

2019 ENERGY REPORT CARD SURINAME



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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION





### INTRODUCTION

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

The ERC provides an overview of the 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, 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

GDP (USD) Per Capita

Debt as % of GDP

Human Development Index (20

National Development Plan/Overall Country Dev

National Energy Policy

Renewable Energy (RE) Polic

**RE Target** 

**Energy Performance Standards/Applian** 

No. of Persons Employed in Energy

Total Oil Import (BOE) per dag

Total Oil Export (BOE) per dag

**Total Oil Production per year** 

**Total Installed Capacity (MW** 

Total Installed RE (MW)

Electricity System Losses (%)

Energy Use (kWh) Per Capita

Fuel and Oil Imports as % of G

**Climate Change Policy** 

**Electric Vehicle Stock** 

**National Determined Contributions** 

National Repository for Energy I

<sup>1</sup> No specific percentages were provided

	590,100 [1]
	6,359.80 [2]
	86.60% [3]
018)	0.724 [4]
velopment Strategy	2017-2021 Policy Development Plan [5]]
	None
ÿ	None
	35% by 2030 [6]
ce Labelling	None
Sector	1241 [6]
У	9,028,550 [7]
У	2,775,424 [7]
r	4,108,000 [7]
7)	750.72 [8]
	194.03 [8]
	15 [8]
a	2800 [8]
DP	5.93 [9]
	National Climate Change Policy, Strategy and Action Plan (2014 - 2021) [10]
	None
s (NDC)	<ul> <li>Decarbonization of sustainable economic development</li> <li>Maintaining the integrity of natural forest acting as a carbon sink</li> <li>strengthening resilience so as to enable adaptation and mitigation action<sup>1</sup> [6]</li> </ul>
Data	None





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## ENERGY SECTOR PERFORMANCE AGAINST TARGETS

#### **RENEWABLE ENERGY AS A PERCENTAGE OF INSTALLED CAPACITY**



National Target by 2030

35%

National Target (Proposed by CARICOM-CSERMS Report) (2027)

**52%** 

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### **KEY ENERGY STAKEHOLDERS**

#### **GOVERNMENT MINISTRIES, DEPARTMENTS AND** AGENCIES

Ministry of Natural Resources

#### **FUEL IMPORTERS & SUPPLIERS**

- SOL
- Roy Boedhoe
- Staatsolie

#### **ELECTRIC UTILITY**

• N.V. Energiebedrijven Suriname

#### **INDEPENDENT POWER PRODUCER(S)**

- Rosebel Gold Mine
- Staatsolie Power Company (SPCS)

#### **ELECTRICITY REGULATOR**

• Suriname Energy Authority (Energie Autoriteit Suriname - EAS)

#### TRANSPORTATION

Ministry of Transport, Communications and Tourism





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

	Completed	Draft	In Progress	Not Completed
Energy Policy and Energy Action Plan		$\checkmark$		
RE Target				$\checkmark$
EE Target				$\checkmark$
Electricity Regulator		$\checkmark$		
Net Billing / Net Metering		$\checkmark$		
Interconnection Policy/Standards		$\checkmark$		
Feed-in-tariff		$\checkmark$		
RE/EE Act				$\checkmark$

#### **KEY ACHIEVEMENTS: PLR FRAMEWORK TIMELINE FOR ELECTRICITY** SECTOR

Name	Year
Electricity Act [18]	2016

#### **POLICIES AND LEGISLATION RELEVANT TO** THE ENERGY SECTOR

**Policies:** 

Draft Energy Sector Plan (2018)







### **ELECTRICITY & ENERGY** EFFICIENCY









### **ELECTRICITY & ENERGY** EFFICIENCY (CONT'D)

#### **ELECTRICITY CONSUMPTION**



1,335

	138	<b>260</b>	
TAL SALES (GWH)	PARASITIC LOAD(GWH)	ELECTRICITY SYSTEM LOSSES (GWH)	





## **ELECTRICITY & ENERGY** EFFICIENCY (CONT'D)

#### **RENEWABLE ENERGY RESOURCES (MW)**





![](_page_10_Picture_0.jpeg)

### ELECTRICITY & ENERGY EFFICIENCY (CONT'D)

#### TARRIFS

Rate	Tariff / (US\$/kWh)
Residential	0.0300 - 0.1740
Small Commercial	0.0665
Large Commercial	0.0678
Industrial/Large Power	0.0678
Public Sector	0.0465

#### EFFICIENCY

Electricity System Heat Rate (kJ/kWh)	8323
EE Target %	43
Electricity System Losses (%)	15
Energy Use (MWh) Per Capita	2.8

![](_page_10_Picture_6.jpeg)

![](_page_11_Picture_0.jpeg)

### **PROJECTS IN THE PIPELINE**

Project	Status	Project Subsector	Project Type	Donor Organization & Banks	Year	Total Cost
Consolidating a Sustainable Energy Sector	Implementation	Rural Electrification	Loan Operation	IADB	2019	US\$30,000,000

#### **RENEWABLE ENERGY PROJECTS**

<b>Renewable Energy Source</b>	Resource and Projects Capacity	Development Partner
Solar Photo-Voltaic	528 kW	PowerChina
Solar Photo-Voltaic	21,484.97 kWp (Proposed)	IndiaDirect
Solar Photo-Voltaic	600 kWp	Anton de Kom University of Suriname

![](_page_11_Picture_5.jpeg)

![](_page_12_Picture_0.jpeg)

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

Name of Education Programme Provider	No. of Persons Types of Programme		Programme Link	
	Enrolled	M.Sc.		
Institude for Graduate Studies & Research (IGSR/FTeW)	11	Renewable Energy Technology	<u>http://www.igsr.sr/</u>	
Anton de Kom University of Suriname - FTeW	60	Sustainable Management of Natural Resources	https://www.uvs.edu/adekus/ faculteiten/technologische- wetenschappen/	

![](_page_12_Picture_3.jpeg)

![](_page_12_Picture_4.jpeg)

![](_page_13_Picture_0.jpeg)

### WORKFORCE

(GOVERNMENT ENTITIES)

![](_page_13_Figure_3.jpeg)

### **NO. OF PERSONS EMPLOYED IN ENERGY SECTOR**

![](_page_13_Picture_5.jpeg)

Males

![](_page_13_Picture_8.jpeg)

![](_page_14_Picture_0.jpeg)

### **TRANSPORTATION SECTOR**

#### **KEY TRANSPORTATION DATA AND INFORMATION**

![](_page_14_Figure_4.jpeg)

![](_page_14_Picture_5.jpeg)

![](_page_15_Picture_0.jpeg)

### **CLIMATE CHANGE FRAMEWORK**

**Climate Change Policy** 

National Determined Contributions

**Emissions Reduction Target** 

**Priority Sectors for NDC** 

National Communications (NC) to the UNFCC

#### **GREENHOUSE GAS (GHG) INVENTORY [22]**

Gas	
Carbon Dioxide (CO2)	
Methane (CH₄)	
	L
Nitrous Oxide (N <sub>2</sub> O)	

	National Climate Change Policy, Strategy and Action Plan (NCCPSAP) for Suriname 2014-2021
	The Republic of Suriname Nationally Determined Contribution 2020 (Submitted December 2019) [6]
	No Targets were set [11]
	Forestry, Electricity, Agriculture and Transport
СС	First National Communication Under the United Nations Framework Convention On Climate Change (2005) [12]
	Second National Communication to the United Nations Framework Convention on Climate Change (2016) [13]

Sector	Volume / Gg
Energy	120.54
Industrial Processes	2,912.47
Transport	622.46
Other	132.68
Energy	0.01
Industrial Processes	2.83
Transport	0.01
Other	0.4
Energy	0.03
Industrial Processes	6.75
Transport	0.2
Other	0.25

![](_page_15_Picture_12.jpeg)

![](_page_16_Picture_0.jpeg)

### REFERENCES

[1] General Bureau of Statistics, "Statistical Yearbook 2018/2019 Suriname," General Bureau of Statistics, Paramaribo, 2020.

[2] The World Bank, "GDP per capita (current US\$) - Suriname," 2020. [Online]. Available: https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=SR. [Accessed August 2020].

Suriname Debt Management Office, Paramaribo: [Private Communication], 2020. [3]

[4] United Nations Development Programme, "Human Development Report 2019: Inequalities in Human Development in the 21st Century," UNDP, 2019. [Online]. Available: http://hdr.undp.org/sites/default/files/hdr2019.pdf. [Accessed August 2020].

[5] Government of the Republic of Suriname, "2017-2021 Policy Development Plan," January 2017. [Online]. Available: http://www.planningofficesuriname. com/wp-content/uploads/2018/02/2017-2021-DEVELOPMENT-PLAN.pdf. [Accessed August 2020].

[6] Cabinet of the President of the Republic of Suriname | Coordination Environment, "The Republic of Suriname Nationally Determined Contribution 2020," December 2019. [Online]. Available: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Suriname%20Second/Suriname%20Second%20 NDC.pdf. [Accessed August 2020].

[7] Ministry of Natural Resources, N.V. Energiebedrijven Suriname, Paramaribo: [Private Communication], 2020. [8] Staatsolie, Paramaribo: [Private Communication], 2020.

[9] N.V. Energiebedrijven Suriname, Paramaribo: [Private Communication], 2020.

[10] Ministry of Trade, Industry and Tourism, "Suriname Oil Import Data," Private Communication, Paramaribo, 2020.

[11] Ministry of Labour, Technological Development and Environment, "Final National Climate Change Policy, Strategy and Action Plan for Suriname 2014-2021," June 2015. [Online]. Available: http://www.caribbeanelections.com/eDocs/strategy/sr\_strategy/sr\_Climate\_Change\_Policy\_Strategy\_Action\_ Plan\_2014\_2021.pdf. [Accessed 09 2020].

[12] National Institute for Environmental Development in Suriname (NIMOS), "First National Communication Under the United Nations Framework Convention On Climate Change," 2005. [Online]. Available: https://unfccc.int/sites/default/files/resource/Suriname%20INC.pdf. [Accessed August 2020].

[13] Office of the President of the Republic of Suriname, "Second National Communication to the United Nations Framework Convention on Climate Change," [Online]. Available: https://unfccc.int/sites/default/files/resource/Surnc2rev.pdf. [Accessed August 2020].

![](_page_16_Figure_14.jpeg)

![](_page_16_Figure_15.jpeg)

![](_page_16_Figure_16.jpeg)

![](_page_16_Picture_17.jpeg)