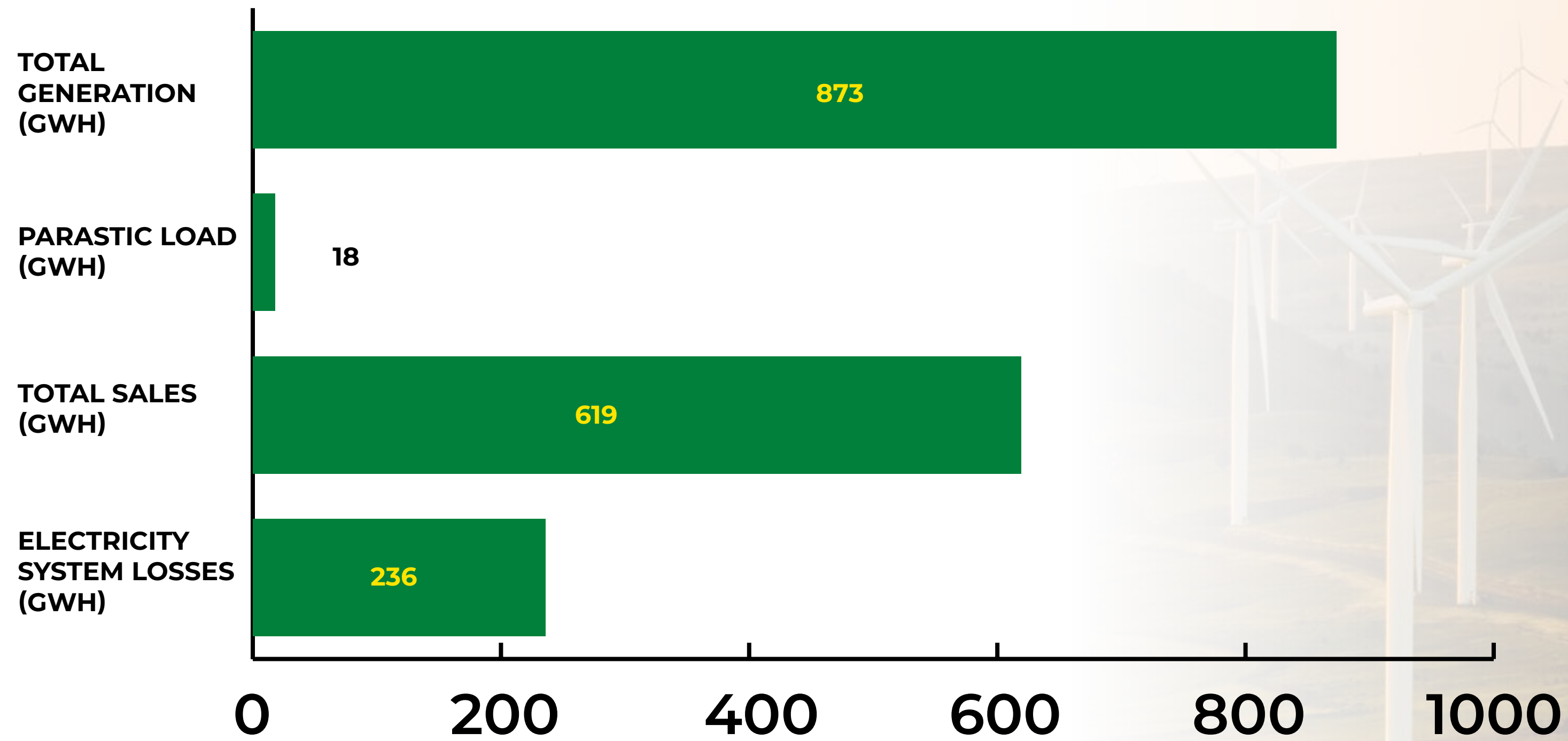
ELECTRICITY GENERATION





ELECTRICITY & ENERGY EFFICIENCY (CONT'D)

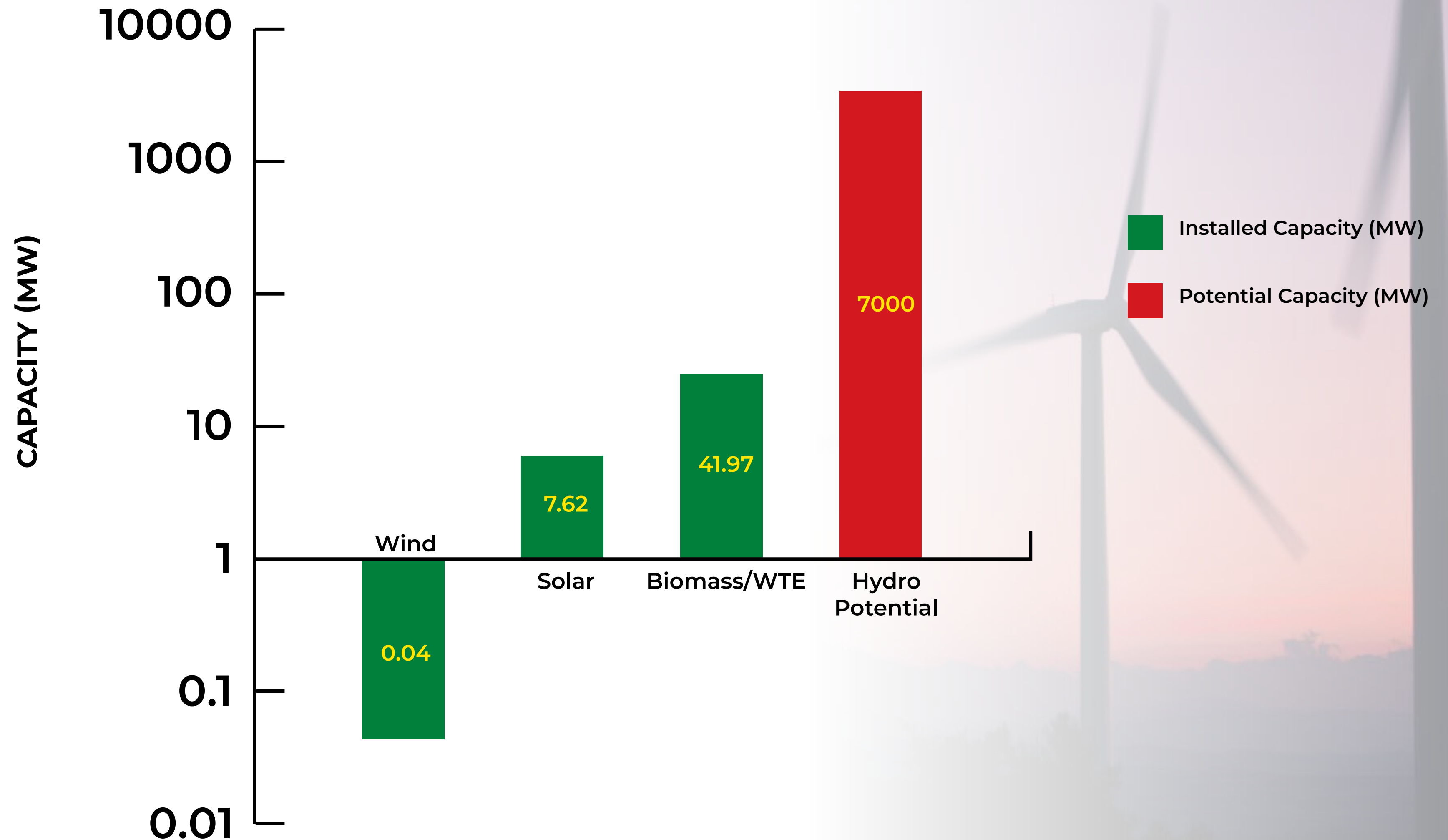
ELECTRICITY CONSUMPTION





ELECTRICITY & ENERGY EFFICIENCY (CONT'D)

RENEWABLE ENERGY RESOURCES





ELECTRICITY & ENERGY EFFICIENCY (CONT'D)

TARRIFS

NON-GOVERNMENT

Rate	Classification	Tarrif / (US\$/kWh)
Residential	A ≤ 75 kWh	0.19
	A > 75 kWh	0.21
Commercial	B	0.27
Industrial/Large Power	C	0.24
	D	0.23
Streetlights	E	0.20

GOVERNMENT

Rate	Classification	Tarrif / (US\$/kWh)
Residential	GA ≤ 75 kWh	0.22
	GA > 75 kWh	0.22
Commercial	GB	0.28
Industrial/Large Power	CC	0.25
	GD	0.24
Public Sector	GE	0.21



PROJECTS IN THE PIPELINE

Renewable Energy Source	Resource and Projects Capacity (MW)	Location	Development Partner	Total Estimated Cost	Funding Source
Solar Photo-Voltaic	10	Edinburg	Guyana REDD+ Investment Fund (GRIF)	80 MUSD	Interamerican Development Bank (IaDB)
	10	Prospect (Berbice)			
	10	Golden Grove			
	1	Leguan			
	4	Lima Sand			
	1.5	Wakenaam (Two Phases)	Fund's Project Manager MASDAR		United Arab Emirate's Caribbean Energy Development Fund (UAE-CREF)
	1.5	Bartica	GEA		IaDB
	Wind Energy	20	Not available	Not available	Not available
Hydropower	0.7	Moco-Moco	GEA	Not available	Islamic Development Bank (IsDB)
	1.5	Kumu	GEA	Not available	IsDB
	1	Ikuribisi	GEA	Not available	IsDB
	0.15	Kato	GEA, HECl	Not available	Not available
	0.02	Hosororo	GEA	Not available	Not available

ENERGY EFFICIENCY PROJECTS

Energy Efficiency	Old/Existing Infrastructure (Number/Size)	Consumption (KW)	Annual Costs (USD)	Expected Change in Technology
Household Lighting	24,177	Not available	821,060.31	Replace with LED



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

Name of Education Programme Provider	Types of Programme	Programme Link
	Postgraduate	
University of Guyana	Renewable Energy Management	https://www.uog.edu.gy/tuition-fees



WORKFORCE

NO. OF PERSONS EMPLOYED IN ENERGY SECTOR

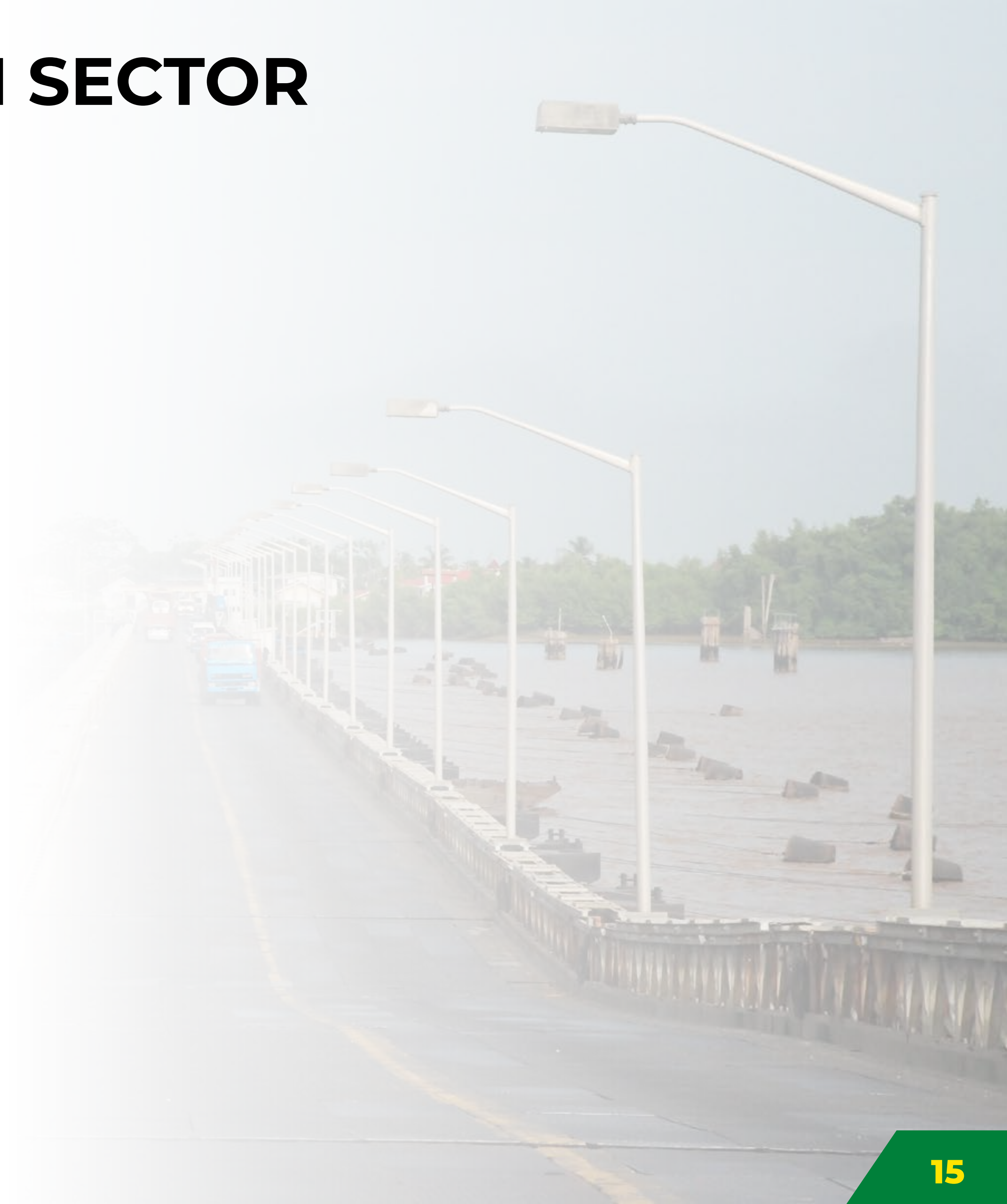
Name of Entity	Number of Persons Employed
Guyana Energy Agency	107
Guyana Power and Light	1548

Note: Data was not separated by gender.



TRANSPORTATION SECTOR

Notes: Data on the transportation sector was not available





CLIMATE CHANGE FRAMEWORK

Climate Change Policy	Draft National Climate Change Policy and Action Plan 2020-2030 [12]
National Determined Contributions	<ul style="list-style-type: none"> • 11% annually compared to historic levels from the timber industry • Switch to 100% renewables by 2025 (Note that Guyana is a net carbon sink) [13]
Priority Sectors for NDC	Forestry (including Avoided Deforestation), and Energy [13]
National Communications (NC) to the UNFCCC	Guyana Initial National Communication to the United Nations Framework Convention on Climate Change (2002) [27]
	Guyana Second National Communication to the United Nations Framework Convention on Climate Change (2012) [28]

GREENHOUSE GAS (GHG) INVENTORY 2004 [28]

GHG Source/ Sink Category (Gg)	Energy Industries	Manufacturing, Construction and Industrial Processes	Transport	Commercial, Institutional and Residential	Agriculture and Fisheries	Land-Use Change and Forestry	Waste	International Bunkers	Biomass
CO ₂	741	192	314	85	325	-54,834		21	716
CH ₄					44.63	7			
N ₂ O					0.72	0.05			
NO _x	10					2			
CO	41					61			
NM VOC	11	15.63							
SO ₂	6.9								
CH ₄ and N ₂ O	6.9						86.52		



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