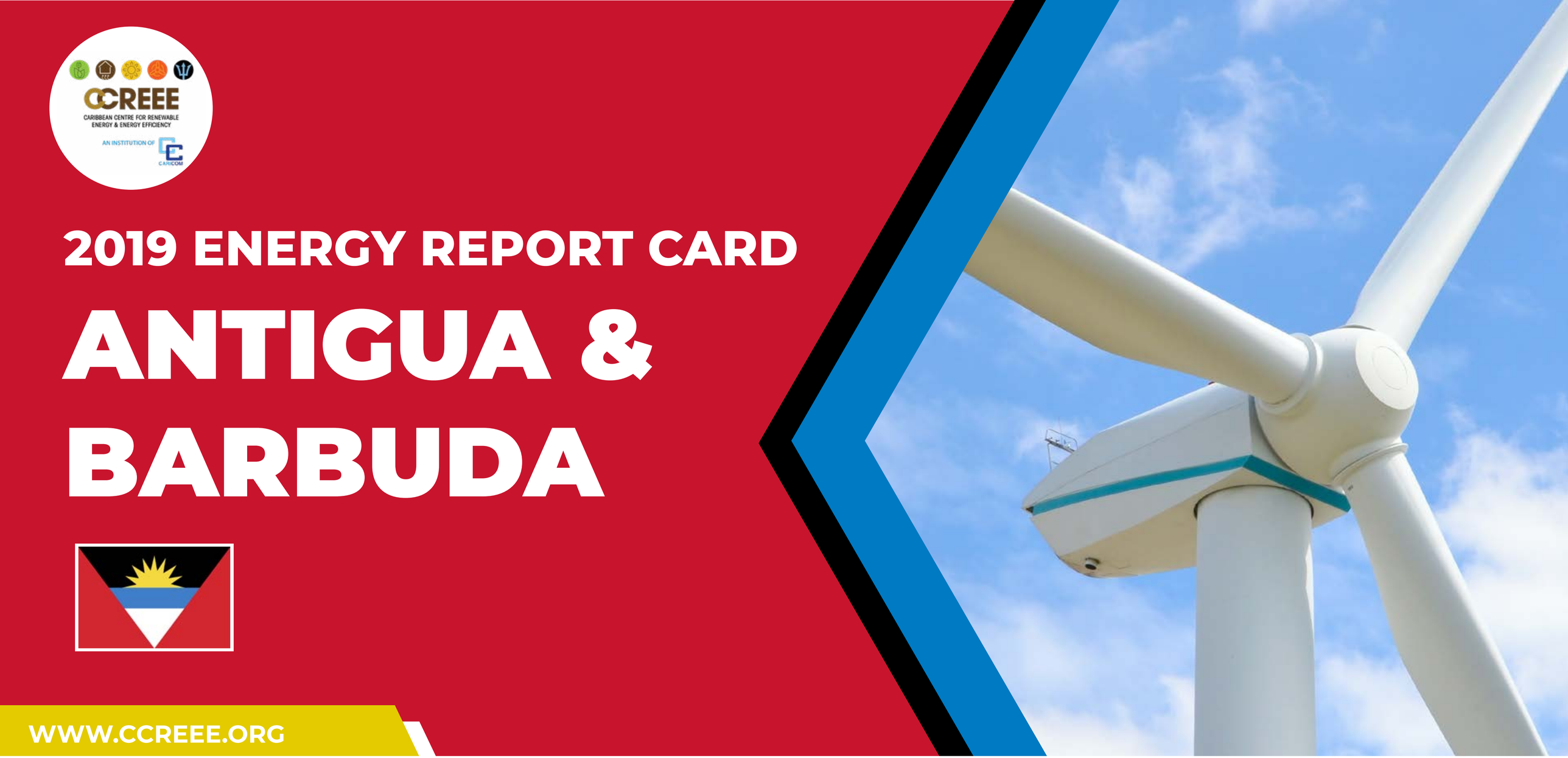
CCREEE
CARIBBEAN CENTRE FOR RENEWABLE ENERGY & ENERGY EFFICIENCY
AN INSTITUTION OF CARICOM

# 2019 ENERGY REPORT CARD

# ANTIGUA & BARBUDA



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CARICOM
TAPSEC TECHNICAL ASSISTANCE PROGRAMME FOR SUSTAINABLE ENERGY IN THE CARIBBEAN
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Implemented by giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
SIDSDOCK SMALL ISLAND DEVELOPING STATES ISLAND ENERGY FOR ISLAND LIFE
Austrian Development Agency
aecid Agencia Española de Cooperación Internacional para el Desarrollo
UNIDO UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

# INTRODUCTION

This document presents Antigua and Barbuda's Energy Report Card (ERC) for 2019.

The ERC provides an overview of the energy sector performance in Antigua and Barbuda. 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.

# CONTENTS

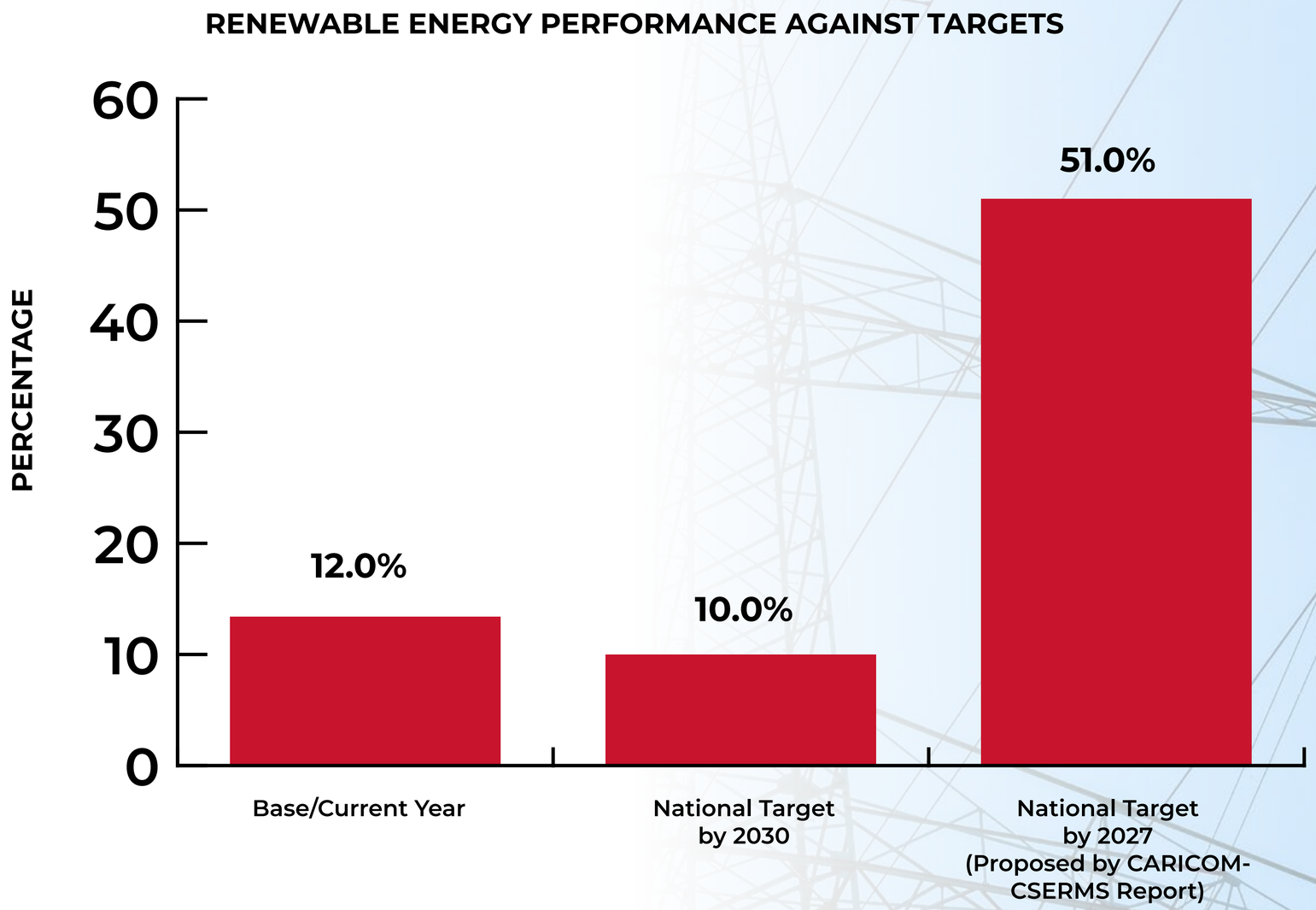
# ENERGY SECTOR SUMMARY

| Key Data and Information - Energy Sector | |
|---|---|
| Population | 96,453 [1] |
| GDP (USD) Per Capita | $17,790.30 [2] |
| Debt as % of GDP | 76.30% [3] |
| Human Development Index | 0.778 [4] |
| National Development Plan/Overall Country Development Strategy | Government of Antigua and Barbuda Medium -Term Development Strategy 2016 to 2020 [5] |
| National Energy Policy | Antigua and Barbuda National Energy Policy 2011 [6] |
| Renewable Energy (RE) Policy | No Renewable Energy policy found but Renewable objectives are outlined in the Sustainable Energy Action Plan [7] |
| RE Target | 10 % by 2020 and 15 % by 2030 [7] |
| Energy Performance Standards/Appliance Labelling | In the development phase by the Antigua and Barbuda Bureau of Standards [8] |
| No. of Persons Employed in Energy Sector | 691 [9] |
| Total Oil Import (BOE) per day (2018) | 5,076 [10] |
| Total Oil Export (BOE) per day | None [10] |
| Total Installed Capacity (MW) | 88.5 [11] |
| Total Installed RE (MW) | 10.3 [11] |
| Electricity System Losses (%) | 13.1% [11] |
| Energy Use (kWh) Per Capita | 3,219.53 [11] |
| Fuel and Oil Imports as % of GDP | 5.10% [12] |
| Climate Change Policy | Sustainable Energy Action Plan [7] |
| Electric Vehicle Stock | 20 [13] |

# ENERGY SECTOR SUMMARY (CONT'D)

| Key Data and Information - Energy Sector | |
|---|---|
| National Determined Contributions (NDC) | Conditional Mitigation Targets [13]<br>1. By 2020, establish efficiency standards for the importation of all vehicles and appliances.<br>2. By 2020, finalize the technical studies with the intention to construct and operationalize a waste to energy (WTE) plant by 2025.<br>3. By 2030, achieve an energy matrix with 50 MW of electricity from renewable sources both on and off-grid in the public and private sectors.<br>4. By 2030, all remaining wetlands and watershed areas with carbon sequestration potential are protected as carbon sinks.<br><br>Unconditional Targets<br>1. Enhance the established enabling legal, policy and institutional environment for a low carbon emission development pathway to achieve poverty reduction and sustainable development.<br>2. By 2020, updating the building code to meet projected impacts of climate change. |
| National Repository for Energy Data | None |

# ENERGY SECTOR PERFORMANCE AGAINST TARGETS



# KEY ENERGY STAKEHOLDERS

## Government Ministries, Departments and Agencies

- Ministry of Tourism, Economic Development, Investment and Energy (MTEDIE) [15]
- Ministry Public Utilities, Civil Aviation, Transport and Energy [15]

## Fuel Importers & Suppliers

- West Indies Oil Company Limited [15]
- Rubis Caribbean [16]

## Electric Utility

- Antigua Public Utilities Authority [15]

## Independent Power Producer(s)

- Antigua Power Company Limited [17]

## Electricity Regulator

- Antigua Public Utilities Authority [17]

## Transportation

- Antigua and Barbuda Transport Board [18] [19]

## Other

- Ministry of Finance and Corporate Governance [15]
- Department of the Environment, Ministry of Health, Wellness, and the Environment [15]
- Antigua and Barbuda Bureau of Standards [15]
- Nu Bec Energy Conservation Products Ltd [20]
- New Energy Antigua [21]
- PV Energy Limited [22]

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

| | Completed | Draft | In Progress | Not Completed |
|---|---|---|---|---|
| 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 | ✓ | | | |

## Policies and Legislation Relevant to the Energy Sector

Policies:
- Interconnection Policy Statement 2011 [23]
- National Energy Policy 2011 [6]
- Sustainable Energy Action Plan 2013 [7]
- CARICOM Regional Energy Efficient Building Code 2018 [24]

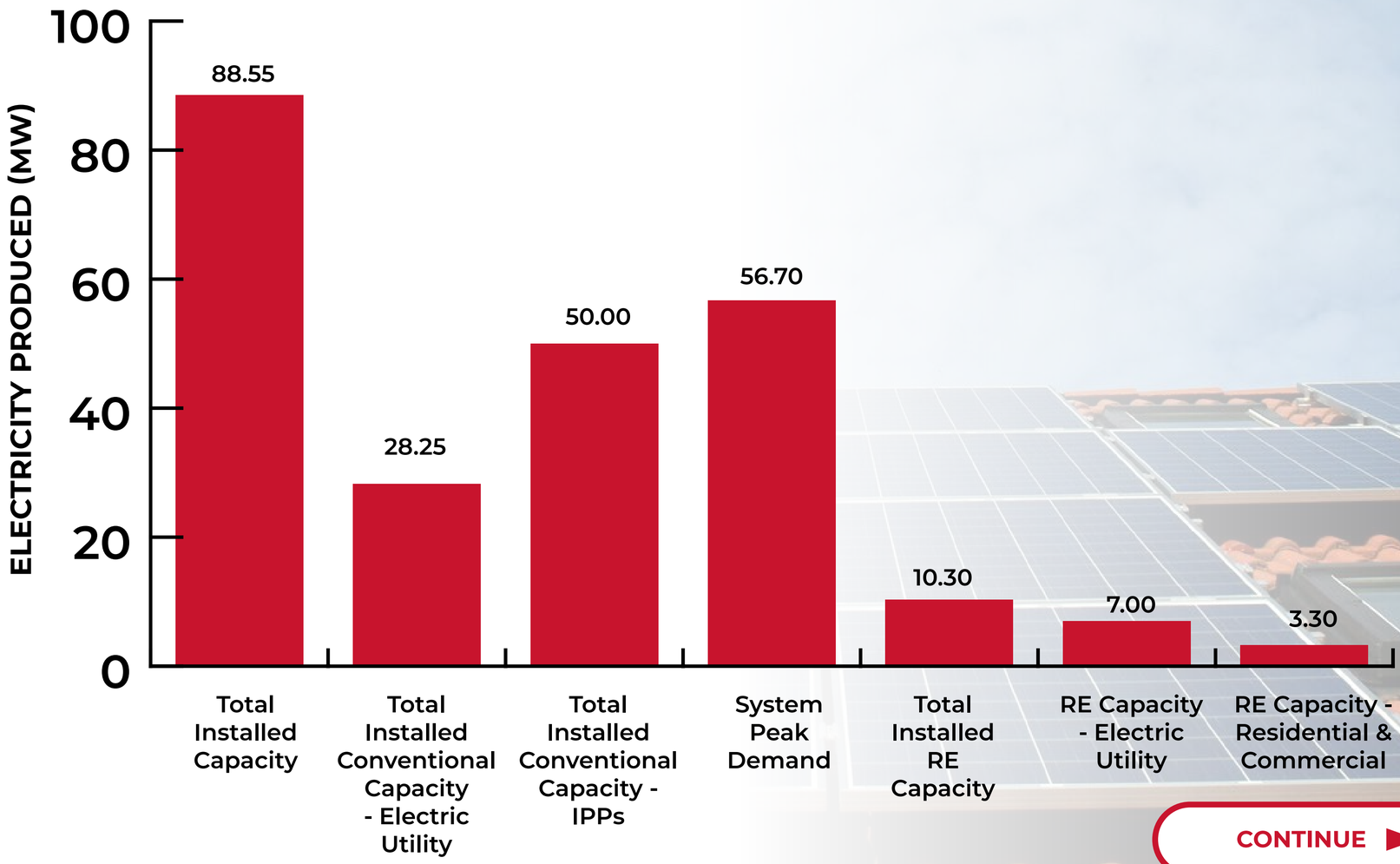
Legislation:
- Environment Protection Act (Last Revision 2011) [25]
- Petroleum Act Chapter 225 (Last Revision 2000) [26]
- Environmental Protection and Management Act 2019 [27]

## Policies and Legislation Relevant to the Transportation Sector

Legislation:
- Transport Board Act 1995 [28]
- The Vehicles and Road Traffic Act [29]

# ELECTRICITY & ENERGY EFFICIENCY

## ELECTRICITY GENERATION

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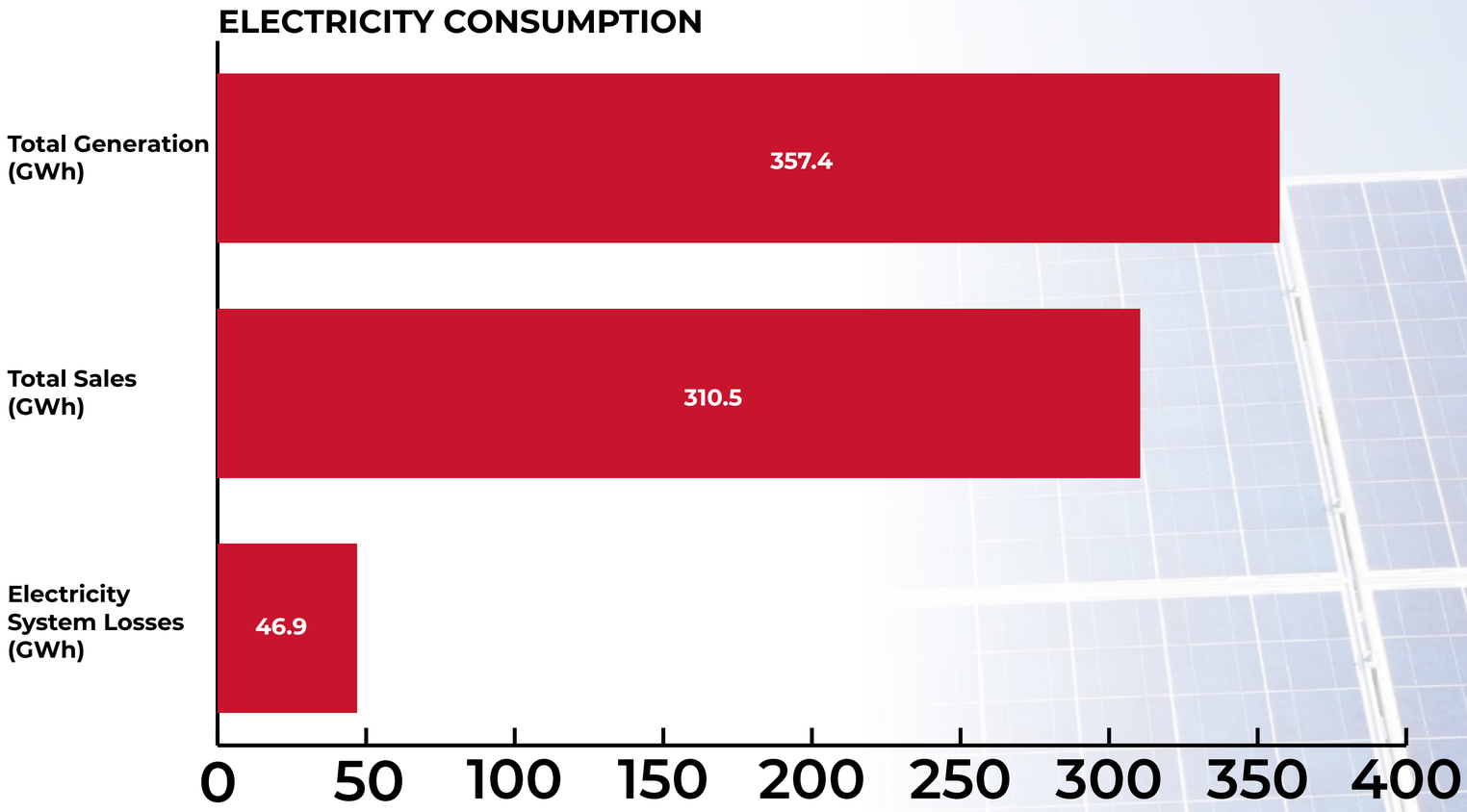
# ELECTRICITY & ENERGY EFFICIENCY (CONT'D)

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# ELECTRICITY & ENERGY EFFICIENCY (CONT'D)

## TARRIFS

| Class | Minimum charge | Minimum charge USD/ Month | Energy Charge USD/kWh | Demand USD/kVA |
|---|---|---|---|---|
| Residential | $9.25 | ≤ 300 | $0.15 | |
| | | > 300 | $0.14 | |
| Commercial | $16.65 | ≤ 100 | $0.17 | $2.96 |
| | | 100 - 250 | $0.16 | |
| | | > 250 | $0.14 | |
| Industrial/ Large Power | | | $0.14 | |
| Streetlights | | | $0.14 | |

Note: In addition, Residential and Commercial consumers are subject to a variable fuel charge

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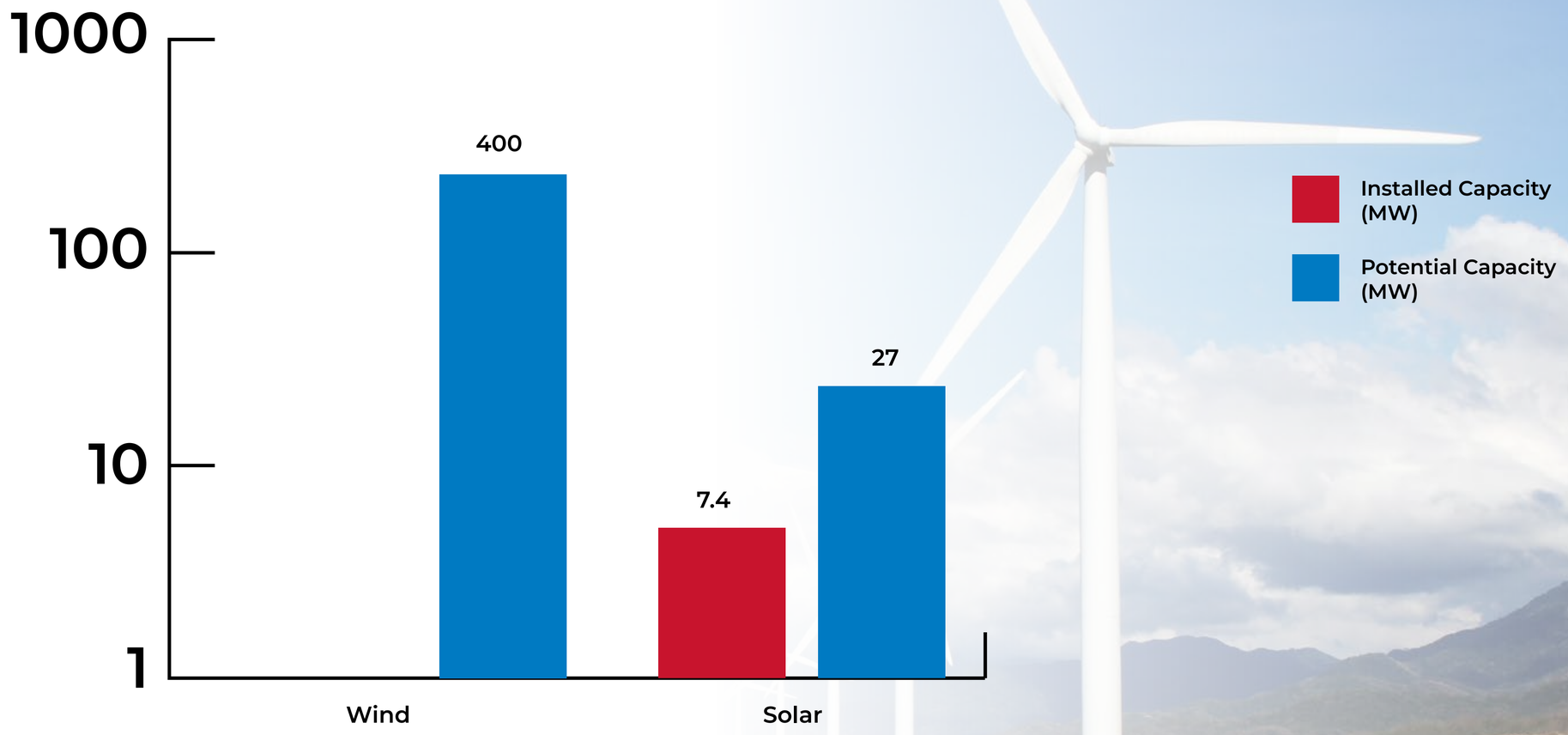
# ELECTRICITY & ENERGY EFFICIENCY (CONT'D)

## RENEWABLE ENERGY RESOURCE

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# PROJECTS IN THE PIPELINE

## TECHNICAL ASSISTANCE PROJECTS

| Donor Funding and Technical Assistance Landscape | Donor Organization & Banks | Technical Assistance Providers | Funding Awards | Year |
|---|---|---|---|---|
| Sustainable Pathways- Protected Areas and Renewable Energy [30] | Global Environment Facility | UNEP | US$1,095,890 | 2015 |
| Electric Bus Pilot Project [31] | Italian Government (bilateral) | LOGIOS | USD$625,000 | 2017 |
| Grid-Interactive Solar PV Systems for Schools and Clinics [32] | The Ministry of the Environment, Land & Sea of Italy | | US$ 825000 | 2017 |
| Sustainability Energy Facility Program [33] | Global Environment Facility | United Nations Electricity Supply Partnership | | 2018 |
| Green Barbuda Power Plant [34] | Caricom Development Fund United Arab Emirates Government of New Zealand | | XCD$15,000,000 | 2019 |

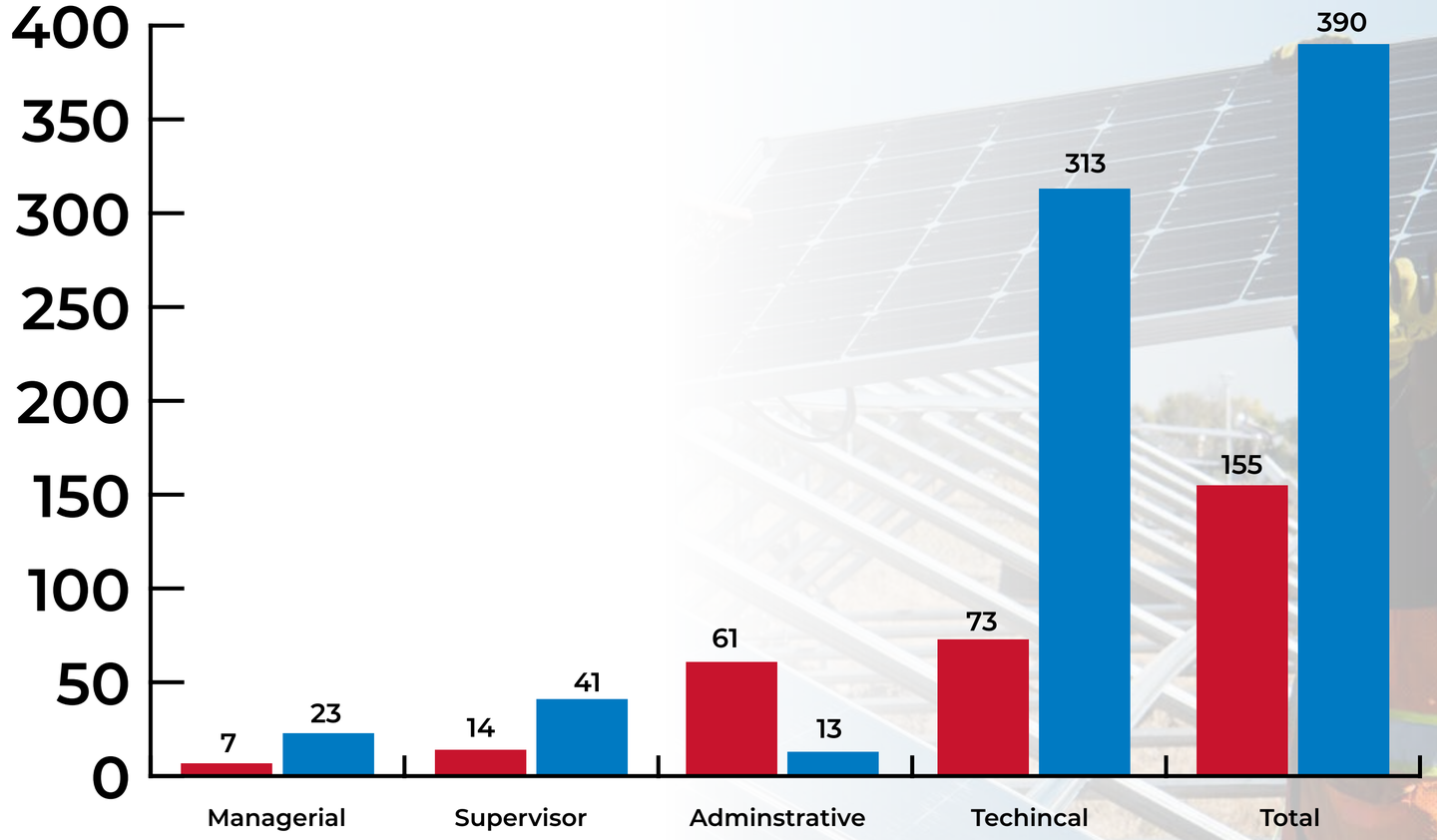
## RENEWABLE ENERGY PROJECTS

| Renewable Energy Source | Resource and Projects Capacity | Development Partner | Total Estimated Cost | Funding Source |
|---|---|---|---|---|
| Solar Photo-Voltaic | 10 MW | PV Energy Limited | US$ 3 Million | Government of Antigua and Barbuda [35] |

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

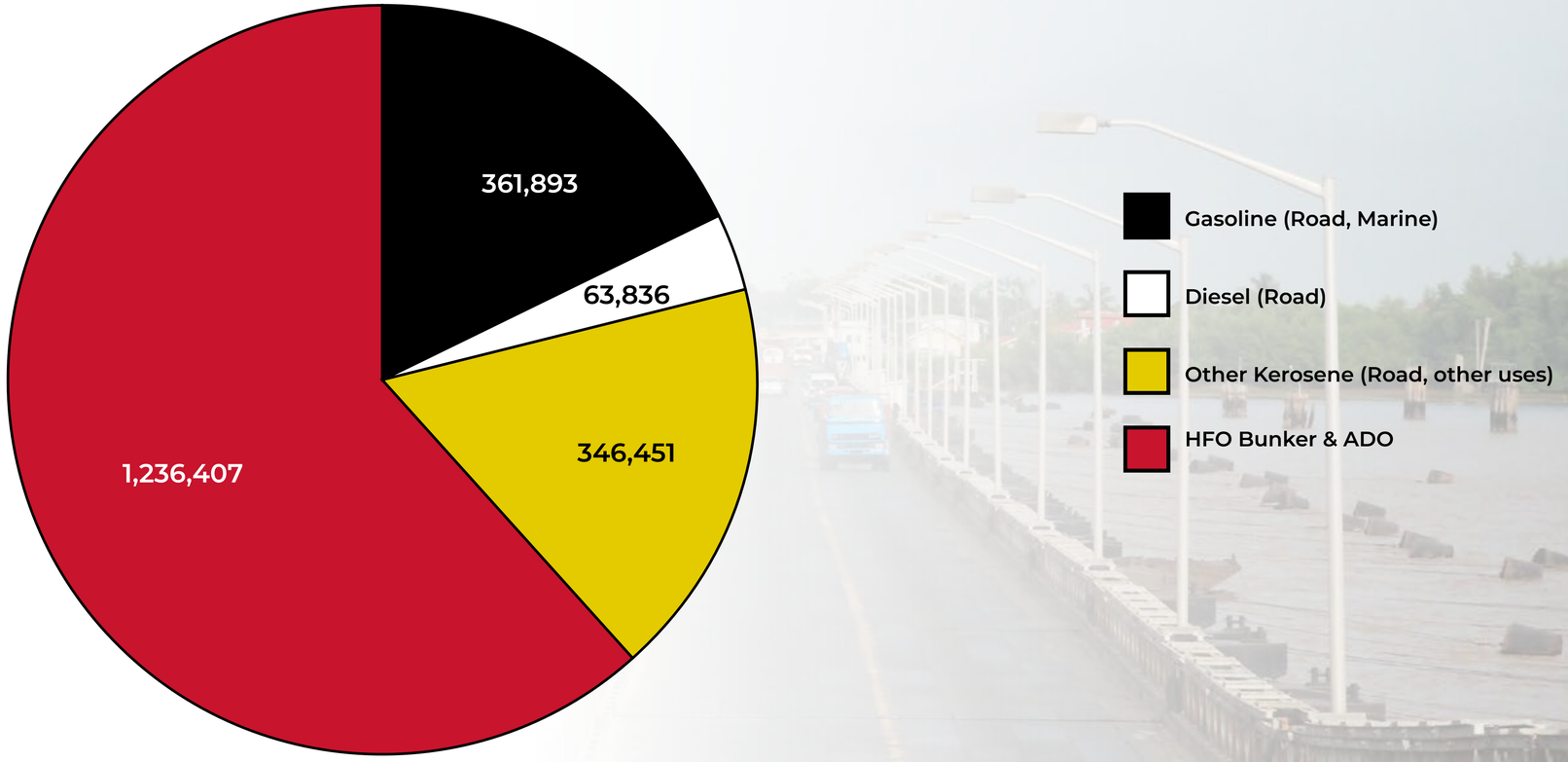
| Name of Education Programme Provider | No. of Persons Enrolled | Type of Programme | Programme Link |
|---|---|---|---|
| | | Certificate | |
| Antigua State College | 14 | CAPE Green Engineering | https://antiguastatecollege-anu.webs.com/DLA%20Brochure%202020-2021.pdf |

# WORKFORCE



# TRANSPORTATION SECTOR

## TRANSPORTATION FUEL CONSUMPTION (BOE)



# CLIMATE CHANGE FRAMEWORK

| Climate Change Policy | Sustainable Energy Action Plan [7] |
|---|---|
| National Determined Contributions | Conditional Mitigation Targets [14]<br>1. By 2020, establish efficiency standards for the importation of all vehicles and appliances.<br>2. By 2020, finalize the technical studies with the intention to construct and operationalize a waste to energy (WTE) plant by 2025.<br>3. By 2030, achieve an energy matrix with 50 MW of electricity from renewable sources both on and off-grid in the public and private sectors.<br>4. By 2030, all remaining wetlands and watershed areas with carbon sequestration potential are protected as carbon sinks.<br><br>Unconditional Targets<br>1. Enhance the established enabling legal, policy and institutional environment for a low carbon emission development pathway to achieve poverty reduction and sustainable development.<br>2. By 2020, updating the building code to meet projected impacts of climate change. |
| Emissions Reduction Target | 25% below 1990 levels by 2020 [36] |
| Priority Sectors for NDC | Energy, Water, Health, and Emergency Services [14] |
| National Communications (NC) to the UNFCCC | Antigua and Barbuda's Initial National Communication on Climate Change [37] |
| | Antigua and Barbuda's Second National Communication on Climate Change [38] |
| | Antigua and Barbuda's Third National Communication on Climate Change [39] |

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# CLIMATE CHANGE FRAMEWORK (CONT'D)

## GREENHOUSE GAS (GHG) INVENTORY BY SECTOR [35]

| Greenhouse Gas Source and Sink Categories | Net $CO_2$ (Gg) | $CH_4$ (Gg $CO_2$eq) | $N_2O$ (Gg $CO_2$eq) | NOx (Gg NO2) | NMVOC (Gg NMVOC) | CO (Gg CO) |
|---|---|---|---|---|---|---|
| Energy | 648.76 | 0.02579 | 0.00512 | 0 | 0 | 0 |
| Industrial Processes | 3.1439 | 0 | 0.00202 | 0 | 0.03539 | 0 |
| Agriculture | 191.54 | 0.62928 | 0 | 0 | 0 | 0 |
| Waste | 0.83290 | 0.86238 | 0.04149 | 0 | 0 | 0 |

◀ PREVIOUS







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