CCREEE
CARIBBEAN CENTRE FOR RENEWABLE ENERGY & ENERGY EFFICIENCY

CARICOM

2018 ENERGY REPORT CARD
SURINAME

This document presents Suriname's Energy Report Card (ERC) for 2018. The ERC provides an overview of energy sector performance in Suriname. 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 and was supplemented by internet research, author calculations and inferences.

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"AT-A-GLANCE"

Summary of the Energy Sector

KEY DATA & INFORMATION – ENERGY SECTOR	
Population	583,400 [1]
GDP (USD) Per Capita	$13,776 [2]
Human Development Index	0.72 (2017) [3]
National Energy Policy	Draft [4]
Renewable Energy (RE) Policy	
RE Target	
Energy Performance Standards/Appliance Labelling	Yes [4]
Total Oil Imports (BOE) per day	
Total Oil Export (BOE) per day	16 000 [1]
Total Installed Capacity (MW)	506.2 [5]
Total Installed RE (MW)	196.5 [4]
Fuel & Oil Imports as % of GDP	
Electric vehicle stock	
National Repository for Energy Data	

ENERGY SECTOR PERFORMANCE AGAINST TARGETS

Indicator	Base /Current Performance (Year)	National Target	National Target (Proposed by CARICOM – CSERMS Report)[6]
RE as % of Installed Capacity	38.82 % [10]		52 % by 2027
*Energy Intensity (BTU/US$1 Unit of output)	7,707 [11]		

Indicative RE Oil Displacement[7,8] Potential Annually*

- *1 MW wind displaces 1,760 barrels of oil equivalent (BOE)*
- *1 MW hydro displaces 3,300 BOE*
- *1 MW solar displaces 1,210 BOE*

Energy Intensity (EI)[9]:

- *EI measures how energy benefits the economy and is calculated by taking the ratio of total primary energy use (all of the fuels and flows that a country uses to get energy) to GDP (the total money made in a country). EI indicates how effectively an economy uses their fuels and flows.*

*The energy efficiency target for CARICOM is 33% reduction in energy intensity by 2027, compared to a reference of Average Annual Energy Intensity of ~13,000 BTU per USD of GDP in 2015.
**Based on capacity factors of 0.32 for wind. 0.6 for hydro and 0.22 for solar.

KEY ENERGY SECTOR STAKEHOLDERS[12]

GOVERNMENT MINISTRIES, DEPARTMENTS AND AGENCIES:

Ministry of Natural Resources

Suriname Energy Authority (Energie Autoriteit Suriname - EAS)

Staatsolie

ELECTRIC UTILITY(IES):

Energie Bedrijven Suriname (EBS) – state-owned

INDEPENDENT/OTHER POWER PRODUCER(S):

Suriname Aluminum Company (Suralco)

Staatsolie Power Company

REGULATOR:

Energy Authority of Suriname (being established)

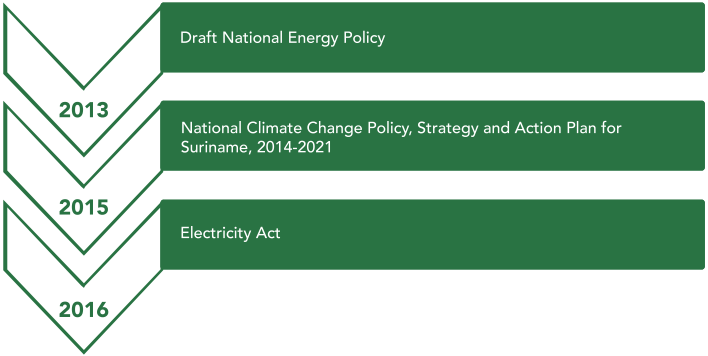
POLICY, LEGAL AND REGULATORY FRAMEWORK

Electricity Sector : Policy, Legal and Regulatory (PLR) Framework [12]

✓ 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	

Completed/ In place | In progress/ Draft | Not yet started/ Not established

Key Achievements: PLR Framework Timeline for the Electricity Sector [12]



ELECTRICITY & ENERGY EFFICIENCY

KEY DATA & INFORMATION	
1. Fuel Consumption – Electricity Subsector (BOE)	
2. Installed Conventional Capacity – Electric Utility (MW)	216.2 [5]
3. Installed Conventional Capacity – IPPs (MW)	290 [5]
4. Base Load (MW)	
5. System Peak Demand (MW)	
6. Total Generation (MWh)	
7. Total Sales (MWh)	
8. Total Number of Customers	
TARIFFS	
9. Residential Tariff (US$/kWh)	0.04 [5]
10. Commercial (US$/kWh)	0.07 [5]
11. Industrial/Large Power (US$/kWh)	0.07 [5]
12. Street Lights (US$/kWh)	0.05 [5]

EFFICIENCY	
13. EE Target	
14. Electricity System Losses (%)	16 % [4]
15. Energy Use (kWh) Per Capita	3,294 [13]
16. EE Initiative and Impact	

RE Resource	Installed Capacity (MW) [4]
Wind	N/A
Solar PV	7.5
Hydro	189
Geothermal	N/A
Biomass/ WTE	N/A
Total	196.5

RE as % of installed Power Capacity = 38.82 %

RE Resource Potentials	Potential Capacity (MW)[5]
Wind	N/A
Solar PV	20
Hydro	182
Geothermal	N/A
Biomass/ WTE	2 - 10
Total	204 - 214

PROJECTS IN THE PIPELINE

Donor Funding & Technical Assistance Landscape	Donor Organisation & Banks	Technical Assistance Providers	Funding Awards	Year
UAE-CREF establishing a solar-PV microgrid on the main campus of the Anton de Kom University of Suriname	Government of UAE	Masdar: A Mubadala Company	Amount 3 million USD	2019
CROSQ-REEBC: The REEBC is expected to address all of the aspects of energy use in buildings	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	This initiative is being supported by GIZ through the Renewable Energy and Energy Efficiency Technical Assistance (REETA) Programme	Unknown	Started in 2012

Energy Efficiency	Old/Existing Infrastructure (Number/Size)	Consumption (kWh)	Annual costs (USD)
Street Lighting	20000	28416495	2350930
Public Buildings	1288	35780230	2726697

Source:

Suriname Ministry of Natural Resources (2019)

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[1]Suriname 8th Environmental Statistics Publication (2017)

[2]Trading Economics: https://tradingeconomics.com/suriname/gdp-per-capita-ppp

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[4]Castalia Consulting Report: Suriname (2017) 5 NV Energie bedrijven Suriname (2019)

[5]Worldwatch Institute. (2015). Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS) Baseline Report and Assessment. Retrieved from http://www.worldwatch.org/system/files/C-SERMS_Full_PDF.pdf

[6]Ministry of Science, Energy, Technology and Mining. (2013). Grid Impact Analysis and Assessment for Increased Penetration of Renewable Energy into the Jamaican Electricity Grid. Retrieved from https://www.mset.gov.jm/sites/default/files/pdf/Grid%20Impact%20Analysis%20for%20Renewable%20Energy%20Penetration_2.pdf

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[8]J.M.K.C. Donev et al. (2018). Energy Education - Energy intensity. Retrieved from https://energyeducation.ca/encyclopedia/Energy_intensity.

[9]Calculated using total energy supply and GDP

[10]Suriname Ministry of Natural Resources (2019)

[11]Calculated using generation and population figures