2020 ENERGY REPORT CARD

GUYANA

www.ccreee.org
This document presents Guyana's Energy Report Card (ERC) for 2020. The ERC provides an overview of the energy sector performance in Guyana. 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 (Projection)**: 787,000
- **Energy Performance Standards/Appliance Labelling**: None
- **RE Target**: Near 100% by 2040
- **National Repository for Energy Data**: Guyana Energy Agency
- **GDP (USD) Per Capita**: $6,955.90
- **Electricity System Losses (%)**: 25%
- **Electric Vehicle Stock**: Not Available
- **Electric Vehicle Stock**: Not Available
- **Energy Use (kWh) Per Capita**: 1,146
- **Electricity Export (BOE) per day**: 0
- **Total Oil Export (BOE) per day**: 0
- **Debt as % of GDP**: 47.40%
- **Total Oil Import (BOE) per day**: 17,298
- **Total Oil Import (BOE) per day**: 17,298
- **National Energy Policy**
- **Human Development Index**: 0.682 (2019)
- **Energy Intensity (BTU/$) Not Available**
- **Total Installed Conventional Capacity (MW)**: 296.48
- **Total Installed Renewable Capacity (MW)**: 58.46
- **No. of Persons Employed in Energy Sector**: 1,655
- **National Determined Contributions (NDC)**: 11% annually compared to historic levels from the timber industry
- **Climate Change Policy**: Draft National Climate Change Policy and Action Plan 2020-2030
- **Energy Use (kWh) Per Capita**: 1,146
- **Electricity System Losses (%)**: 25%
- **Electric Vehicle Stock**: Not Available
- **Renewable Energy (RE) Policy**: None
- **National Development Plan**
  - Green State Development Strategy: Vision 2040
- **Energy Use (kWh) Per Capita**: 1,146
- **Electricity System Losses (%)**: 25%
- **Electric Vehicle Stock**: Not Available
- **Renewable Energy (RE) Policy**: None
ENERGY SECTOR PERFORMANCE AGAINST TARGETS

2020 Performance:
- 16% - Renewables installed capacity against National Target by 2030 (84%)

National Target by 2030:
- 100% - Renewables installed capacity against National Target by 2027 (84%)

Projected by CARICOM-CSERMS Report.
**KEY ENERGY STAKEHOLDERS**

**Government Ministries, Departments and Agencies**
- The Guyana Energy Agency
- The Ministry of Public Infrastructure [14]
- The Ministry of Natural Resources, Department of Energy [15]
- Office for Climate Change [15]

**Fuel Suppliers**
- Guyana Oil Company [16]
- SOL Petroleum Guyana [17]
- RUBIS Guyana Inc. [18]

**Electric Utility**
- Guyana Power and Light (GPL) [19]
- Hinterland Electrification Inc. (HECI)
  -Linden Electricity Company (LECI/LUSCSL)
  -Kwakwani Utilities Inc (KUI)
  -Lethem Power Company Inc. (LMPC)
  -Mahdia Power and Light Inc. (MPL)
  -Matthew's Ridge Power and Light Inc.
  -Mabaruma Power and Light (MPL)
  -Port Kaituma Power and Light Inc. (PKPL) [19,20]

**Independent Power Producer**
- Linden Power Company (BOSAI) [15]

**Electricity Regulator**
- Public Utilities Commission [19]

**Transportation**
- Ministry of Public Infrastructure/Public Works
- Guyana Civil Aviation Authority
- Guyana National Road Safety Council [15]

**Other**
- Guyana Geology and Mines (GGMC) [15]
- Environmental Protection Agency (EPA) [15]
POLICY, LEGAL AND REGULATORY (PLR) FRAMEWORK

Key Achievements: PLR Framework Timeline for Electricity Sector
- 2019: Net Billing / Net Metering
- 2017: RE/EE ACT
- 2013: Electricity Regulator
- 2009: Interconnection Policy/Standards

Policies and Legislation Relevant to the Energy Sector

- **Guyana Energy Policy (1994) [6]**
- **Energy Sector (Harmonization of Laws) Act (2002) [29] [30]**

Timeline:
- 2019: Key Achievements
- 2017: Revised Low Carbon Development Strategy [22]
- 2016: Revision of Low Carbon Development Strategy [21]
- 2015: Hydroelectric Power Act and Regulation [23]
- 2013: Guyana Power Generation Expansion Study [25]
- 2011: Updated Guyana Power Expansion Study [27]
- 2010: Green State Development Strategy [28]
- 2008: Revised Low Carbon Development Strategy [21]
- 2006: Hydroelectric Power Act and Regulation [23]
- 2001: Updated Guyana Power Expansion Study [27]
- 2000: Green State Development Strategy [28]
- 1996: Hydroelectric Power Act and Regulation [23]
POLICY, LEGAL AND REGULATORY (PLR) FRAMEWORK

POLICIES AND LEGISLATION RELEVANT TO THE TRANSPORTATION SECTOR

LEGISLATION & REGULATION

1998
Guyana Shipping Act (1998) [31]

2000
Civil Aviation Act (2000) [31]

2002
Energy Sector (Harmonization of Laws) Act (2002) [29]

2000
Customs Act [31]

2014

Legislations & Regulations

Legislations & Regulations

Legislations & Regulations

Legislations & Regulations

Legislations & Regulations
<table>
<thead>
<tr>
<th>Source</th>
<th>Installed Capacity</th>
<th>Potential Capacity</th>
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</thead>
<tbody>
<tr>
<td>WIND</td>
<td>7.80</td>
<td>0.04</td>
</tr>
<tr>
<td>SOLAR PV</td>
<td>0.02</td>
<td>7000</td>
</tr>
<tr>
<td>HYDRO</td>
<td>0.010</td>
<td>50.60</td>
</tr>
<tr>
<td>GEOTHERMAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOMASS/WTE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RENEWABLE ENERGY CAPACITY (MW)**

- **WIND**: 7.80 MW (Installed), 0.04 MW (Potential)
- **SOLAR PV**: 0.02 MW (Installed), 7000 MW (Potential)
- **HYDRO**: 0.010 MW (Installed), 50.60 MW (Potential)
- **GEOTHERMAL**: Not shown
- **BIOMASS/WTE**: Not shown
## Electricity Tariiffs Non Government

<table>
<thead>
<tr>
<th>Rate Class</th>
<th>Monthly Consumption/Demand (kWh)</th>
<th>Tariff Including Subcharge (US$/kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>A &lt; 75</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>A &gt; 75</td>
<td>0.24</td>
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<tr>
<td>Commercial</td>
<td>B</td>
<td>0.32</td>
</tr>
<tr>
<td>Industrial/Hotels</td>
<td>C</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>0.27</td>
</tr>
<tr>
<td>Streetlights</td>
<td>E</td>
<td>0.24</td>
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</tbody>
</table>
### Electricity TariFFs Government

<table>
<thead>
<tr>
<th>Rate Class</th>
<th>Monthly Consumption/Demand (kWh)</th>
<th>Tariff Including Subcharge / (US$/kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>GA &lt; 75</td>
<td>0.27</td>
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<tr>
<td></td>
<td>GA &gt; 75</td>
<td>0.27</td>
</tr>
<tr>
<td>Commercial</td>
<td>GB</td>
<td>0.33</td>
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<tr>
<td>Industrial</td>
<td>GC</td>
<td>0.30</td>
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<tr>
<td></td>
<td>GD</td>
<td>0.29</td>
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<tr>
<td>Streetlights</td>
<td>GE</td>
<td>0.25</td>
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## TECHNICAL ASSISTANCE PROJECTS

<table>
<thead>
<tr>
<th>DONOR FUNDING AND TECHNICAL ASSISTANCE LANDSCAPE</th>
<th>DONOR ORGANIZATION &amp; BANKS</th>
<th>FUNDING AWARDS</th>
<th>YEAR</th>
</tr>
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<tbody>
<tr>
<td>CANADA FUNDING FOR LOCAL INITIATIVES</td>
<td>CANADIAN HIGH COMMISSION</td>
<td>GYD $2.4 MILLION</td>
<td>2019</td>
</tr>
<tr>
<td>BRITISH HIGH COMMISSION THROUGH THE UK PROSPERITY FUND</td>
<td>BRITISH HIGH COMMISSION</td>
<td>GYD $8.1 MILLION</td>
<td>2018</td>
</tr>
<tr>
<td>ABU DHABI FUND FOR DEVELOPMENT (ADFD) AND INTERNATIONAL RENEWABLE ENERGY AGENCY</td>
<td>IRENA/AFD PROJECT FACILITY</td>
<td>$8 MILLION USD</td>
<td>2019</td>
</tr>
<tr>
<td>GUYANA REDD+ INVESTMENT FUND (GRIF)</td>
<td>INTER-AMERICAN DEVELOPMENT BANK</td>
<td>$150 MILLION USD</td>
<td>2014</td>
</tr>
<tr>
<td>REHABILITATION OF MOCO MOCO HYDRO-POWER STATION &amp; CONSTRUCTION OF NEW HYDROPOWER</td>
<td>JISLAMIC DEVELOPMENT BANK</td>
<td>NOT AVAILABLE</td>
<td>2019</td>
</tr>
<tr>
<td>THE REHABILITATION OF THE HOSORORO HYDROPOWER FACILITY IN REGION 1</td>
<td>GIZ/REETA GOVERNMENT OF GUYANA</td>
<td>$74 THOUSAND USD</td>
<td>2015</td>
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</table>
ENERGY EFFICIENCY PROJECTS

<table>
<thead>
<tr>
<th>ENERGY EFFICIENCY INITIATIVE</th>
<th>CONSUMPTION (KW) ASK IF ESTIMATED OR MEASURED</th>
<th>ENERGY EFFICIENCY LEGISLATION OR REGULATIONS</th>
<th>ENERGY SERVICE COMPANIES (YES/NO)</th>
<th>CHANGE IN OLD/EXISTING INFRASTRUCTURE EXPECTED IN UPCOMING CALENDAR YEAR (NUMBER/SIZE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STREET LIGHTNING</td>
<td>NONE</td>
<td>NO</td>
<td>NO</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>PUBLIC BUILDINGS</td>
<td>4.753 MWp</td>
<td>NONE</td>
<td>NO</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>
# RENEWABLE ENERGY PROJECTS

<table>
<thead>
<tr>
<th>RENEWABLE ENERGY SOURCE</th>
<th>RESOURCE AND PROJECTS CAPACITY (MW)</th>
<th>DEVELOPMENT PARTNER</th>
<th>TOTAL ESTIMATED COST</th>
<th>FUNDING SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLAR PHOTO-VOLTAIC</td>
<td>72 kWp SOLAR MICRO GRID IN MORAIK OBAI</td>
<td>NOT AVAILABLE</td>
<td>NOT AVAILABLE</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>WIND</td>
<td>500 W WIND TURBINE, 40 W LED LAMPS, 105 AH BATTERY</td>
<td>GUYANA ENERGY AGENCY W/ GUYANA TRAFFIC &amp;HIGHWAY LIGHT UNIT</td>
<td>GYD $247,553</td>
<td>NO SPECIFIC DETAILS GIVEN</td>
</tr>
<tr>
<td>HYDRO</td>
<td>20 KW HOSORORO HYDROPOWER PROJECT</td>
<td>GERMAN GOVERNMENT</td>
<td>USD $165,175</td>
<td>GIZ/REETA AND GOVERNMENT OF GUYANA</td>
</tr>
<tr>
<td>WASTE TO ENERGY</td>
<td>NOT AVAILABLE</td>
<td>GOVERNMENT OF GUYANA AND OTHER PRIVATE SECTOR STAKEHOLDERS</td>
<td>NOT AVAILABLE</td>
<td>HOSKINSON GROUP</td>
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<tr>
<td>BIOFUELS</td>
<td>GUYSUCO BIOETHANOL PLANT</td>
<td>WHITEFOX TECH AND GREEN SOCIAL BENEFICIARIES</td>
<td>GYD $85 MILLION</td>
<td>INTER-AMERICAN BANK AND GUYSUCO</td>
</tr>
<tr>
<td>BIOMASS</td>
<td>UNIVERSITY OF GUYANA GASIFIER PROJECT</td>
<td>EXXON MOBILE, PESCADO &amp;GUYANA GEOLOGY&amp;MINES</td>
<td>GYD $12.4 MILLION</td>
<td>EXXONMOBIL GUYANA GEOLOGY AND MINES COMMISSION</td>
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</table>
TERTIARY PROGRAMMES OFFERED

UNIVERSITY OF GUYANA

<table>
<thead>
<tr>
<th>B.Sc.</th>
<th>M.Sc.</th>
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<tbody>
<tr>
<td>CHEMISTRY</td>
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<tr>
<td>PERSONS ENROLLED</td>
<td>PERSONS ENROLLED</td>
</tr>
<tr>
<td>84</td>
<td>-</td>
</tr>
<tr>
<td>PERSONS GRADUATED</td>
<td>PERSONS GRADUATED</td>
</tr>
<tr>
<td>26</td>
<td>-</td>
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</tbody>
</table>


https://fees.uog.edu.gy/srms/departments/8/programmes/

WORKFORCE

1,655 EMPLOYEES WERE REPORTED ACROSS THE GUYANA ENERGY AGENCY AND GUYANA POWER AND LIGHT.

THIS INFORMATION WAS NOT DISAGGREGATED BY GENDER.
TRANSPORTATION SECTOR

REGISTERED VEHICLES

- Cars: 3,324
- Motorcycles: 579
- Lorries & Vans: 2,993
- Buses: 1,694
- Tractors: 1,947
- Trailers: 628
- Others: 264

QUANTITY (BOE)

- Gasoline (Road): 2,993
- Diesel (Road): 1,491
- HFO Bunker and ADO: 1,424

TOTAL: 5,908
**NATIONAL DETERMINED CONTRIBUTIONS**

11% annually compared to historic levels from the timber industry.

*(Note that Guyana is a net carbon sink)* [12]

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**PRIORITY SECTORS FOR NDCs**

Forestry (including Avoided Deforestation), and Energy [12]

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**NATIONAL COMMUNICATIONS (NC) TO THE UNFCCC:**

Initial National Communication (2002) [34]
Second National Communication (2012) [35]
# Summary of Guyana's GHG Emissions

## Emissions (Gg* CO₂ Equivalent)

<table>
<thead>
<tr>
<th>Categories</th>
<th>CO₂</th>
<th>CH₄</th>
<th>N₂O</th>
<th>NOx</th>
<th>CO</th>
<th>NMVOCs</th>
<th>SO₂</th>
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<tbody>
<tr>
<td>Energy</td>
<td>792.70</td>
<td>0.22</td>
<td>0.03</td>
<td>2.69</td>
<td>6.34</td>
<td>0.36</td>
<td>8.46</td>
</tr>
<tr>
<td>Manufacturing Industries &amp; Construction</td>
<td>61.10</td>
<td></td>
<td>0.16</td>
<td>0.03</td>
<td></td>
<td>0.01</td>
<td>0.67</td>
</tr>
<tr>
<td>Civil Aviation</td>
<td>52.90</td>
<td></td>
<td></td>
<td>7.33</td>
<td>58.48</td>
<td>11.04</td>
<td>0.47</td>
</tr>
<tr>
<td>Road Transportation</td>
<td>752.30</td>
<td>0.24</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>87.60</td>
<td>0.32</td>
<td></td>
<td>8.74</td>
<td>17.70</td>
<td>2.66</td>
<td>7.09</td>
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<tr>
<td>Commercial</td>
<td>11.50</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>0.19</td>
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<td>Navigation</td>
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</tr>
<tr>
<td>Agriculture / Forestry / Fishing</td>
<td>517.10</td>
<td>0.07</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Gg represents giga grams*
REFERENCES

[9] W. George, Interviewee, Personal communication. [Interview].
REFERENCES


