2017 ENERGY REPORT CARD

ST. VINCENT AND THE GRENADINES

This document presents St. Vincent and the Grenadine's Energy Report Card (ERC) for 2017, which was prepared using data and information submitted by the Member State as well as supplemental data extracted from online resources (see list of References). The ERC provides an overview of energy sector performance in St. Vincent and the Grenadines by focusing on two priority sub-sectors: Electricity and Transportation. The ERC also includes energy efficiency, climate change, energy sector workforce, training and capacity building information, subject to the availability of data.

December 2018

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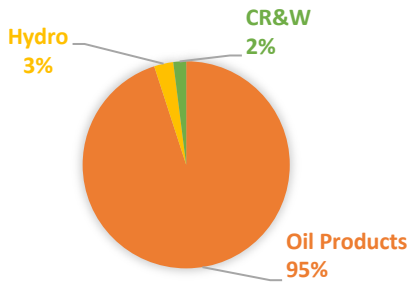
"AT-A-GLANCE" SUMMARY OF ST. VINCENT AND THE GRENADINES' ENERGY SECTOR

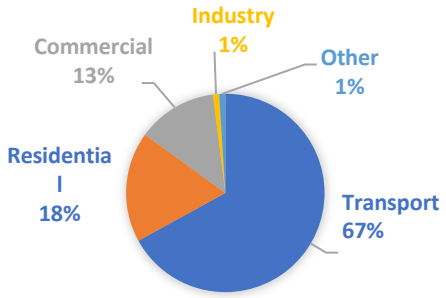
KEY DATA & INFORMATION – ENERGY SECTOR	
Population	102,089 (July 2017 est.)[1]
GDP (USD) Per Capita	$11,500 (2017 est.)[2]
Debt as % of GDP	73.8% of GDP (2017 est.)[2]
Human Development Index	0.723 (2017)[3]
National Development Plan/ Overall Country Development Strategy	Yes[4]
National Energy Policy	Yes[5]
Renewable Energy (RE) Policy	
RE Target	60% by 2020[6]
Energy Performance Standards/Appliance Labelling	In development (2015)[6]
Number of Persons Employed in Energy Sector	
Total Oil Import (BOE) per day	1,500 BOE/day (2012)[7]
Total Oil Export (BOE) per day	
Total Installed Capacity (MW)	52.4 (2017)[8]
Total Installed RE (MW)	6.59 (2017)[8]
Electricity System Losses (%)	7% (2017)[8]
Energy Use (kWh) Per Capita	1,342 [9]
Energy Intensity	2,837[10]
Oil Imports as % of GDP	8.8% (2013)[7]
Climate Change Policy	
National Determined Contributions (NDC)	Yes (2015)[11]
National Repository for Energy Data	

TOTAL ENERGY SUPPLY (2012)



574,328 BOE (1,573.5 BOE/day), 2012[7]; Source: IDB (2015)

ENERGY CONSUMPTION BY SECTOR



438,365 BOE (1201 BOE/day), 2012[7]; Source: IDB (2015)

ST. VINCENT AND THE GRENADINES' ENERGY SECTOR PERFORMANCE AGAINST TARGETS

Indicator	Base /Current Performance (Year)	National Target	National Target (Proposed by CARICOM – CSERMS Report)[12]
RE as % of Installed Capacity	11.7% (2012)	60% by 2020[6]	59% by 2027
***Energy Intensity (BTU/US$1 Unit of output)**			
% Reduction in Energy Sector Emissions (NDC)	407 Gg CO_2e (2010)[11]	22% Reduction against Business as Usual scenario by 2025	

Indicative RE Oil Displacement[13,14] 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)[15]:

- *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.*

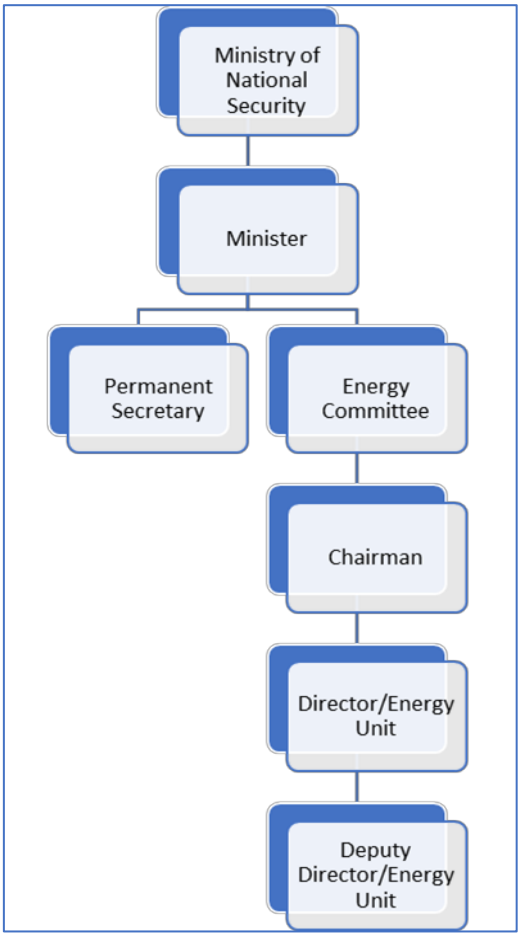
*The energy efficiency target for CARICOM is 33% reduction in energy intensity by 2027, compared to a reference of Average Annual Energy Intensity of ~13,000 BTU per USD of GDP in 2015.

**Based on capacity factors of 0.32 for wind. 0.6 for hydro and 0.22 for solar.[13]

KEY ENERGY SECTOR STAKEHOLDERS: ST. VINCENT AND THE GRENADINES

Key electricity stakeholders include[8, 16, 7]:

GOVERNMENT MINISTRIES, DEPARTMENTS AND AGENCIES[16]**:**	▪ Ministry of National Security, Air and Sea Port Development ○ Energy Unit ○ National Emergency Management Organisation ▪ Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology ○ Invest SVG ▪ Ministry of Transport, Works, Urban Development and Local Government
ELECTRIC UTILITY(IES):	▪ St. Vincent Electricity Services Limited (VINLEC)
INDEPENDENT POWER PRODUCER(S):	
REGULATOR:	▪ No designated regulatory authority (IDB, 2015)[7]



Other key electricity stakeholders include[8]:

- Energy Unit - Advisor to the Government
- Rubis - Importer/distributor of fuel
- Petro Caribe - Importer/distributor of fuel
- SOL - Importer/distributor of fuel

Key Stakeholders: Road Transportation Sub-sector

- Ministry of Transport, Works, Urban Development and Local Government
- Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology
- PDV Saint Vincent and the Grenadines Ltd
- Sol Petroleum
- Rubis Caribbean

POLICY, LEGAL AND REGULATORY FRAMEWORK: ST. VINCENT AND THE GRENADINES

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

• Energy Policy and Energy Action Plan[8, 5,17]	●
• RE Target[6]	●
• EE Target[6]	●
• Electricity Regulator	●
• Net billing/Net metering[6]	●
• Interconnection Policy/Standards[6]	●
• Feed-in-tariff[6]	●
× RE/EE Act	

● Completed/ In place ● In progress/ In Development ● Not yet started/ Not established

Key Achievements: PLR Framework Timeline for the Electricity Sector[5,17,18]

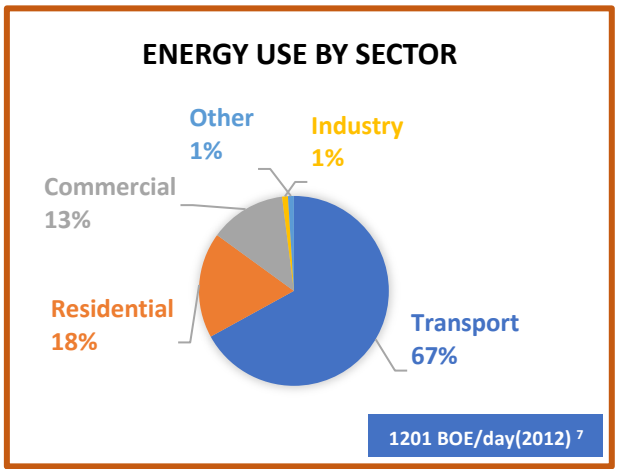
- 2009: •National Energy Policy (approved by Cabinet)
- 2010: •Energy Action Plan
- 2013: •National Economic and Social Development Plan, 2013-2025
- 2015: •Geothermal Resources Development Bill

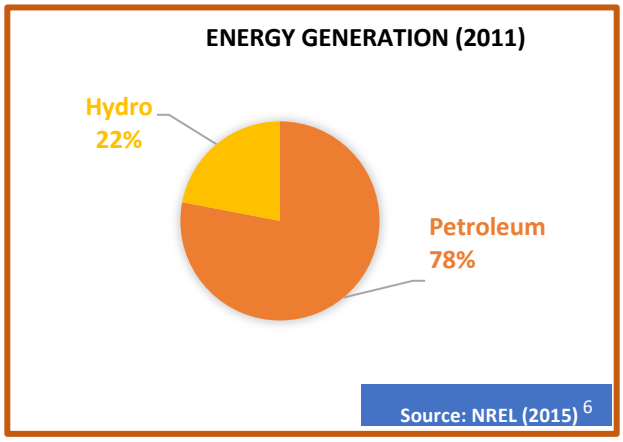
Policies and Legislation Relevant to the Transportation Sector	
Policies	National Energy Policy, 2009
Legislation & Regulation	

Climate Change Framework - St. Vincent and the Grenadines	
Climate Change Policy	
National Determined Contributions	Yes (2015)[11]
Emissions Reduction Target	Reduction in GHG emissions of 22% compared to its business as usual (BAU) scenario by 2025. [11]
Priority Sectors for NDC	Energy (including domestic transport) [11] Industrial processes and product use [11] Agriculture[11] Land use, land use change and forestry[11] Waste[11]
National Communications (NC) to the UNFCCC	NC1 submitted in 2000; NC2 submitted in 2016[19]
Greenhouse Gas (GHG) Inventory	

ELECTRICITY SUBSECTOR & ENERGY EFFICIENCY: ST. VINCENT AND THE GRENADINES

KEY DATA & INFORMATION	
CONVENTIONAL ENERGY	
1. Fuel Consumption – Electricity Subsector (BOE)	75,203 BOE (2013) [7]
2. Total Installed Capacity (MW)	52.4 (2017)[8]
3. Installed Conventional Capacity – Electric Utility (MW)	45.8 (2017)[8]
4. Installed Conventional Capacity – IPPs (MW)	
5. Base Load (MW)	11.93 (2017)[8]
6. System Peak Demand (MW)	23.22 (2017)[8]
7. Total Generation (MWh)	150,664 (2017)[8]
8. Total Sales (MWh)	135,931 (2017)[8]
9. Total Number of Customers	44,522 (2017)[8]
RENEWABLE ENERGY	
10. Total Installed RE Capacity (MW)	6.59 (2017)[8]
11. RE Capacity – Electric Utility (MW)	6.59 (2017)[8]
12. RE Capacity – IPPs (MW)	
13. RE as % of Total Installed Generating Capacity	12.6%
14. RE Target	60% by 2020[6]
AVERAGE ELECTRICITY TARIFFS	
15. Residential Tariff (US$/kWh)	$0.21 (2017)[8]
16. Commercial (US$/kWh)	$0.21-$0.22 (2017)[8]
17. Industrial/Large Power (US$/kWh)	$0.17 (2017)[8]
18. Street Lights/Public Lighting (US$/kWh)	$0.24 (2017)[8]
EFFICIENCY	
19. Electricity System Heat Rate	
20. Electricity System Losses (%)	7% (2017)[8]
21. Energy Use (kWh) Per Capita	1,342[9]
22. Energy intensity index (EII) BTU/US$1 Unit of output	2,837[10]
23. EE Target	
MANAGEMENT OF ENERGY DATA/KNOWLEDGE	
24. Name of Energy Knowledge Management System	
25. Name of Energy Data Management System	





RE Resource	Installed Capacity (MW)	Year Commissioned
Wind		
Solar	0.97 (2017)[8]	
Hydro	5.62 (2017)[8]	
Geothermal		
Biomass/ WTE		
Total	6.59	

RE as % of installed Power Capacity = 12.6%

RE Resource Potentials	Potential Capacity (MW)	Assessment Conducted?
Wind	8[12]	
Solar	23[12]	
Hydro	5-10[7]	
Geothermal	100-890[7]	
Biomass/ WTE	4[12]	
Total	105-900	

TRANSPORTATION SUBSECTOR: ST. VINCENT AND THE GRENADINES

Key Transportation Data and Information	
Fuel Consumption, Transportation (BOE)	804 BOE/day (2012)[7]
Energy-related transportation targets?	
Sustainable /Alternative fuels used?	
Total Imports for Alternative Fuels	
Conventional Vehicle Stock/Vehicle Registration	**24,046**[8]
Trucks	2036
Cars	19,064
Buses	2,128
SUVs	815
Hybrid vehicle stock	2
Electric vehicle stock	1
Fuel Quality Standards?	

Breakdown of Fuel Use in the Transportation Sector		
Type of Fuel/s	**Quantity (BOE)**	**Purpose** (Road, Railway, Aviation, Marine)
Gasoline		
Diesel		

WORKFORCE: ENERGY SECTOR, ST. VINCENT AND THE GRENADINES

Number of Persons Employed in the Energy Sector

NAME OF ENTITY	PRIVATE OR PUBLIC?	NUMBER OF PERSONS EMPLOYED	BREAKDOWN BY GENDER AND EMPLOYMENT LEVEL	
	Public	5	**Females:3** Managerial Level: Supervisor: Technical: Administrative:	**Males:2** Managerial Level: Supervisor: Technical: Administrative:

Number of Persons Trained in the Energy Sector in 2017

NAME OF ENTITY	PRIVATE OR PUBLIC?	NUMBER OF PERSONS TRAINED	BREAKDOWN BY GENDER AND EMPLOYMENT LEVEL	
Sustainable Energy Department		10	**Females:** Managerial Level: Supervisor: Technical: Administrative:	**Males:** Managerial Level: Supervisor: Technical: Administrative:
Energy Unit		9		
St. Vincent Electricity Services		20		

Indicative Number and Type of Tertiary level and vocational training SE Programmes Offered in St. Vincent and the Grenadines

Name of Education Programme Provider	Name of Programme	Number of persons enrolled	Type of Programme			
			Certificate	B.Sc	M.Sc	Ph.D

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[1] Central Intelligence Agency. (2017). *The World Factbook.* Retrieved from https://www.cia.gov/library/publications/download/download-2017/index.html

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[6] National Renewable Energy Laboratory. (2015). *Energy Transition Initiative: Islands Energy Snapshot – St Vincent and the Grenadines.* Retrieved from https://www.nrel.gov/docs/fy15osti/64127.pdf

[7] Inter-American Development Bank. (2015). *Challenges and Opportunities for the Energy Sector in the Eastern Carib*bean: *Saint Vincent and the Grenadines Energy Dossier*. Retrieved from https://publications.iadb.org/bitstream/handle/11319/7291/IDB_TN_853_Energy_Dossier_Saint_Vincent_and_the_Grenadines.pdf?sequence=1&isAllowed=y

[8] Ministry of National Security, Air and Sea Port Development (Focal Point: Mr. Ellsworth Dacon). (2018). *CARIFORUM Energy Report Card Input Data 2017 (completed for* St Vincent and the Grenadines*).*

[9] Calculated using generation and population figures.

[10] Calculated using total energy supply and GDP.

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