

# 2018 ENERGY REPORT CARD

This document presents Saint Lucia's Energy Report Card (ERC) for 2018. The ERC provides an overview of energy sector performance in Saint Lucia. 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.

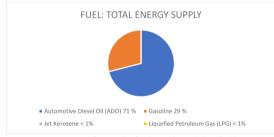


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## "AT-A-GLANCE"

Summary of the Energy Sector



Source: Government of St. Lucia: foreign trade statistics (fuel imports)

KEY DATA & INFORMATION – ENERGY SECTOR			
Population 178,695 <sup>1</sup>			
GDP (USD) Per Capita	\$14,400 <sup>2</sup>		
Human Development Index	0.747 <sup>1</sup>		
National Energy Policy	Yes <sup>3</sup>		
Renewable Energy (RE) Policy			
RE Target	35 % by 2020 <sup>4</sup>		
Energy Performance	No		
Standards/Appliance Labelling			
Total Oil Imports (BOE) per day	781 837.66 <sup>5</sup>		
Total Oil Export (BOE) per day	0		
Total Installed Capacity (MW)	92.1 <sup>6</sup>		
Total Installed RE (MW)	3.7 <sup>6</sup>		
Fuel & Oil Imports as % of GDP	7.7 % <sup>1</sup>		
Electric vehicle stock	12 <sup>6</sup>		
National Repository for Energy Data			

## **ENERGY SECTOR PERFORMANCE AGAINST TARGETS**

Indicator	Base /Current Performance (Year)	National Target	National Target (Proposed by CARICOM – CSERMS Report) <sup>8</sup>	Indicative         RE         Oil         Displacement <sup>9,10</sup> Potential Annually**          1         MW wind displaces 1,760 barrels of oil equivalent (BOE)            •         1         MW hydro displaces 3,300 BOE	
RE as % of Installed Capacity	4% <sup>12</sup>	35 % by 2020 <sup>4</sup>	69% by 2027	<ul> <li>1 MW solar displaces 0,210 BOE</li> <li>Energy Intensity (EI)<sup>11</sup>:</li> <li>El 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). El indicates how effectively an economy uses their fuels and flows.</li> </ul>	
*Energy Intensity (BTU/US\$1 Unit of output)	0.0000398 <sup>1</sup>				

\*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**

#### GOVERNMENT MINISTRIES, DEPARTMENTS AND AGENCIES <sup>13</sup>

Ministry of Economic Development, Housing, Urban Renewal, Transport and Civil Aviation

Ministry of Education, Innovation, Gender Relations and Sustainable Development

Ministry of Infrastructure, Ports, Energy and Labour

St. Lucia Bureau of Standards

St. Lucia Transport Board

#### FUEL IMPORTERS & SUPPLIERS <sup>14</sup>

**Buckeye Partners** 

PDV Caribe

Sol Petroleum

#### ELECTRIC UTILITY(IES) 15

St. Lucia Electricity Services Ltd (LUCELEC)

## INDEPENDENT POWER PRODUCER(S)

No current PPAs

**REGULATOR <sup>16</sup>** 

National Utilities Regulatory Commission

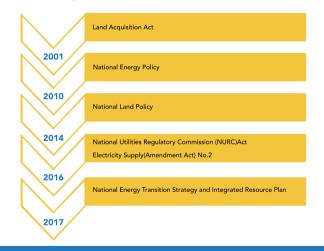
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## POLICY, LEGAL AND REGULATORY FRAMEWORK

Electricity Sector : Policy, Legal and Regulatory (PLR) Framework  $^{\rm 15}$ 



Key Achievements: PLR Framework Timeline for the Electricity Sector  $^{\rm 17}$ 



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## **ELECTRICITY & ENERGY EFFICIENCY**

KEY DATA & INFORMATION					
1.	Fuel Consumption – Electricity Subsector (BOE)				
2.	Installed Conventional Capacity – Electric Utility (MW)	92.1 <sup>6</sup>			
3.	Installed Conventional Capacity – IPPs (MW)				
4.	Base Load (MW)				
5.	System Peak Demand (MW)	60.6 <sup>6</sup>			
6.	Total Generation (MWh)	399228 <sup>6</sup>			
7.	Total Sales (MWh)	361623 <sup>6</sup>			
8.	Total Number of Customers	67301 <sup>6</sup>			
TAI	RIFFS				
9.	Residential Tariff (US\$/kWh)	0.28 <sup>6</sup>			
10.	Commercial (US\$/kWh)	0.32 – 0.34 <sup>6</sup>			
11.	Industrial/Large Power (US\$/kWh)	0.34 <sup>6</sup>			
12.	Street Lights (US\$/kWh)	0.34 <sup>6</sup>			

EFFICIENCY	
13. EE Target	20% energy consumption reduction within the public sector <sup>4</sup>
14. Electricity System Losses (%)	6 % <sup>6</sup>
15. Energy Use (kWh) Per Capita	1963 <sup>6</sup>
16. EE Initiative and Impact	

RE Resource	Installed Capacity (MW) <sup>6</sup>	RE Resource Potentials	Potential Capacity (MW) <sup>18</sup>
Wind		Wind	18
Solar	3.7	Solar PV	380
Hydro		Hydro	360
Geothermal		Geothermal	30
Biomass/ WTE		Biomass/ WTE	50
Total	3.7	Total	428

RE as % of installed Power Capacity = 4%

## **PROJECTS IN THE PIPELINE**

Renewable Energy Source	e Resource and	Project Capacity Development Partner	<b>Total Estimated Cost</b>
Solar Photo-Voltaic	10MW	LUCELEC	50,000,000
Wind Energy	12 MW		22 to 25,000,000
Geothermal	30MW		

Energy	Old/Existing Infrastructure	Annual costs	Energy	Energy Efficiency Legislation	Energy Service
Efficiency	(Number/Size)	(USD)	Audits	or Regulations	Companies
Street Lighting	g 22,500	2,576,465.82	yes	draft	yes

Source: St. Lucia Electricity Services Limited (LUCELEC) 2019



## REFERENCES

<sup>1</sup>Central Statistical Office of Saint Lucia (2019)

<sup>2</sup>Central Intelligence Agency (2019) The World Factbook

<sup>3</sup>2010 Saint Lucia National Energy Policy: http://www.oas.org/en/sedi/dsd/Energy/Doc/NEP\_StLucia\_web.pdf (Accessed: 2019).

<sup>4</sup>Rocky Mountain Institute (2018) Saint Lucia National Energy and Transition Strategy and Integrated Resource Plan, Available at: http://www.govt.lc/media.govt.lc/www/resources/publications/saint-lucia-nets-executive-summary-final.pdf (Accessed: 10th July 2019).

<sup>5</sup>St. Lucia Electricity Services Limited (LUCELEC) 2017 Summarised Vital Statistics: https://www.lucelec.com/sites/default/files/documents/St%20Lucia%20Electricity%20Services%20Limited%20LUCELEC%20Summarised%20Vital% 20Statistics.pdf (Accessed: 2019)

<sup>6</sup>The Ministry of Infrastructure, Ports, Energy and Labour (Summary of Vehicle type by year:1997 – 2019)

<sup>7</sup>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

<sup>8</sup>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

<sup>°</sup>Sustainable Energy Ireland – Renewable Energy Information Office. (2011). Energy Unit Conversion Tool. Retrieved from https://ec.europa.eu/energy/intelligent/projects/sites/iee-projects/files/projects/documents/make-it-be\_energy\_unit\_conversion\_tool.xlsx

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<sup>10</sup>J.M.K.C. Donev et al. (2018). Energy Education - Energy intensity. Retrieved from https://energyeducation.ca/encyclopedia/Energy\_intensity.

<sup>12</sup>Government of the Commonwealth of Saint Lucia. (2018). Ministries. Retrieved from http://www.govt.lc/ministries

<sup>13</sup>Inter-American Development Bank. (2015). Challenges and Opportunities for the Energy Sector in the Eastern Caribbean: Saint Lucia Energy Dossier. Retrieved from https://publications.iadb.org/bitstream/handle/11319/7300/IDB-TN- 852%20Energy%20Dossier%20Saint%20Lucia.pdf

<sup>14</sup>St. Lucia Electricity Services Limited LUCELEC. (2018). Discover LUCELEC. Retrieved from https://www.lucelec.com/content/discover-lucelec

<sup>15</sup>National Utilities Regulatory Commission NURC. (2018). About Us. Retrieved from http://nurc.org.lc/about/

<sup>16</sup>Rocky Mountain Institute. (2017). Saint Lucia National Energy Transition Strategy and Integrated Resource Plan. Retrieved from http://www.govt.lc/media.govt.lc/www/resources/publications/saint-lucia-nets-executive-summary- final.pdf

<sup>17</sup>Bunker, Kaitlyn, Stephen Doig, Justin Locke, Stephen Mushegan, Siana Teelucksingh, Roy Torbert, Saint Lucia National Energy Transition Strategy, (Rocky Mountain Institute, 2017), https://www.rmi.org/insights/reports/saint\_lucia\_NETS/

<sup>18</sup>Rapid Scan Assessment of the Capacity Requirements for Sustainable Energy Development for CARICOM Countries (Professor Dr. Olav Hohmeyer, International Energy Consulting) (2019)