



2019 ENERGY REPORT CARD

DOMINICA



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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

INTRODUCTION

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

The ERC provides an overview of the energy sector performance in Dominica. 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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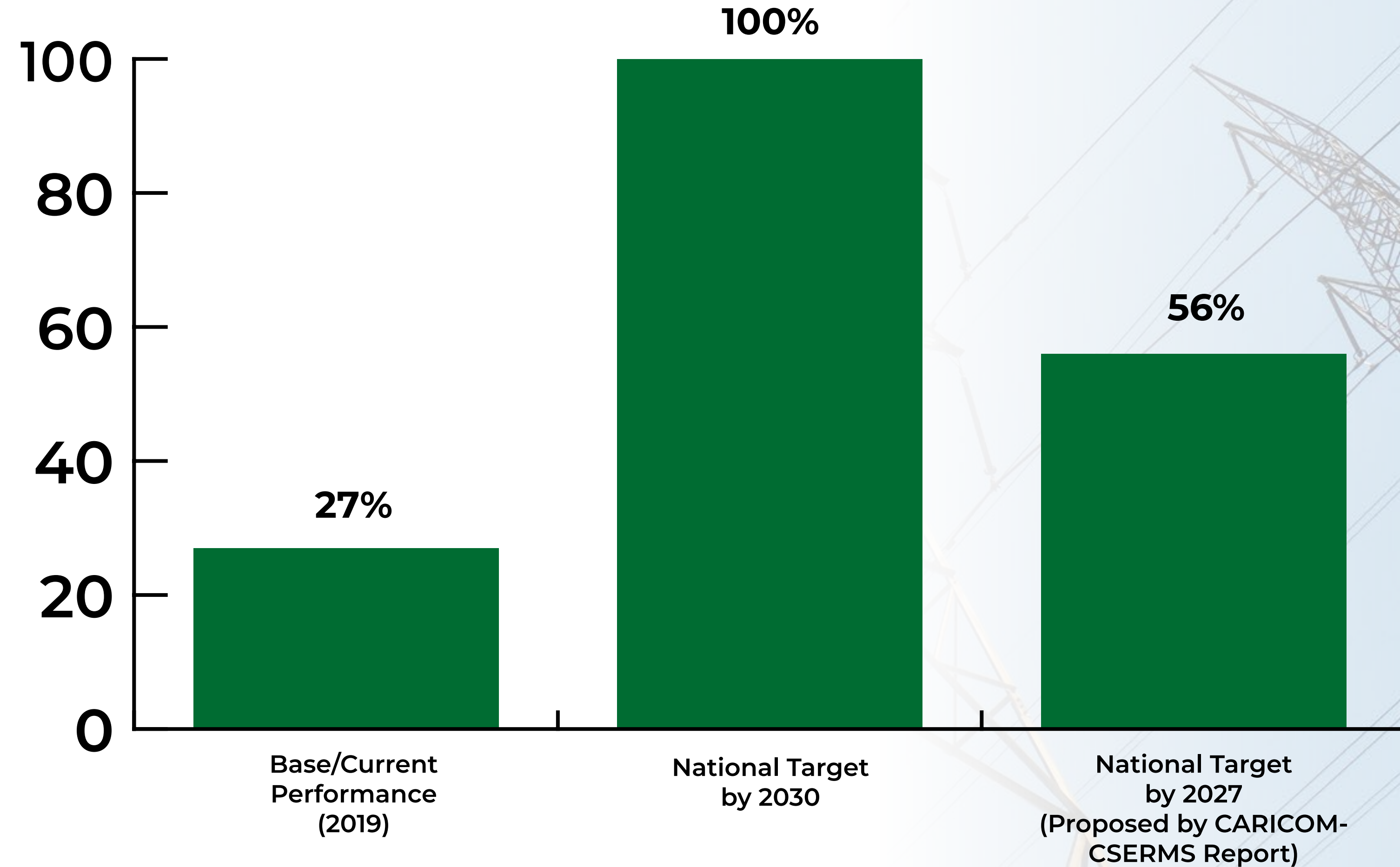
ENERGY SECTOR SUMMARY

Key Data and Information - Energy Sector	
Population (2019 Preliminary Estimate)	72,231 [1]
GDP (USD) Per Capita	8063.02 [2]
Debt as % of GDP (2018 value)	78.75% [3]
Human Development Index (2018)	0.756 [4]
National Development Plan/Overall Country Development Strategy	National Resilience Development Strategy Dominica 2030 [5]
National Energy Policy	National Energy Policy of the Commonwealth of Dominica [6]
Renewable Energy (RE) Policy	Sustainable & Resilient Energy Plan for Dominica [7]
RE Target	100% by 2030 [6]
Energy Performance Standards/Appliance Labelling	The Dominica Bureau of Standards is in the process of adopting the Minimum Energy Performance Standards (MEPS) developed by CARICOM Regional Organisation of Standards and Quality (CROSQ) [8]
No. of Persons Employed in Energy Sector	599 [9]
Total Oil Import (BOE) per day	1,154.81 [10]
Total Oil Export (BOE) per day	0 [10]
Total Installed Capacity (MW)	27.65 [11]
Total Installed RE (MW)	7.55 [11]
Electricity System Losses (%)	9.30% [12]
Energy Use (kWh) Per Capita	1,290.22 [11]
Energy Intensity (BTU/\$1)	5,047.21 [10]
Fuel and Oil Imports as % of GDP	5.46% [10]
Climate Change Policy	Dominica Climate Resilience and Recovery Plan 2020-2030 [13]
Electric Vehicle Stock	3 [14]
National Determined Contributions (NDC)	44.7 % below 2014 levels by 2030 [15]
National Repository for Energy Data	Operating Statistics and Fuel Surcharge 2004-2020 [16]



ENERGY SECTOR PERFORMANCE AGAINST TARGETS

RENEWABLE ENERGY PERFORMANCE AGAINST TARGETS





KEY ENERGY STAKEHOLDERS

Government Ministries, Departments and Agencies

- Ministry of Blue and Green Economy, Agriculture and National Food Security- Energy Unit/ Renewable Energy Programme
- Ministry of Public Works and Digital Economy- Electrical Division

Fuel Importers & Suppliers

- SOL EC Ltd Dominica
- Sukie's Enterprises Ltd.
- National Petroleum Marketing Company Limited
- RUBIS West Indies Ltd.
- Petro Caribe
- The West Indies Oil Company

Electric Utility

- Dominica Electricity Services Limited

Independent Power Producer(s)

- Dominica Geothermal Development Company¹

Electricity Regulator

- Independent Regulatory Commission

Transportation

- Dominica Transport Board

Other

- Climate Resilience Execution Agency of Dominica
- Ministry of Trade, Commerce, Entrepreneurship, Innovation, Business and Export Development
- Dominica Bureau of Standards

¹This power plant is still under construction and has not begun deploying power to the grid.



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

	Completed	Draft	In Progress	Not Established
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	✓			

KEY ACHIEVEMENTS: PLR FRAMEWORK TIMELINE FOR ELECTRICITY SECTOR

Name	Year
Electricity Act No. 1 [17]	2006
Low Carbon Climate Resilient Development Strategy and Compendium [18]	2012
Strategic Program on Climate Resilience [19]	2012
Generation Licence for Dominica Electricity Services Ltd. (Non-exclusive) [20]	2013
Transmission, Distribution and Supply Licence for Dominica Electricity Services Limited (Exclusive to DOMLEC) [21]	2013
Distributed Renewable Energy Generation Policy [22]	2016

Policies and Legislation Relevant to the Energy Sector

Policies:

- National Energy Policy 2019 [23]
- National Resilience Development Strategy (2018) [5]
- Sustainable and Resilient Energy Plan for Dominica (2019) [7]
- Master Plan for Resilience (2019) [24]

Legislation:

- Geothermal Energy Act No. 24 (1975) [25]
- Geothermal Resources Development Act No. 12 (2016) [26]
- Climate Resilience Act No. 16 (2018) [27]

Policies and Legislation Relevant to the Transportation Sector

Policies:

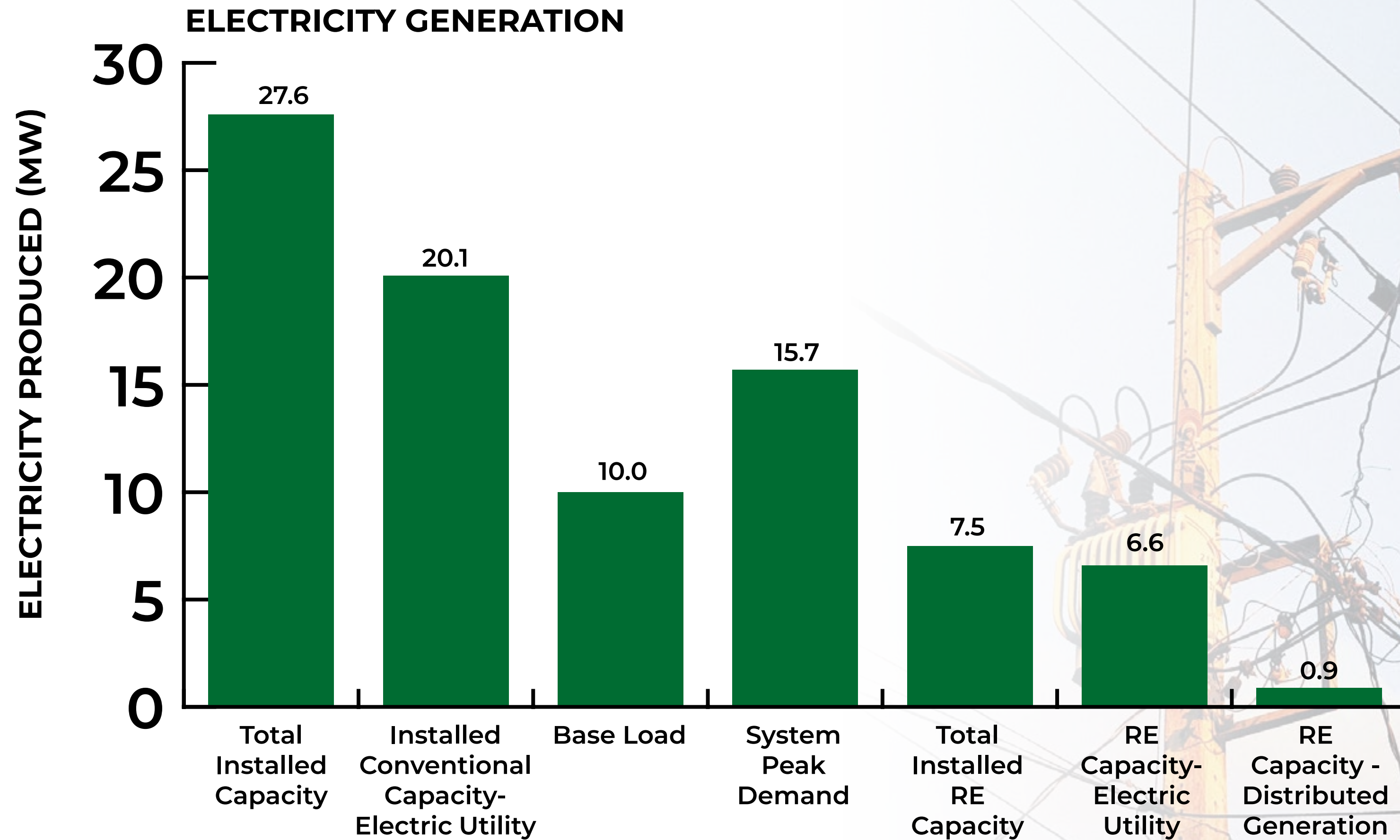
- National Roads Policy [28]

Legislation & Regulation:

- Supplies Control Act No. 21 of 1979 [28]
- Climate Change, Environment and Natural Resource Management Bill 2014 [28]
- Electrical Vehicle Duty Free Importation [29]
- Environmental Levy on Vehicles [30]



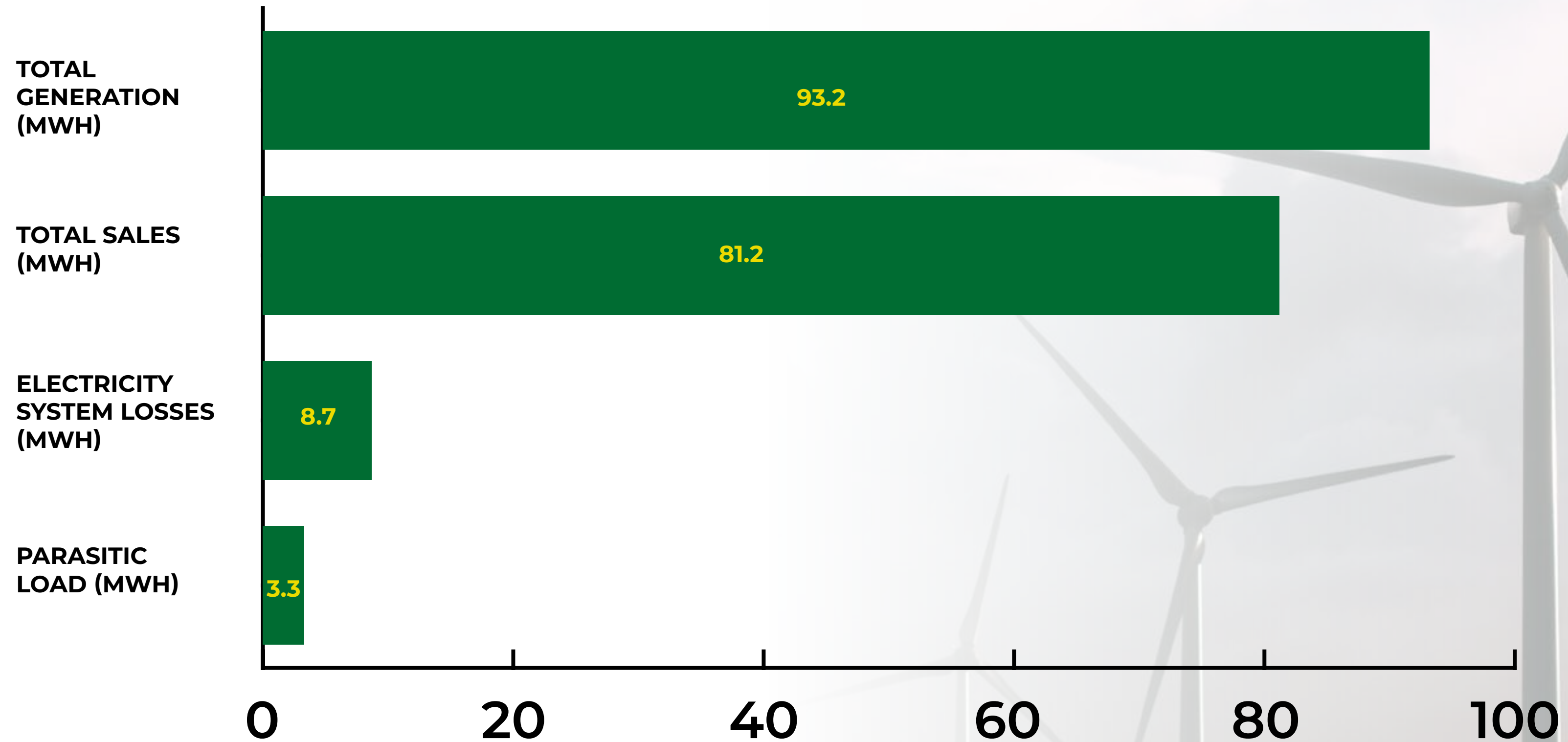
ELECTRICITY & ENERGY EFFICIENCY





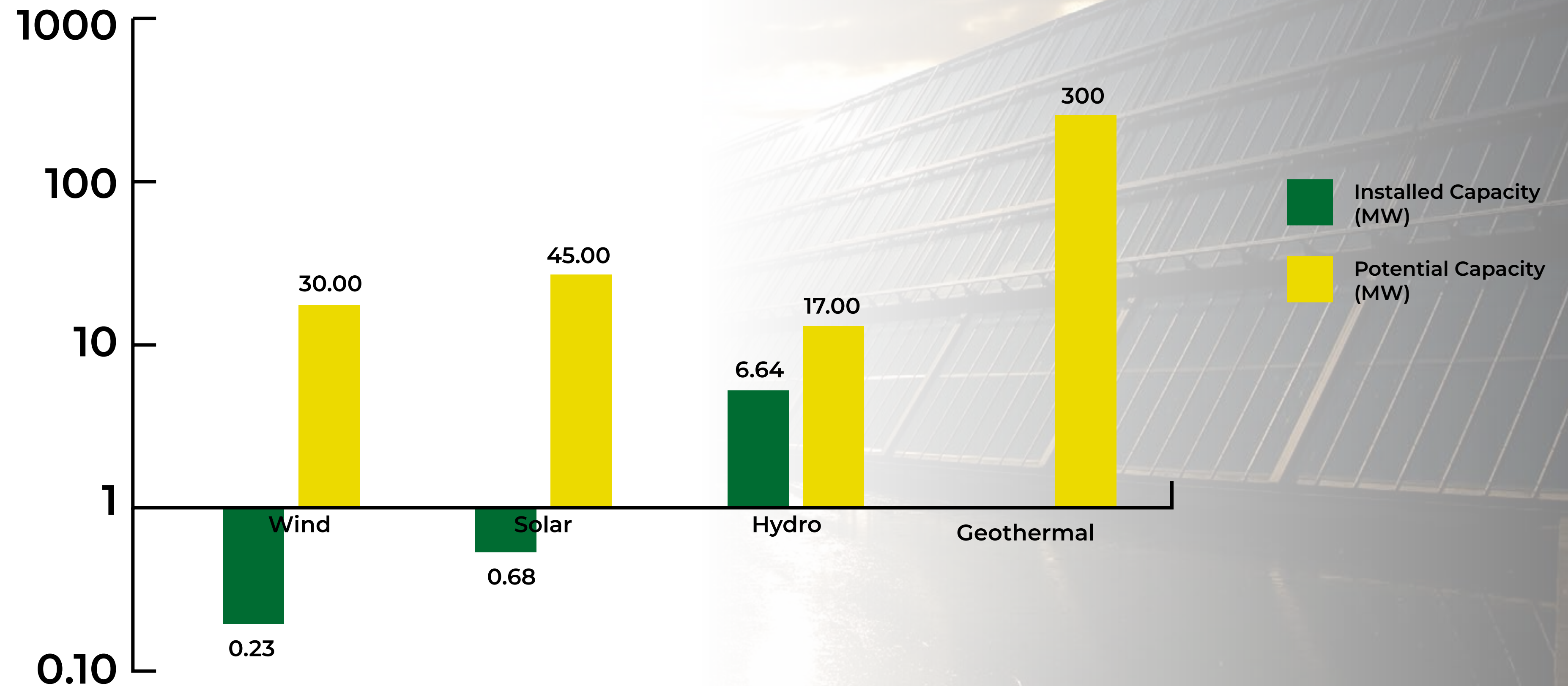
ELECTRICITY & ENERGY EFFICIENCY (CONT'D)

ELECTRICITY CONSUMPTION





ELECTRICITY & ENERGY EFFICIENCY (CONT'D)





ELECTRICITY & ENERGY EFFICIENCY (CONT'D)

TARRIFS

Class	Details	Energy Charge USD/kWh
Residential Tariff Block 1	$\leq 50\text{kWh}$	0.2141
Residential Tariff Block 2	$\geq 50\text{kWh}$	0.2481
Commercial		0.2641
Industrial/Large Power Block 1	Electricity supplied between 6am and 10pm	0.2344
Industrial/Large Power Block 2	Electricity supplied between 10pm and 6am	0.2152
Hotels		0.2344
Lighting		0.2641
Street Lights		0.2630



PROJECTS IN THE PIPELINE

ENERGY EFFICIENCY PROJECTS

Energy Efficiency	Old/Existing Infrastructure (Number/Size)	Consumption (MWh)	Annual Costs (USD)	Energy Audits (Yes/No)	Energy Efficiency Legislation or Regulations	Change in Old/Existing Infrastructure Expected in Upcoming Calendar Year (Number/Size)	Expected Change in Technology	Relative Difference in Operating Consumption/ Costs
Ministry of Public Works and Digital Economy: Renewable Energy Street Lighting	4,982 non-RE streetlights as of June 2020	1,834 (2014-2017 Average)	220,254.81	Yes. By Ministry of Public Works and Digital Economy	No	Not currently determined	HPS Lighting to Solar and Solar-Wind Hybrid lighting	Not obtained
DOMLEC Smart Street Light project funded by CDB	732 HPS streetlights	1,834 (2014-2017 Average)	220,254.81	Yes	No	Not obtained	HPS Lighting to LED lighting	Not obtained
Public Buildings Energy Audit funded by CDB	8 Buildings	2,854.5	831,709.00	Yes. Audit prepared by Energy Dynamics Ltd.	No	To be determined by each public building. Recommendations included: PV system for each building, premium efficiency motors, LED lighting, thermostats, VRF replacement, roof insulation, efficient air conditioning units.	To be determined by each public building	Total annual cost savings US \$277,813. Average payback period: 3 years. Average cost reductions: 60%. Average energy reduction: 64%.
DOWASCO Wastewater Plant and Water Pumping Stations Audit Report funded by CDB	Bayton Wastewater Treatment Plant and 4 pumping stations (Soufriere, Jimmit, Goodwill, Giraudel, Newtown)	227.4	60,001	Yes. Audit prepared by Energy Dynamics Ltd.	Internal Energy Policy		Recommended LED lighting, efficient air conditioning, and high efficiency pumps	\$5205 US per year after 3 years. 7% Energy Savings, 9% Cost Savings. 31% internal rate of return over ten years.



PROJECTS IN THE PIPELINE (CONT'D)

RENEWABLE ENERGY PROJECTS

Renewable Energy Source	Resource and Projects Capacity (MW)	Development Partner	Total Estimated Cost	Funding Source
Solar Photo-Voltaic	8.08	Independent Regulatory Commission, DOWASCO	Not Yet Determined	Not Yet Determined
	~ 4	Independent Regulatory Commission	Not yet determined	
	~ 4 plus battery storage	Independent Regulatory Commission	Not yet determined	
	0.03	Caribbean Community Climate Change Centre	Not Available	The Government of Italy
	0.05	Reliable Solutions Caribbean Ltd	Not Yet Determined	Not Yet Determined
Geothermal	10 (Phase 1)	Dominica Geothermal Development Company, Agence Francaise de Developpement, Government of New Zealand, Clean Infra Partners, Ambassador Vince Henderson	\$51.45 thus far (Not Fully Determined);	The World Bank through various donors (IDA US\$17.2 million; New Zealand: Ministry of Foreign Affairs US\$2 million; Free-Standing Single Purpose Trust Fund US\$10 million; CTD US\$9.953 million; SIDS DOCK US\$2 million) The Government of the Commonwealth of Dominica US\$10.3 million;;
	50 (Phase 2)	Execution to be led by Dominica Geothermal Development Company as Phase 2 of geothermal energy exploitation in Dominica. Plans for Phase 2 are in preliminary stages. Data from the domestic plant of 10MW will be used as a guide for Phase 2 once it is commissioned.	Not Yet Determined	Not yet determined



PROJECTS IN THE PIPELINE (CONT'D)

RENEWABLE ENERGY PROJECTS (CONT'D)

Renewable Energy Source	Resource and Projects Capacity (MW)	Development Partner	Total Estimated Cost	Funding Source
Hydro	0.22	Dominica Water and Sewerage Company (DOWASCO), Bernard Ingenieure ZT	Not Disclosed	German Technical Corporation: Federal German Ministry of Economic Cooperation and Development
Other (Battery Storage)	5	Government of UAE; Dominica Geothermal Development Company	Not Disclosed	Government of UAE



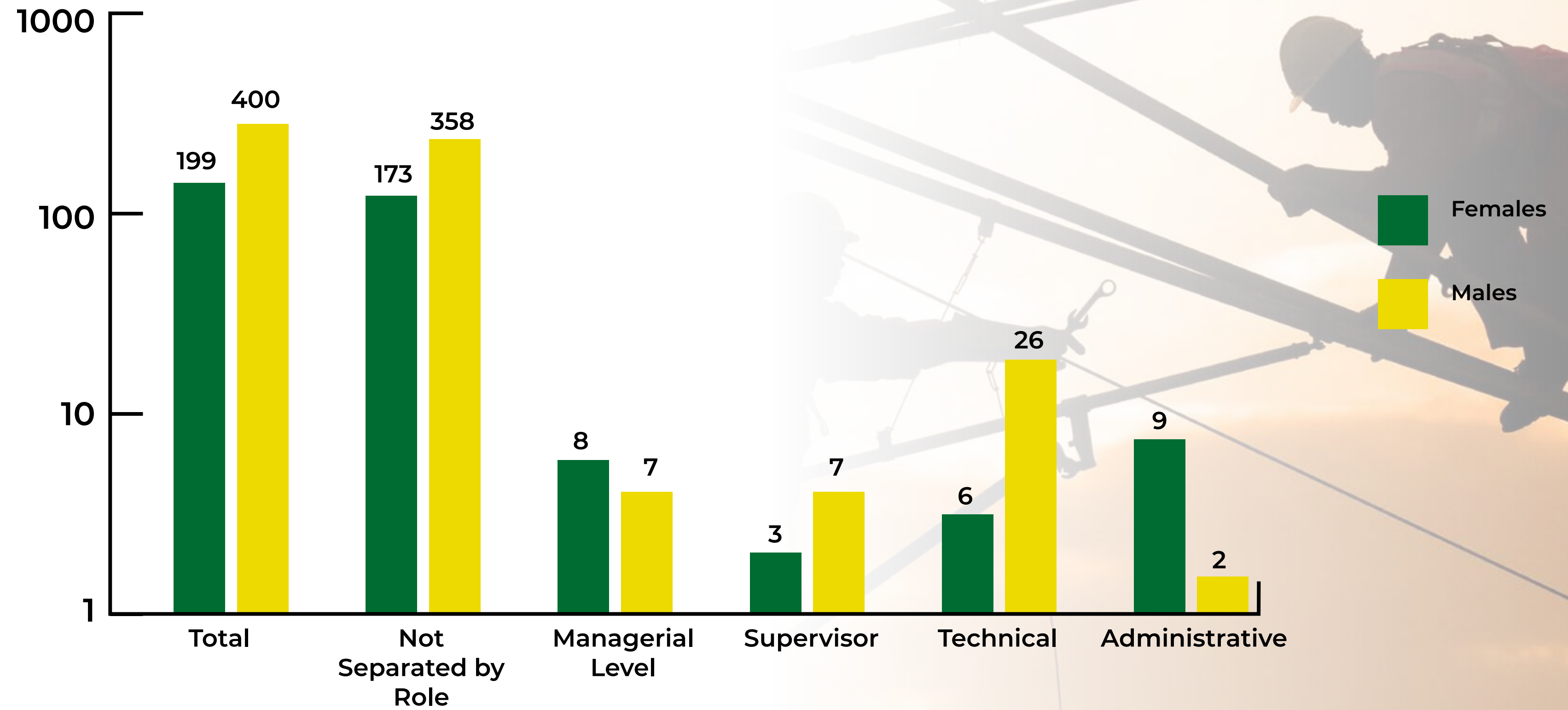
NUMBER AND TYPE OF TERTIARY LEVEL & VOCATIONAL TRAINING SUSTAINABLE ENERGY PROGRAMMES OFFERED

Name of Education Programme Provider	No of Persons Enrolled	Types of Programme		Programme Link
		Certificate	ASc.	
Green Solutions International SKN Incorporated	25	NABCEP Associate and Systems Inspectors Certification Course		https://www.greensolutionskn.com/online-learning
Dominica State College	13 enrolled (2017-2019) 4 Graduated (3 Males and 1 Female)		Renewable Energy	https://dominicastatecollege.com/?page_id=2818



WORKFORCE

WORKFORCE DATA

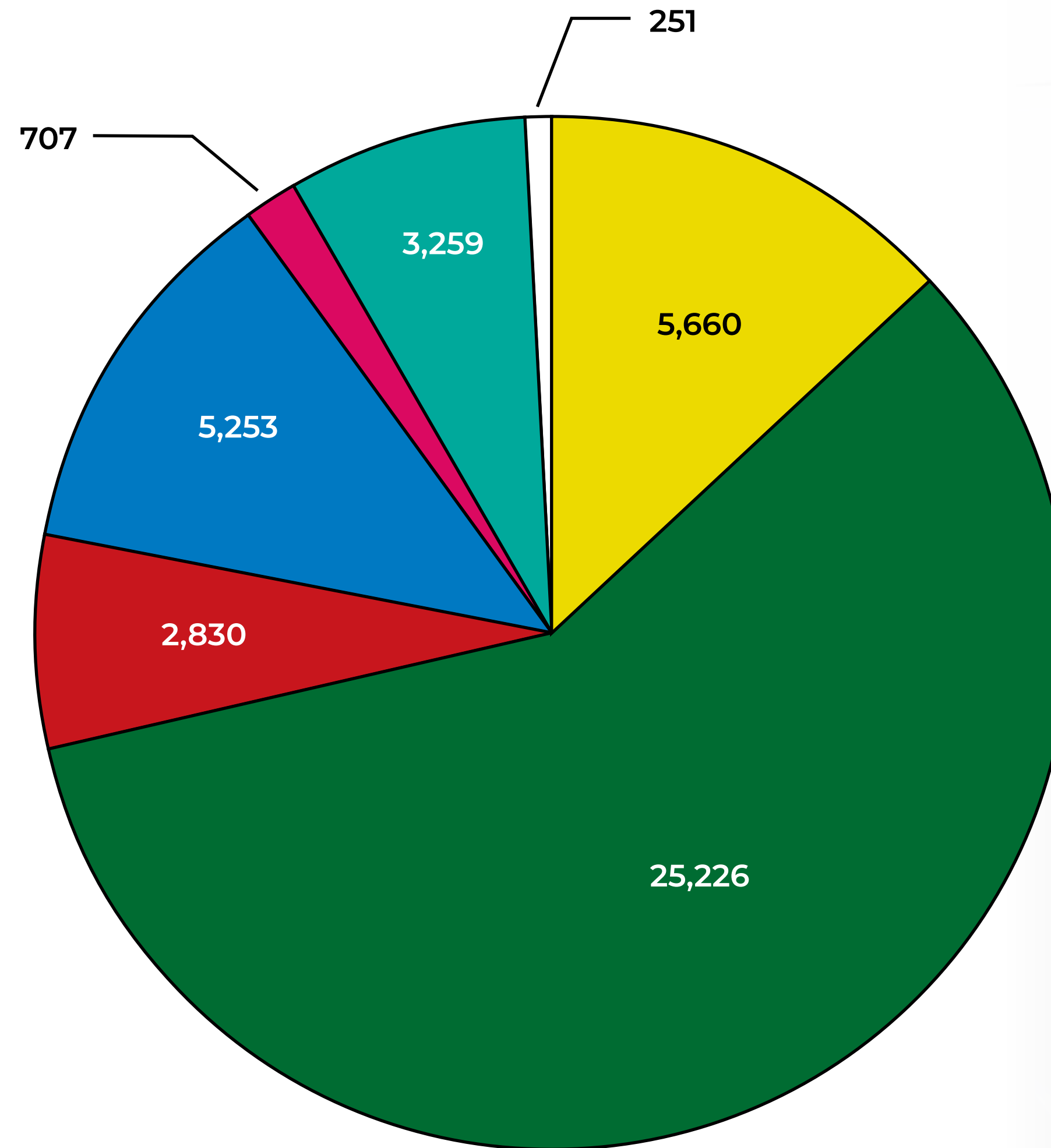


Note: Most companies did not provide data separated by role



TRANSPORTATION SECTOR

REGISTERED VEHICLE STOCK



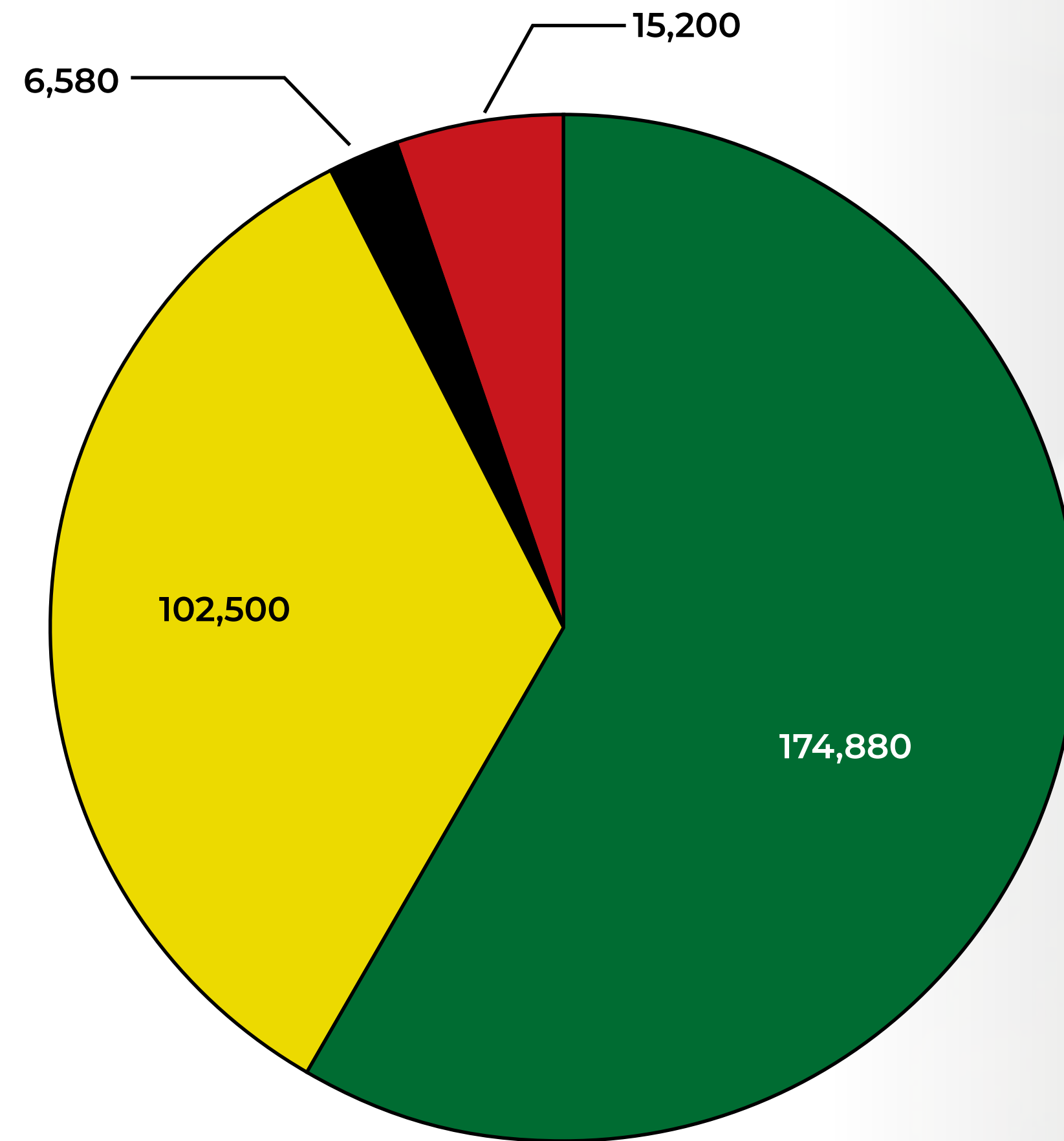
- Trucks
- Cars
- Buses
- SUVs
- Taxis
- Motorcycles
- Tractors

There are also:
5 Electric Vehicles
No information is captured on hybrid vehicles



TRANSPORTATION SECTOR (CONT'D)

FUEL CONSUMPTION (BOE)



- Gasoline (Road)
- Diesel (Road)
- Kerosene Type Jet Fuel (Aviation)
- Other Gas Oil (Mixed)



CLIMATE CHANGE FRAMEWORK

Climate Change Policy	Dominica Climate Resilience Plan 2020-2030 [13]
National Determined Contributions	44.7 % below 2014 levels by 2030 [15]
Priority Sectors for NDC	Energy industries Transport Solid waste
National Communications (NC) to the UNFCCC	Initial National Communication Under the United Nations Framework Convention on Climate Change (2001) [31]
	Second National Communication of the Commonwealth of Dominica Under the United Nations Framework Convention on Climate Change (2012) [32]
	Third National Communication to the United Nations Framework on Climate Change of the Commonwealth of Dominica (2020) [33]

Greenhouse gas source and sink categories	CO ₂ emissions	CO ₂ eq removals	CH ₄	N ₂ O	CO	NO _x	NMVOCs	SO _x
Total national emissions and removals	444.158	-3,261.148	2.687	0.907	-491.704	0.019	0.86	X
1. Energy	156.2	X	X	X	X	X	X	X
2. Industrial processes	X	X	X	X	X	X	0.46	X
3. Solvent and other product use	0.08	X	X	X	X	X	0.4	X
4. Agriculture	286	-497.504	0.962	0.002	X	X	X	X
5. Land Use, Land Use Change and Forestry	1.298	-2763.644	0.194	0.9	-491.704	0.019	X	X
6. Waste	0.58	X	1.531	0.0051	X	X	X	X



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