2020- ENERGY REPORT CARD

INTRODUCTION

This document presents Antigua and Barbuda’s Energy Report Card (ERC) for 2020. The ERC provides an overview of the energy sector performance in Antigua and Barbuda. 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.
**Energy Sector Summary**

- **Population (Census/Projection):** 97,928 (Estimate)
- **GDP (USD) Per Capita:** 14,450
- **Human Development Index:** 0.78 (2019)
- **Energy Performance Standards/Appliance Labelling:** CARICOM Energy Efficiency Labelling Standards
- **Electricity System Losses (%):** 10.30%
- **Energy Use (kWh) Per Capita:** 3143.13
- **Electric Vehicle Stock:** 29
- **Energy Intensity (BTU/$):** 3688.90 (2015)
- **Total Installed RE (MW):** 9.20
- **Total Oil Export (BOE) per day:** 12,378
- **Total Oil Import (BOE) per day:** 16,798
- **Total Installed Conventional Capacity (MW):** 78.25
- **No. of Persons Employed in Energy Sector Data not available**

**National Determined Contributions (NDC)**

**Conditional Mitigation Targets**
1. By 2020, establish efficiency standards for the importation of all vehicles and appliances.
2. By 2020, finalize the technical studies with the intention to construct and operationalize a waste to energy (WTE) plant by 2025.
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.
4. By 2030, all remaining wetlands and watershed areas with carbon sequestration potential are protected as carbon sinks.

**Unconditional Targets**
1. Enhance the established enabling legal, policy and institutional environment for a low carbon emission development pathway to achieve poverty reduction and sustainable development.
2. By 2020, update the Building Code to meet projected impacts of climate change.
RENEWABLE ENERGY PERFORMANCE AGAINST TARGETS [2]

- **2020 performance**
  - **11%** Renewable Energy Installed Capacity

- **National Target by 2027**
  - **51%** Renewable Energy Installed Capacity
  - **33%** % Reduction in Energy Intensity (BTU/ US$1 Unit of Output)
  - **62%** % Reduction in Energy Sector Emissions

- **National Target by 2030**
  - **100%** Renewable Energy Installed Capacity
  - **10%** % Reduction in Energy Intensity (BTU/ US$1 Unit of Output)
  - **90%** % Reduction in Energy Sector Emissions

![Bar chart showing performance against targets](chart.png)

- 2020 Performance
- National Target by 2030 (Proposed by CARICOM -CSERMS Report)
KEY ENERGY STAKEHOLDERS

Government Ministries, Departments and Agencies
- Department of Environment (Ministry of Health, Wellness and the Environment) [15]
- Ministry of Public Utilities, Civil Aviation, Transport and Energy [16]
- Antigua Public Utilities Authority (APUA) [17]

Fuel Importers & Suppliers
- West Indies Oil Company LTD [18]
- Rubis Caribbean [19]

Electric Utility
- Antigua Public Utilities Authority (APUA) [17]

Independent Power Producer
- Antigua Power Company (APC) [20]

Electricity Regulator
- Antigua Public Utilities Authority (APUA) [17]

Transportation
- Antigua and Barbuda Transport Board (ABTB) [21]

Other
- Development Control Authority [22]
- Antigua and Barbuda Bureau of Standards [23]
- Ministry of Finance and Corporate Governance [24]
POLICY, LEGAL AND REGULATORY (PLR) FRAMEWORK

Policies and Legislation Relevant to the Energy Sector

- Sustainable Energy Action Plan [7]
- Medium-Term Development Strategy [5]
- Environment Protection and Management Act [28]
- CARICOM Regional Energy Efficiency Building Code [29]

Key Achievements: PLR Framework Timeline for Electricity Sector

- Energy Policy: Completed
- Interconnection Policy: 2011
- Net Billing / Net Metering: 2013
- RE/EE Act: 2017
- EE Target: 2019
- RE Target: 2021
- The Public Utilities Act: 1973
- Interconnection Policy Standards: Completed
- Feed-in-tariff: IN PROGRESS
POLICY, LEGAL AND REGULATORY (PLR) FRAMEWORK

POLICIES AND LEGISLATION RELEVANT TO THE TRANSPORTATION SECTOR

**LEGISLATION & REGULATION**

- **1931** Motor Vehicles (Customs Duty Exemption) Act
- **1952** Motor Vehicles Insurance (Third-Party Risks) Act
- **1963** The Petroleum Industry (Encouragement) Act
- **2018** The Vehicles and Road Traffic (Amendment) Act
- **1949** The Petroleum Act
- **1962** Motor Vehicles (Control of Hire) Act
- **2015** Environment Protection and Management Act
- **2020** The Transport Board Act (Amendment)
**ELECTRICITY & ENERGY EFFICIENCY**

**INSTALLED CAPACITY (MW)**

- **TOTAL INSTALLED CAPACITY**: 87.45
- **Electrical Utility (HFO)**: 50
- **Electrical Utility (LFO)**: 27
- **IPP’s (HFO)**: 14
- **Distributed Generation (PV)**: 6
- **Other**: 2

**ELECTRICITY CONSUMPTION (GWH)**

- **TOTAL GENERATED**: 342.50
- **Residential**: 35.30
- **Commercial**: 180
- **Barbuda**: 103
- **Industrial**: 6
- **Streetlights**: 14
- **Losses**: 3

**RENEWABLE ENERGY CAPACITY (MW)**

- **SOLAR**: Installed: 9.20; Potential: 27
- **WIND**: Installed: 400

**Notes**

- The chart includes various energy sources and their contributions to the total capacity and consumption.
- The categories 'Residential', 'Commercial', 'Barbuda', 'Industrial', 'Streetlights', and 'Losses' are shown with respective values.
- The 'SOLAR' section highlights installed and potential capacities.
- The 'WIND' section focuses on the installed capacity.
## Electricity Tariffs

<table>
<thead>
<tr>
<th>Rate Class</th>
<th>Monthly Consumption/Demand (kWh)</th>
<th>Minimum Charge (US$)</th>
<th>Tariff (US$/kWh)</th>
<th>Demand/(US$/kVA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Tariff ‘A’ (D.T.A.) &lt; 50</td>
<td>&lt; 50</td>
<td>2.96</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 – 300</td>
<td>9.26</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>Domestic Tariff ‘B’ (D.T.B.) ≥ 50</td>
<td>≥ 300</td>
<td>9.26</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td>Commercial &amp; Non-Domestic Tariff (C.N.D.T.)</td>
<td>≥ 100</td>
<td>16.67</td>
<td>0.17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 – 250</td>
<td>16.67</td>
<td>0.16</td>
<td>2.96</td>
</tr>
<tr>
<td></td>
<td>≥ 250</td>
<td>16.67</td>
<td>0.14</td>
<td>2.96</td>
</tr>
<tr>
<td>Industrial Tariff (I.T.)</td>
<td>≥ 100</td>
<td>16.67</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>100 – 250</td>
<td>16.67</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>≥ 250</td>
<td>16.67</td>
<td>0.13</td>
<td>0.13</td>
</tr>
<tr>
<td>General Purposes Tariff (G.P.T.) Streetlights and Temporary Supply</td>
<td></td>
<td>5.56</td>
<td>0.17</td>
<td></td>
</tr>
</tbody>
</table>
## Projects in the Pipeline

### Technical Assistance Projects

<table>
<thead>
<tr>
<th>Donor Funding and Technical Assistance Landscape</th>
<th>RE Specific Task/Goals</th>
<th>Donor Organization &amp; Banks</th>
<th>Funding Awards</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRID-INTERACTIVE SOLAR PV SYSTEMS FOR SCHOOLS AND CLINICS (GISS)</strong></td>
<td>Supply and installation of grid-interactive solar PV systems with battery backup on nineteen (19) school facilities.</td>
<td>Italian Government</td>
<td>$825,000.00</td>
<td>2017</td>
</tr>
<tr>
<td><strong>SUSTAINABLE PATHWAYS-PROTECTED AREAS AND RENEWABLE ENERGY (SPPARE)</strong></td>
<td>Installation of fifteen 275KW wind turbines</td>
<td></td>
<td>$13,900,417.00</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>Installation of 2322 solar PV panels, each at 300W at the Mount St John's Medical Centre</td>
<td></td>
<td>$652,692.71</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>Renewable energy for the LEED certified interpretation center</td>
<td></td>
<td>$60,000.00</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>RFP 1 - 9 Clinics (Clare Hall, Grays Farm, All Saints, Brownes Avenue, Cedar Grove, Johnson's Point, Bethesda, Jennings, New Field), Clare Hall Pharmacy, NODS, Ministry of Health</td>
<td>Global Environment Facility (GEF), International Renewable Energy Agency (IRENA)/ABU DHABI Development Fund (ADFD) Facility</td>
<td>$1,175,826.00</td>
<td>2015</td>
</tr>
<tr>
<td>DONOR FUNDING AND TECHNICAL ASSISTANCE LANDSCAPE</td>
<td>RE SPECIFIC TASK/GOALS</td>
<td>DONOR ORGANIZATION &amp; BANKS</td>
<td>FUNDING AWARDS</td>
<td>YEAR</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>------------------------</td>
<td>-----------------------------</td>
<td>---------------</td>
<td>------</td>
</tr>
<tr>
<td><strong>CARIBBEAN DEVELOPMENT BANK PROJECT (CDB)</strong></td>
<td>RFP 2 - 5 CLINICS (BENDALS, BOLANS, PARHAM, POTTERS- ISSUES NOTED WITH THIS SITE, SWEETES), GOOD SHEPHERD HOME, HOBERTON HOSPICE, NYAHBINDHI SCHOOL, VICTORY CENTRE, HOBERTON CHILDREN'S WARD CARE PROJECT/ CHILDREN'S WARD</td>
<td>CARIBBEAN DEVELOPMENT BANK; SUSTAINABLE ENERGY FACILITY (SEF), GLOBAL ENVIRONMENT FACILITY TRUST FUND; AND CLEAN TECHNOLOGY FUND,</td>
<td>$1,078,000.00</td>
<td>2017</td>
</tr>
<tr>
<td><strong>GISS PHASE 2 - ADAPTATION FUND (AF) REGIONAL SCHOOL PROJECT</strong></td>
<td>SAFE LEARNING FACILITIES (INCLUDING STANDARDIZED SCHOOL SAFETY ASSESSMENT), SCHOOL DISASTER MANAGEMENT (INCLUDING MULTI-HAZARD SCHOOL SAFETY PLANS AND GUIDANCE DOCUMENTS) AND RISK REDUCTION AND RESILIENCE EDUCATION (INCLUDING CURRICULA AND TRAININGS ON DISASTER RISK MANAGEMENT)</td>
<td>ADAPTATION FUND RESILIENCE GRANT</td>
<td>$9,735,000.00</td>
<td>2021</td>
</tr>
</tbody>
</table>
## PROJECTS IN THE PIPELINE

### TECHNICAL ASSISTANCE PROJECTS

<table>
<thead>
<tr>
<th>DONOR FUNDING AND TECHNICAL ASSISTANCE LANDSCAPE</th>
<th>RE SPECIFIC TASK/GOALS</th>
<th>DONOR ORGANIZATION &amp; BANKS</th>
<th>FUNDING AWARDS (USD)</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY FOR SUSTAINABLE DEVELOPMENT IN THE CARIBBEAN (ESD PROJECT), (ANTIGUA AND BARBUDA). THIS IS A REGIONAL PROJECT TO INCLUDE ANTIGUA AND BARBUDA, BELIZE, GRENADA, ST, LUCIA, TRINIDAD AND TOBAGO AND 5CS.</td>
<td>TO REDUCE GREEN HOUSE GAS (GHG) EMISSIONS AT DEMO SITES THROUGH ENERGY EFFICIENCY (EE) MEASURES. RENEWABLE ENERGY (RE) TECHNOLOGY. THE SITES ARE AS FOLLOWS: DEPARTMENT OF ENVIRONMENT, THE PRIME MINISTER’S OFFICE, THE ANTIGUA GRAMMAR SCHOOL, THE BOLANS CLINIC, ANTIGUA AND BARBUDA STANDARDS OFFICE.</td>
<td>GLOBAL ENVIRONMENT FUND (GEF)</td>
<td>$4,859,000.00 (ENTIRE PROJECT GRANT)</td>
<td>2014</td>
</tr>
<tr>
<td>AN INTEGRATED APPROACH TO PHYSICAL ADAPTATION AND COMMUNITY RESILIENCE IN THE ANTIGUA AND BARBUDA’S NORTHWEST MCKINNON’S WATERSHED</td>
<td>TO TRANSITION CHURCHES IN MCKINNONS TO COMMUNITY SHELTERS. THESE SHELTERS WILL BE POWERED BY RE TECHNOLOGY. THE FIVE SELECTED CHURCHES ARE AS FOLLOWS: VILLA BAPTIST CHURCH, ST. FRANCIS OF ASSISI, ST ANDREW’S ANGLICAN CHURCH, CHURCH OF GOD OF PROPHECY, SPRING GARDEN MORAVIAN CHURCH</td>
<td>ADAPTATION FUND</td>
<td>$1,500,000.00</td>
<td>2021</td>
</tr>
</tbody>
</table>
## TECHNICAL ASSISTANCE PROJECTS

<table>
<thead>
<tr>
<th>DONOR FUNDING AND TECHNICAL ASSISTANCE LANDSCAPE</th>
<th>RE SPECIFIC TASK/GOALS</th>
<th>DONOR ORGANIZATION &amp; BANKS</th>
<th>FUNDING AWARDS</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEGRATED PHYSICAL ADAPTATION AND COMMUNITY RESILIENCE THROUGH AN ENHANCED DIRECT ACCESS PILOT IN THE PUBLIC, PRIVATE, CIVIL SOCIETY SECTORS OF THREE EASTERN CARIBBEAN SMALL ISLAND DEVELOPING STATES</td>
<td>COMPONENT 3: TO TRANSITION FOUR - FIVE CHURCHES IN THE CASHEW HILL WATERSHED TO COMMUNITY SHELTERS. THESE SHELTERS WILL BE POWERED BY RE TECHNOLOGIES.</td>
<td>GREEN CLIMATE FUND (GCF)</td>
<td>$900,000.00</td>
<td>2018</td>
</tr>
<tr>
<td>ENERGY AUDIT OF GOVERNMENT BUILDINGS</td>
<td>ENERGY AUDITS CONDUCTED ON FINANCE/Legal AFFAIRS, MIN OF EDUCATION/TOURISM, HIGH COURT, PARLIAMENT, MIN OF FOREIGN AFFAIRS/PM OFFICE, DEPT. OF YOUTH AFFAIRS, THE HOSPITAL, THE NEW TERMINAL AT THE AIRPORT.</td>
<td>ENERGY DIVISION</td>
<td>2020</td>
<td></td>
</tr>
<tr>
<td>GREEN CLIMATE FUND (GCF) BUILD</td>
<td>RESILIENCE TO HURRICANES IN THE BUILDING SECTOR IN ANGUILLA AND BARBUDA. INSTALL RE ON 54 PUBLIC BUILDINGS</td>
<td>GREEN CLIMATE FUND (GCF)</td>
<td>$32,706,595.00</td>
<td>2021</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GOAB CO-FINANCING</td>
<td>$13,458,035.00</td>
<td></td>
</tr>
</tbody>
</table>
### Projects in the Pipeline

#### Technical Assistance Projects

<table>
<thead>
<tr>
<th>Donor Funding and Technical Assistance Landscape</th>
<th>Re Specific Task/Goals</th>
<th>Donor Organization &amp; Banks</th>
<th>Funding Awards</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Low Emissions Island Mobility (SLIM) Project</td>
<td>Installation of 2 solar PV charging stations, procurement of 2 electric taxis &amp; 2 buses, providing concessional financing to purchase 10+ electric taxis</td>
<td>Global Environment Fund (GEF)</td>
<td>$3,245,000.00</td>
<td>2021</td>
</tr>
<tr>
<td>Adaptation Fund Innovation Grant</td>
<td>Innovative technologies for improved water availability to increase food security in Antigua and Barbuda, procurement, installation and commission of 2 decentralised solar powered RO units and 3 solar pumps at 3 agriculture sites</td>
<td>Adaptation Fund Innovation Grant</td>
<td>$250,000.00</td>
<td>2021</td>
</tr>
</tbody>
</table>
## PROJECTS IN THE PIPELINE

### TECHNICAL ASSISTANCE PROJECTS

<table>
<thead>
<tr>
<th>DONOR FUNDING AND TECHNICAL ASSISTANCE LANDSCAPE</th>
<th>RE SPECIFIC TASK/GOALS</th>
<th>DONOR ORGANIZATION &amp; BANKS</th>
<th>FUNDING AWARDS</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE TRANSFORMATION OF THE HEALTH AND WATER SECTOR (IRENA/ADFD PHASE 2)</td>
<td>INSTALLATION OF RENEWABLE ENERGY TECHNOLOGIES AND ENERGY EFFICIENCY UPGRADES TO CRITICAL PUBLIC INFRASTRUCTURE AN 8 MW HYBRID POWER PLANT (SOLAR AND WIND) EXPECTED TO BENEFIT 5,500 HOUSEHOLDS AND ALLOW FOR LARGE REDUCTIONS IN THE IMPORT OF FOSSIL FUELS.</td>
<td>IRENA/ADFD FACILITY</td>
<td>$15,000,000.00</td>
<td>2021</td>
</tr>
<tr>
<td>SUSTAINABLE ISLAND RESOURCE FRAMEWORK (SIRF) FUND</td>
<td>FACILITATING IMPLEMENTATION OF RENEWABLE ENERGY TECHNOLOGIES WITHIN ANTIGUA AND BARBUDA</td>
<td>SPECIAL CLIMATE CHANGE FUND (SCCF)</td>
<td>$1,600,000.00</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPECIAL CLIMATE CHANGE FUND (SCCF)</td>
<td>$3,000,000.00</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPECIAL CLIMATE CHANGE FUND (SCCF)</td>
<td>$2,000,000.00</td>
<td>2018</td>
</tr>
</tbody>
</table>
# PROJECTS IN THE PIPELINE

## RENEWABLE ENERGY PROJECTS

<table>
<thead>
<tr>
<th>RENEWABLE ENERGY SOURCE</th>
<th>PROJECT DESCRIPTION</th>
<th>RESOURCE AND PROJECTS CAPACITY (kW)</th>
<th>DEVELOPMENT PARTNER</th>
<th>TOTAL ESTIMATED COST (USD)</th>
<th>FUNDING SOURCE</th>
<th>OWNERSHIP (PPA, UTILITY OWNED, COMMUNITY-OWNED OR PUBLIC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLAR PHOTO VOLTAIC</td>
<td>SUSTAINABLE PATHWAYS-PROTECTED AREAS AND RENEWABLE ENERGY (SPARE)</td>
<td>696.0</td>
<td>VERGNET GROUP</td>
<td>$652,692.71</td>
<td>GEF, IRENA/ADFD</td>
<td>GOVERNMENT</td>
</tr>
<tr>
<td></td>
<td>SUSTAINABLE PATHWAYS-PROTECTED AREAS AND RENEWABLE ENERGY (SPARE) - RFP 1</td>
<td>290.76</td>
<td>GREENTECH SOLAR ACT</td>
<td>$1,175,826.00</td>
<td>ABU DHABI DEVELOPMENT FUND (ADFD)</td>
<td>GOVERNMENT</td>
</tr>
<tr>
<td></td>
<td>CARIBBEAN DEVELOPMENT BANK (CDB)</td>
<td>142.22</td>
<td>GREENTECH SOLAR ACT</td>
<td>$1,078,000.00</td>
<td>CARIBBEAN DEVELOPMENT BANK: SUSTAINABLE ENERGY FACILITY (SEF)</td>
<td>GOVERNMENT</td>
</tr>
<tr>
<td></td>
<td>GRID-INTERACTIVE SOLAR PV SYSTEMS FOR SCHOOLS (GISS)</td>
<td>132.95</td>
<td>LOCAL INSTALLER: CARISUN, ALANZO JACK, GIBBS INSTALLATION, GREENTECH SOLAR ACT, JACE IRISH, MEGAPOWER, AMORY JOSEPH, CHURCHHILL NORBERT</td>
<td>$825,000.00</td>
<td>ITALIAN GOVERNMENT</td>
<td>RESIDENTIAL</td>
</tr>
</tbody>
</table>
## Projects in the Pipeline

### Renewable Energy Projects

<table>
<thead>
<tr>
<th>Renewable Energy Source</th>
<th>Project Description</th>
<th>Resource and Projects Capacity (kW)</th>
<th>Development Partner</th>
<th>Total Estimated Cost (USD)</th>
<th>Funding Source</th>
<th>Ownership (PPA, Utility Owned, Community-Owned or Public)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar Photo Voltaic</td>
<td>AN INTEGRATED APPROACH TO PHYSICAL ADAPTATION AND COMMUNITY RESILIENCE IN THE ANTIGUA AND BARBUDA’S NORTHWEST MCKINNON’S WATERSHED</td>
<td>900</td>
<td>LOCAL INSTALLERS</td>
<td>$1,500,000.00</td>
<td>ADAPTATION FUND</td>
<td>RESIDENTIAL</td>
</tr>
<tr>
<td>Solar Photo Voltaic</td>
<td>INTEGRATED PHYSICAL ADAPTATION AND COMMUNITY RESILIENCE THROUGH AN ENHANCED DIRECT ACCESS PILOT IN THE PUBLIC, PRIVATE, CIVIL SOCIETY SECTORS OF THREE EASTERN CARIBBEAN SMALL ISLAND DEVELOPING STATES</td>
<td>650</td>
<td>LOCAL INSTALLERS</td>
<td>$900,000.00</td>
<td>GREEN CLIMATE FUND (GCF)</td>
<td>RESIDENTIAL</td>
</tr>
<tr>
<td>Solar Photo Voltaic</td>
<td>GREEN CLIMATE FUND (GCF) PROJECT</td>
<td>1500</td>
<td>TBD</td>
<td>$32,706,595.00</td>
<td>GREEN CLIMATE FUND (GCF)</td>
<td>RESIDENTIAL</td>
</tr>
</tbody>
</table>
### RENEWABLE ENERGY PROJECTS

<table>
<thead>
<tr>
<th>RENEWABLE ENERGY SOURCE</th>
<th>PROJECT DESCRIPTION</th>
<th>RESOURCE AND PROJECTS CAPACITY (kW)</th>
<th>DEVELOPMENT PARTNER</th>
<th>TOTAL ESTIMATED COST (USD)</th>
<th>FUNDING SOURCE</th>
<th>OWNERSHIP (PPA, UTILITY OWNED, COMMUNITY-OWNED OR PUBLIC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLAR PHOTO VOLTAIC</td>
<td>AN INTEGRATED APPROACH TO PHYSICAL ADAPTATION AND COMMUNITY RESILIENCE IN THE ANTIGUA AND BARBUDA’S NORTHWEST MCKINNON’S WATERSHED</td>
<td>1800</td>
<td>TBD</td>
<td>$15,000,000.00</td>
<td>IRENA/ADFD FACILITY</td>
<td>GOVERNMENT</td>
</tr>
</tbody>
</table>
TERTIARY PROGRAMMES OFFERED

Antigua State College
Green Engineering (Associate Degree)
https://asc.edu.ag/department-of-liberal-arts/

WORKFORCE

Data was not available for the workforce in the energy sector in 2020
TRANSPORTATION SECTOR

REGISTERED VEHICLES AS OF 2019

- Buses: 1,099
- Cars: 2,535
- Motorcycle: 865
- SUVs: 929
- Pickup Trucks: 17,617
- Trucks: 31,834

QUANTITY (BOE)

- Gasoline: 361,893
- Diesel: 63,836
- Turbo Fuel: 346,451
- HFO Bunker: 1,236,407

TOTAL: 2,008,587

THERE WERE ALSO 29 ELECTRIC VEHICLES
**NATIONAL DETERMINED CONTRIBUTIONS:**

### Conditional Mitigation Targets
1. By 2020, establish efficiency standards for the importation of all vehicles and appliances.
2. By 2020, finalize the technical studies with the intention to construct and operationalize a waste to energy (WTE) plant by 2025.
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.
4. By 2030, all remaining wetlands and watershed areas with carbon sequestration potential are protected as carbon sinks.

### Unconditional Targets
1. Enhance the established enabling legal, policy and institutional environment for a low carbon emission development pathway to achieve poverty reduction and sustainable development.
2. By 2020, update the Building Code to meet projected impacts of climate change.

---

**EMISSIONS REDUCTION TARGET:**
Reduction of 25% from 1990 levels by 2020

---

**PRIORITY SECTORS FOR NDCs**
- Energy
- Industrial Processes and Products Use
- Agriculture, Forestry
- Other Land Use
- Waste

---

**NATIONAL COMMUNICATIONS (NC) TO THE UNFCCC:**
- Antigua and Barbuda's Initial National Communication (2001)
- Antigua and Barbuda's Second National Communication (2009)
- Antigua and Barbuda's Third National Communication (2015)
- Antigua and Barbuda's Fourth National Communication (In Progress - 2020)
## SUMMARY OF ANTIGUA AND BARBUDA GHG EMISSIONS AND REMOVALS (Gg) FOR 2015

### EMISSIONS (Gg CO₂ EQUIVALENT)

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>NET CO₂</th>
<th>CH₄</th>
<th>N₂O</th>
<th>NMVOCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL NATIONAL EMISSION AND REMOVALS</td>
<td>844.30</td>
<td>1.520</td>
<td>6.05</td>
<td>0.035</td>
</tr>
<tr>
<td>ENERGY</td>
<td>648.80</td>
<td>0.0260</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>INDUSTRIAL PROCESSES AND PRODUCT USE</td>
<td>3.144</td>
<td>0</td>
<td>6.05</td>
<td>0.035</td>
</tr>
<tr>
<td>AGRICULTURE, FORESTRY, AND OTHER LAND USE</td>
<td>191.50</td>
<td>0.629</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>WASTE</td>
<td>0.8330</td>
<td>0.860</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Gg represents giga grams*
REFERENCES


REFERENCES


