



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.

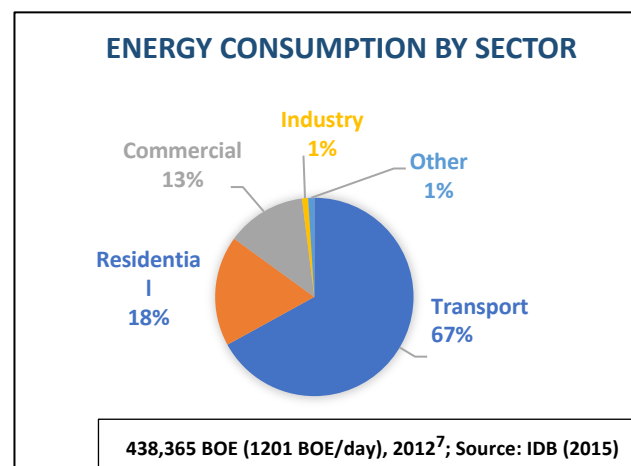
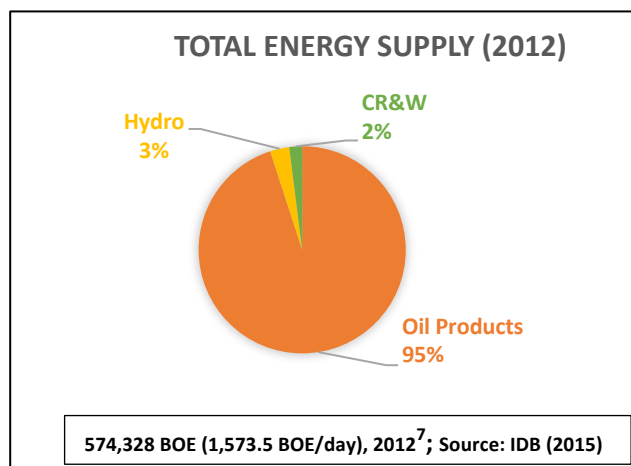
December 2018

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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	



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	Indicative RE Oil Displacement ^{13,14} Potential Annually**
RE as % of Installed Capacity	11.7% (2012)	60% by 2020 ⁶	59% by 2027	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 (BTU/US\$1 Unit of output)				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.
% Reduction in Energy Sector Emissions (NDC)	407 Gg CO ₂ e (2010) ¹¹	22% Reduction against Business as Usual scenario by 2025		

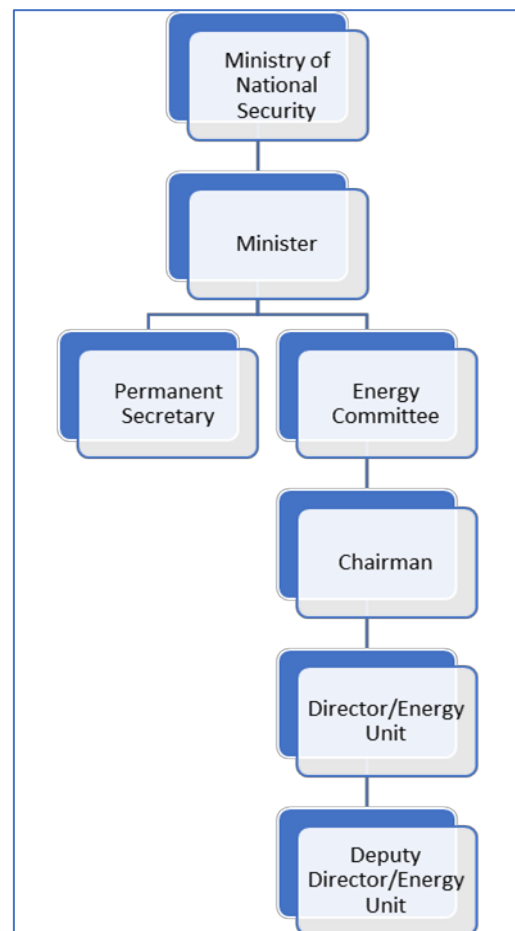
*The energy efficiency target for CARICOM is 33% reduction in energy intensity by 2027, compared to a reference of Average Annual Energy Intensity of ~13,000 BTU per USD of GDP in 2015.

**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 AGENCIES¹⁶:	 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 include⁸:

-  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

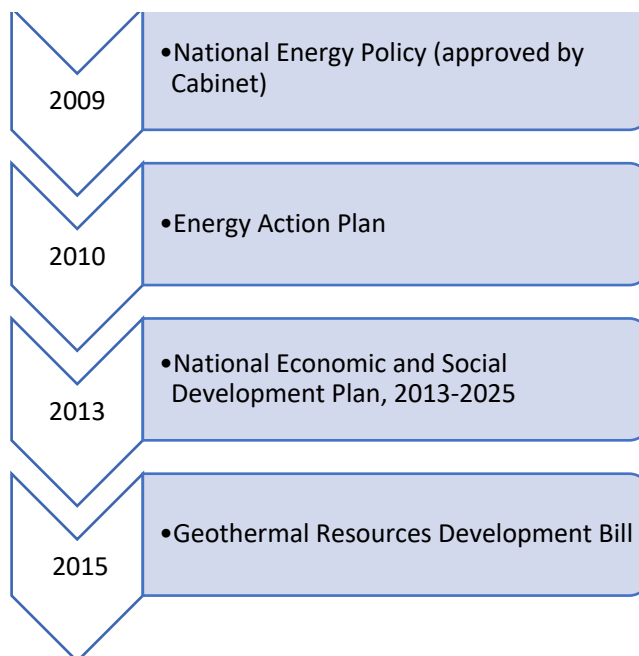
- Ministry of Transport, Works, Urban Development and Local Government
- Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology
- PDV Saint Vincent and the Grenadines Ltd
- Sol Petroleum
- Rubis Caribbean

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}



Policies and Legislation Relevant to the Transportation Sector

Policies	National Energy Policy, 2009
Legislation & Regulation	

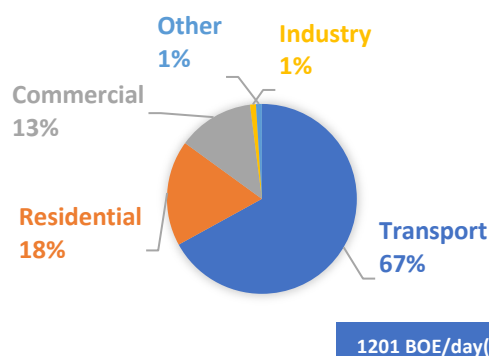
Climate Change Framework - St. Vincent and the Grenadines

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	

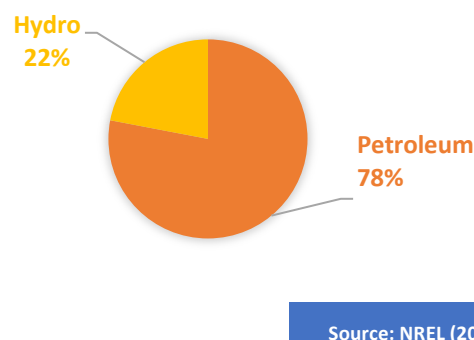
ELECTRICITY SUBSECTOR & ENERGY EFFICIENCY: ST. VINCENT AND THE GRENADINES

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		

ENERGY USE BY SECTOR



ENERGY GENERATION (2011)



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		Breakdown of Fuel Use in the Transportation Sector		
Fuel Consumption, Transportation (BOE)	804 BOE/day (2012) ⁷	Type of Fuel/s	Quantity (BOE)	Purpose (Road, Railway, Aviation, Marine)
Energy-related transportation targets?		Gasoline		
Sustainable /Alternative fuels used?		Diesel		
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?				

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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- ³ United Nations Development Programme. (2018). *Human Development Reports: Table 2. Human Development Index Trends, 1990-2017*. Retrieved from <http://hdr.undp.org/en/composite/trends>
- ⁴ Government of St Vincent and the Grenadines. (2013.) *National Economic and Social Development Plan* Retrieved from <http://finance.gov.vc/finance/index.php/economic-planning-industry-and-social-development/national-economic-a-social-development-plan>
- ⁵ Government of St. Vincent and the Grenadines. (2009). *National Energy Policy*. Retrieved from <http://www.gov.vc/images/PoliciesActsAndBills/SVGNationalEnergyPolicyApprovedMar09.pdf>
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- 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.
- ¹¹ Government of St Vincent and the Grenadines. (2015). *St. Vincent and the Grenadines Intended Nationally Determined Contribution*. Retrieved from https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Saint%20Vincent%20and%20Grenadines%20First/Saint%20Vincent%20and%20the%20Grenadines_NDC.pdf
- ¹² 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
- ¹³ 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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- ¹⁵ J.M.K.C. Donev et al. (2018). *Energy Education - Energy intensity*. Retrieved from https://energyeducation.ca/encyclopedia/Energy_intensity.

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¹⁷ Government of St Vincent and the Grenadines. (2010). *Energy Action Plan for St. Vincent and the Grenadines*. Retrieved from <http://www.gov.vc/images/PoliciesActsAndBills/SVGEnergyActionPlanSvgFirstEdition.pdf>

¹⁸ Environmental Resources Management (2016). *St. Vincent Geothermal Project Phase I Exploratory Drilling Environmental and Social Impact Assessment (ESIA)*. Retrieved from http://security.gov.vc/security/images/stories/Energy_Unit/St_Vincent_Geothermal_Project_Phase_I_Environmental_and_Social_Impact_Assesment_04082016.pdf

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