



# SAINT LUCIA

## NATIONAL ENERGY POLICY

### From 2023 to 2030



Cover photos: Simone D. McCourtie / World Bank

Government of Saint Lucia

October 2023

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# FOREWORD



It is with great pleasure and a profound sense of responsibility that I introduce the updated National Energy Policy for the period 2023–30 and its accompanying implementation plan for our nation. These documents represent a significant milestone in our journey towards a more sustainable, resilient, and prosperous future.

In recent times, the world has faced an accelerating transformation in the global energy landscape. The need to combat the ills of climate change, promote energy security, and foster economic growth has never been more pressing. The situation is especially challenging for small island states, such as Saint Lucia, due to limited economic diversification, high dependence on imported oil for energy, and a geographic location prone to severe storms. As stewards of this island, it is our duty to adapt to these changing dynamics and seize opportunities they present.

In response to these challenges, our government embarked on a comprehensive review of our national energy policy of 2010. We engaged with experts, stakeholders, and our development partners to create a visionary yet achievable National Energy Policy that will guide us through the next few years.

This policy is firmly rooted in my government’s mantra of putting people first. Likewise, our communities must be the focus of the planned actions in order to achieve sustainable gains in consonance with Saint Lucia’s Sustainable Development Goals and our other international environmental and climate commitments.

The National Energy Policy 2023–30 outlines our visionary goals, objectives, and actions for a modern energy sector based on cost minimization, local enfranchisement, and energy security. This modernization is predicated on 12 core values that span themes of reliability, participatory approaches, affordability, and resilience. Importantly, the new policy sets the foundation for supporting investments by Saint Lucians in the novel opportunities that will emerge as we continue to reform our energy sector.

As we set off on this ambitious journey, I issue a clarion call to all Saint Lucians to come together to build a sustainable energy future that not only safeguards our natural and built environments but also empowers our communities and secures economic prosperity for every citizen.

*Stephenson King Senior Minister,  
Ministry of Infrastructure,  
Ports, Transport, Physical Development,  
and Urban Renewal*

# ACRONYMS AND ABBREVIATIONS

<b>BAU</b>	Business As Usual
<b>BESS</b>	Battery Energy Storage System
<b>BUR</b>	Biennial Update Report to the United Nations Framework Convention on Climate Change of 2021
<b>CAF</b>	Development Bank of Latin America
<b>CARICOM</b>	Caribbean Community
<b>CCREEE</b>	Caribbean Centre for Renewable Energy & Energy Efficiency
<b>CDB</b>	Caribbean Development Bank
<b>CDM</b>	Clean Development Mechanism
<b>CFL</b>	Compact Fluorescent Lamp
<b>COP</b>	Conference of Parties
<b>CREEBC</b>	Energy Efficiency Building Code for CARICOM
<b>ESG</b>	Environmental, Social and Governance
<b>GDP</b>	Gross Domestic Product
<b>GHG</b>	Greenhouse Gas
<b>IBD</b>	Inter-American Development Bank
<b>ICE</b>	Internal Combustion Engine
<b>IEA</b>	International Energy Agency
<b>IPP</b>	Independent Power Producer
<b>IRENA</b>	International Renewable Energy Agency
<b>JI</b>	Joint Implementation
<b>LED</b>	Light-Emitting Diode
<b>LPG</b>	Liquid Petroleum Gas
<b>LUCELEC</b>	St. Lucia Electricity Services Limited
<b>NDC</b>	Nationally Determined Contribution
<b>NDCPP</b>	Partnership Plan for Nationally Determined Contributions
<b>NEP</b>	National Energy Policy
<b>NURC</b>	National Utilities Regulatory Commission
<b>OPEC</b>	Organization of the Petroleum Exporting Countries
<b>PV</b>	Photovoltaic
<b>SDG</b>	Sustainable Development Goals
<b>SIDS</b>	Small Island Developing State(s)
<b>SWH</b>	Solar Water Heating
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>USD</b>	United States Dollar

# SAINT LUCIA

## NATIONAL ENERGY POLICY

(2023–30)



## Executive Summary

# EXECUTIVE SUMMARY

## Country Context

Saint Lucia is a small island nation in the Eastern Caribbean with about 180,000 inhabitants. It is a popular tourist destination with an economy that depends heavily on tourism. Saint Lucia relies on imported petroleum products for energy production. This dependence on tourism and imported petroleum products to support economic development goals has made Saint Lucia highly vulnerable to factors outside the country's control.



Photo: Simone D. McCourtie / World Bank

The impact of the global Covid-19 pandemic on Saint Lucia's economy and the volatility of international petroleum prices in recent years have highlighted the country's vulnerability and the need for major changes in the economy and the energy sector. For example, tourism, which accounts for around 41 percent<sup>1</sup> of Saint Lucia's GDP, contracted considerably in 2020 because of a major decline in international travel, due to the pandemic. This contraction was associated with a 20 percent reduction in GDP. In line with the contraction in GDP, Saint Lucia's public debt rose to about 87 percent of GDP, from around 60 percent in previous years.<sup>2</sup>

The price of imported oil in Saint Lucia has been extremely volatile since 2006, reaching as high as 23 percent of GDP.<sup>3</sup> After a dip in oil prices in 2020 due to the slowdown in economic activity associated with the Covid-19 pandemic, prices rose again following the escalation of the conflict in Ukraine in early 2022.

The average annual price of OPEC crude oil increased from about \$42 per barrel in 2020 to nearly \$100 per barrel in 2022.<sup>4</sup> High electricity prices due to a power system that is heavily dependent on imported oil can impede Saint Lucia's competitiveness and growth. More than 55 percent of companies in Saint Lucia have identified high electricity prices as a constraint to doing business in the country.<sup>5</sup>

Saint Lucia's economy is also vulnerable to severe disruption due to infrastructure damage from severe weather, because of the country's location in a hurricane zone.

Threats to the economy from a combination of limited diversification, high dependence on imports of petroleum products subject to price volatility, and vulnerability to severe weather shocks have generated a multifaceted drive to make Saint Lucia more resilient to external shocks.

Prior to the Covid-19 pandemic, the Government of Saint Lucia had been making progress toward greater economic resilience, with the development of a fiscal responsibility framework and plans to lessen dependence on tourism. In particular, the government was pushing to increase the contribution of agro-processing, renewable energy, and the call-centre sector to GDP.

## Profile of the Energy Sector

Petroleum products account for about 92 percent of Saint Lucia's primary energy supply.<sup>6</sup> The remaining 8 percent of primary energy supply comes from renewable energy sources, mostly from solar energy. The development of solar energy on a much larger scale is expected to be a key driver of the transition to a higher share of renewable energy in the country's future energy supply.

Saint Lucia has substantial potential for electricity generated by renewable energy. Solar energy potential is estimated at 36 MW, equivalent to about 41 percent of installed capacity for electricity generation using fossil fuels. Moreover, Saint Lucia is estimated to have huge geothermal resource potential, about 680 MW. However, this potential is in the early stages of evaluation. The estimated potential for wind energy in power generation is 42 MW.

The electricity sector is the second largest consumer of imported fossil fuels, accounting for around 39 percent of all petroleum product consumption (Annex 2). Total electricity generating capacity in Saint Lucia is about 93 MW. Fossil fuel-based generating capacity, operated by St. Lucia Electricity Services, Ltd. (LUCELEC), amounts to 88.4 MW, about 95 percent of total electricity generating capacity. Installed generating capacity from renewable energy is 4.7 MW, of which LUCELEC operates 3 MW. Private power producers operate the remaining 1.7 MW.

The transport sector (road, aviation and maritime) is the largest consumer of fossil fuels at around 54 percent of total consumption. Road transport alone accounts for about 38 percent of the total (Annex 2). The road transport subsector and the electricity sector in Saint Lucia are responsible for about 38 and 39 percent of GHG emissions, respectively (Table 2). The substitution of renewable energy for fossil fuels in electricity generation is a major focus of Saint Lucia's efforts to substantially reduce GHG emissions of both sectors by 2030. The "greening" of the transport sector will require replacing vehicles that run on petroleum products for vehicles that run on electricity, to be generated increasingly by renewable energy.

## Overview of the National Energy Policy (NEP)

The NEP for Saint Lucia, covering the period 2023 to 2030, reflects the commitment of the Government of Saint Lucia to strengthen energy security and reduce energy supply costs. Furthermore, the NEP will help the country meet its nationally determined commitment (NDC) for reducing GHG emissions under the Paris Agreement on climate change.



Photo: Saint Lucia Electricity Services, Limited

The NEP's overall vision for Saint Lucia's energy sector in 2030 is a modern, sustainable energy sector focused on energy security, cost minimisation, and local enfranchisement. This vision will be achieved by transitioning to a more decarbonised economy characterized by affordable, secure, and sustainable energy services, with high levels of local participation, in order to achieve national prosperity.

The following are the NEP's seven goals for the energy sector by 2030:

1. Ensure a secure, reliable, affordable, transparent, greener and resilient electricity sector.
2. Decarbonize thermal applications.
3. Make reduction in energy intensity a key driver of decarbonisation.
4. Decarbonize the transport sector.

5. Ensure a safe, reliable and affordable supply of petroleum products and their efficient and environmentally safe storage, handling and use.
6. Ensure that human, technical and institutional capacities are aligned with the needs of the energy sector and policy objectives, by integrating social and gender aspects into energy sector development; and
7. Facilitate access to financing for renewable energy and energy efficiency.

Supporting these seven goals are 30 objectives. To attain these objectives, a detailed NEP Action Plan, with 145 actions, will be implemented at the working level in the energy sector. Reflected in the design of the NEP are 12 core values defining the vision for the energy sector in 2030. These values fall into three broad categories: (i) improved management of energy demand and supply, (ii) institutional strengthening, and (iii) human resource development.

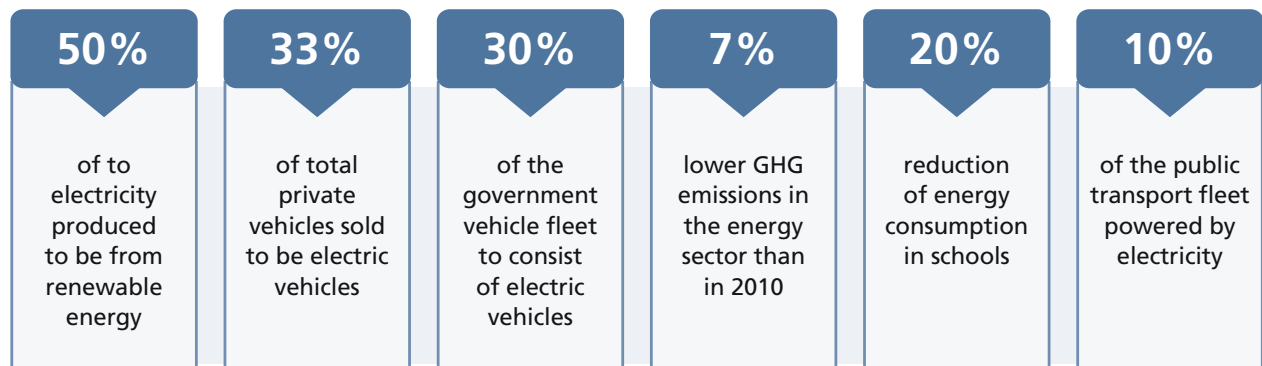
## Key Indicators of NEP Achievements

The NEP has several quantitative key indicators for increased renewable energy in the country's energy sector, improved energy efficiency, and reduced GHG emissions by 2030, as shown in Figure 1. According to these indicators, the share of electricity from renewable energy is expected to rise dramatically from only about 5 percent at present,<sup>7</sup> to 50 percent by 2030.

This ambitious expansion of renewable energy is expected to support an increase of around 10 to 33 percent of electric vehicles in the transport sector, depending on the type of vehicle. The NEP also places strong emphasis on improving energy efficiency, calling for energy audits of government buildings, efficiency-labelling of appliances, and public education on energy conservation.

Decarbonisation of the energy sector, improved energy efficiency, and enhancements to energy security are expected to help Saint Lucia not only prevent future growth of GHG emissions in the energy sector but also scale back considerably, targeting GHG emissions in 2030 that are seven percent below what they were in 2010.

► **FIGURE 1: KEY QUANTITATIVE INDICATORS OF EXPECTED NEP ACHIEVEMENTS BY 2030**



Sources: Mercados-Aries International, Technical assistance updating the National Energy Policy for Saint Lucia, June 14, 2022 and Government of Saint Lucia (2021), Saint Lucia's First Biennial Update Report: Department of Sustainable Development, Ministry of Education, Innovation, Gender Relations and Sustainable Development.

## Potential Sources of Financing for Energy Transition

In 2020, global financial flows for the transition from fossil fuels to renewable energy amounted to \$501 billion. Lending for sustainable energy reached \$321.4 billion in the first half of 2021, setting an all-time record. Major international financial institutions that have affirmed commitment to “green finance” and could be possible sources of financing for Saint Lucia’s energy transition, are: the World Bank, the Inter-American Development Bank (IDB), the Development Bank of Latin America (CAF), and the Caribbean Development Bank (CDB).

## NEP’s Action Plan: Tracking the Energy Transition

The Action Plan provides a detailed framework for monitoring the NEP’s implementation. This plan specifies dates for 145 actions associated with the 30 objectives supporting the NEP’s seven goals, along with the institutional responsibility for each action.

In addition, the plan assesses the risks of not meeting objectives—ranked as minor, medium, significant or critical—and proposes related mitigation measures.

The ministry with responsibility for energy will have overall responsibility for implementing the Action Plan for the NEP. A Monitoring and Reporting Group will be created to coordinate the actions of the various stakeholders and report on progress.

This group will have an operating manual that will define its governance and procedures. It will meet on a quarterly basis to allow for timely identification of barriers and risks, evaluation of progress, and adoption of mitigation measures to address any risks identified. The Group will also issue annual reports, as well as a midterm report in 2026 and a final report in 2030. These reports will record the achievements of the NEP at the specified dates and recommend any adjustments to ensure full implementation of the Action Plan.



Photo: St. Lucia Electricity Services, Limited

# **SAINT LUCIA**

## **NATIONAL ENERGY POLICY**

**(2023–30)**



### **Country Context of the Policy**

# COUNTRY CONTEXT OF THE POLICY

## The Economy

Saint Lucia is a small island nation in the Eastern Caribbean with about 180,000 inhabitants. Endowed with a dramatic volcanic, mountainous landscape and beautiful beaches, the country's economy depends heavily on tourism for income. With GDP at around USD1.6 billion<sup>8</sup> and per capita GDP of about USD 8,952<sup>9</sup>, Saint Lucia is classified as an upper-middle income country. The services sector accounts for about 72 percent of Saint Lucia's GDP, followed by the industrial sector at around 12 percent and the agricultural sector at close to 2 percent.<sup>10</sup> The substantial dependence of the economy on tourism has made Saint Lucia highly vulnerable to factors outside of the country's control.

In 2018 and 2019, Saint Lucia's real GDP grew at 2.6 percent and 1.7 percent, respectively. However, after the onset of the Covid-19 pandemic in 2020, real GDP fell by around 20 percent, its largest decline since 1980. This decline was mainly the result of a sharp reduction in tourism, which accounts for around 41 percent<sup>11</sup> of GDP, as international travel practically came to a halt over fears of the spread of the Covid-19 virus. During the pandemic, an estimated 45 percent of the population stopped working.<sup>12</sup> With the contraction of GDP, public debt rose to about 87 percent of GDP, after hovering around 60 percent in previous years.<sup>13</sup>

## Macroeconomic Impact of the Energy Sector

Saint Lucia depends on imported petroleum products for over 90 percent of its energy supply. The share of GDP absorbed by the cost of oil imports has been volatile since 2006, reaching as high as the equivalent of 23 percent of GDP.<sup>14</sup>

In 2019, the cost of oil imports to Saint Lucia was about USD 105 million, accounting for 16.8 percent of annual import expenses and about 5 percent of GDP (USD 2.1 billion).<sup>15</sup>

The economic slowdown starting in early 2020, as a result of the Covid-19 pandemic, led to a decrease in the cost of oil imports to about USD 53.4 million<sup>16</sup>, approximately 3.3 percent of the country's GDP (USD 1.6 billion).<sup>17</sup>



Photo: Simone D. McCourtie / World Bank

The average annual price of OPEC crude oil rose from about USD 42 per barrel in 2020 to USD100 per barrel in 2022.<sup>18</sup> The value of imports of mineral fuels, lubricants and related materials in 2022 increased to USD 546.1 million, representing 24.3 percent of total imports, higher than the average of 18.9 percent in the period 2015 to 2019 (Economic and Social Review, 2022). Given a predominantly oil-based power system, electricity prices are high, ranging from USD 0.28-0.33/kWh. In addition to placing a heavy financial burden on households, high electricity prices can impede Saint Lucia's competitiveness and growth. More than 55 percent of companies in Saint Lucia have identified high electricity prices as a constraint to doing business in the country.<sup>19</sup>

## Overview of the Energy Sector

Saint Lucia’s primary energy supply amounts to about 8,000 terajoules (TJ), of which 92 percent comes from imported oil and 8 percent comes from renewable energy sources.<sup>20</sup> Per capita energy use is estimated at about 1,936 kWh.<sup>21</sup> Total installed capacity for electricity generation in Saint Lucia is 93.1 MW. About 95 percent of this capacity consists of fossil fuel-generating units operated by the national power utility, St. Lucia Electricity Services, Limited (LUCELEC). The remaining five percent of installed generating capacity uses solar energy.

The transport sector is the largest consumer of petroleum products and the electricity sector is the second largest.<sup>22</sup> Saint Lucia’s considerable renewable energy potential will support the country’s transition away from its current high dependence on fossil fuels. As shown in Table 1, the country’s estimated total renewable energy potential for power generation is 769.2 MW,<sup>23</sup> most of which is geothermal (680 MW). However, the potential of solar and wind in power generation is also substantial, at 36 MW and 42 MW, respectively.

► **TABLE 1: SAINT LUCIA’S ESTIMATED RENEWABLE ENERGY POTENTIAL FOR POWER GENERATION**

RENEWABLE ENERGY SOURCE	MW
Geothermal	680.0
Wind	42.0
Solar	36.0
Biomass/Waste	11.2
<b>Total</b>	<b>769.2</b>

Source: Caribbean Centre for Renewable Energy & Energy Efficiency (CCREEE), Saint Lucia 2021 Energy Report Card.

## The Electricity Sector

Saint Lucia Electricity Services, Limited (LUCELEC) has an exclusive license to generate electricity from fossil fuels, as well as transmit, distribute, and sell electricity.

The formation of LUCELEC, in 1964, unified and centrally managed numerous small power generators. In the 1970s, the company faced rapidly rising demand for power to meet the needs of the growing hotel industry and banana plantations, sectors that were spurring economic growth. Electricity demand grew by an average of 30 percent in this decade, requiring a doubling of power generating capacity every three years. In the 1980s, facing rapidly developing technology, the company recognized the need for better trained staff and initiated a craft apprenticeship program. In 1990, LUCELEC commissioned a new generation and transmission system, which raised overall operational standards. The electricity sector accounts for 39 percent of total petroleum consumption in Saint Lucia.<sup>24</sup>



Photo: St. Lucia Electricity Services, Limited

In 2022, LUCELEC’S installed capacity of fossil fuel-based generation reached 88.4 MW, and peak demand was 61.88 MW. Annual electricity generation is 409 TWh. LUCELEC opened a 3-MW solar farm in 2018, which generated 6.6 TWh in 2022, avoiding the use of 340,000 imperial gallons of diesel oil, resulting in cost savings equivalent to USD 1.43 million.

## The Transport Sector

The transport sector has grown steadily in recent years, mainly as a result of increased imports of used vehicles for private use. This sector is the largest consumer of petroleum products in Saint Lucia, accounting for 54 percent of fossil fuel consumption in road, air and marine transport. Road transport alone accounts for about 38 percent of fossil fuel consumption. Saint Lucia has approximately 84,000<sup>25</sup> registered vehicles.<sup>26</sup> The cars account for 61 percent; sport utility vehicles (SUVs): 20 percent; trucks 13 percent; and buses 2 percent. The remaining four percent consists of motorcycles, tractor trailers, and construction vehicles. Saint Lucia has at least 400 electric cars and hybrid vehicles, accounting for less than one percent of all vehicles.

## Residential and Commercial Sectors

The commercial sector is the largest consumer of electricity, using an estimated 48 percent, followed by the residential sector at 37 percent. Electricity is mainly used for lighting and powering equipment; however, most people use LPG-fuelled stoves for cooking.<sup>27</sup>

## GHG Emissions

Table 2 shows Saint Lucia’s GHG emissions inventory for 2021. Carbon dioxide accounts for about 99 percent of all GHG emissions. The energy and road transportation sectors are the largest emitters of carbon dioxide. These sectors combined account for 77 percent of the total.

► **TABLE 2: SAINT LUCIA’S GHG INVENTORY (2021) IN GIGAGRAMS OF CO<sub>2</sub> EQUIVALENT**

SECTOR	CARBON DIOXIDE	METHANE	NITROUS OXIDE	TOTAL
Energy	249.4	0.22	0.65	250.27
Manufacturing Industries and Construction	12.5	0.02	0.05	11.57
Civil Aviation (Domestic)	5.1	0	0.04	5.14
Road Transportation	245.1	1.33	2	248.43
Navigation	3.6	0.01	0.03	3.64
Commercial/Institutional	5.3	0.01	0	5.31
Residential	19.5	3.9	0.72	24.12
Agriculture/Forestry/Fishing	6.6	0.01	0.02	6.63
Marine International Bunker	3.6	NA	NA	3.60
Aviation International Bunker	90.0	0	0	90.00
<b>Total</b>	<b>639.7</b>	<b>5.5</b>	<b>3.51</b>	<b>648.71</b>

Source: CCREEE, Saint Lucia’s Energy Report Card for 2021.

# **SAINT LUCIA**

## **NATIONAL ENERGY POLICY**

**(2023–30)**



## **Global Context of the Energy Transition**

# GLOBAL CONTEXT OF THE ENERGY TRANSITION

## Climate Change Concerns

Climate change resulting from carbon emissions is a global concern and the use of non-renewable fossil fuels in the energy sector is a major source of carbon emissions.<sup>28</sup> The transition away from an energy mix based primarily on fossil fuels has become the pillar of mitigation initiatives at the international level. This trend is particularly relevant for Saint Lucia as a Small Island Developing State (SIDS), given its vulnerability to climate change consequences like rising sea levels and the increase in extreme weather events. Saint Lucia is also vulnerable to the volatility of prices in the international oil market.

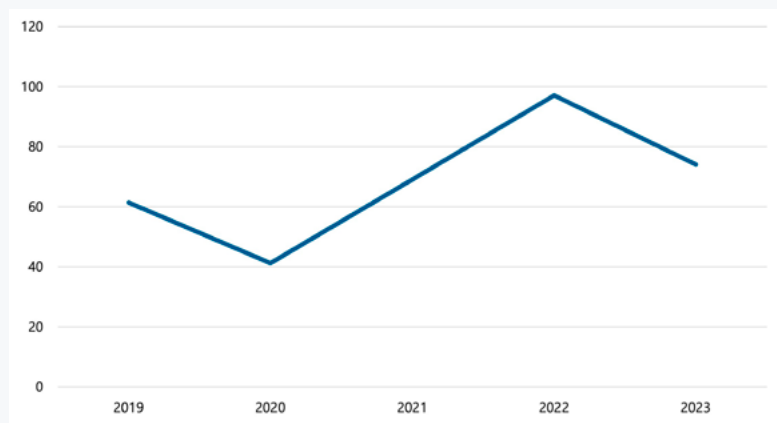
## The Impact of Volatile International Oil Prices

According to World Bank commodity price data, the average international oil price fluctuated markedly between 2019 and the first half of 2023 (Figure 2).

The price declined from an annual average of USD 61.4/barrel in 2019 to an average of USD 41.3/per barrel in 2020. But in 2021, the oil price rebounded to USD 69.1/ per barrel, slightly higher than in 2019. Following the escalation of the conflict in Ukraine in early in 2022, the annual average oil price for that year soared to USD 97.1/barrel. The monthly average for May, 2023, the most recent available, is USD 74.1/barrel.

A publication of the International Energy Agency (IEA), *Oil 2023*,<sup>29</sup> reporting on the outlook for global oil supply to 2028, has placed energy security at the forefront of energy policy, creating a strong incentive for governments to pursue a “low emissions future” in the energy sector. Many governments seem to be responding to this call; in recent years, investment in clean energy appears to be accelerating faster than investment in fossil fuels.

► **FIGURE 2: AVERAGE INTERNATIONAL OIL PRICE, 2019-2023 (IN USD/BARREL)**



Source: World Bank Commodity Price Data. (Annual averages for 2019-2022 and for 2023, the monthly average for May).

## The Paris Agreement

Saint Lucia became a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) in 1993, and ratified the Paris Agreement in 2016. The country's first Nationally Determined Contribution (NDC) set a reduction target of 16 percent against the Business as Usual (BAU) emissions projections by 2025 and a 23 percent reduction by 2030. Saint Lucia's Partnership Plan for Nationally Determined Contributions to emissions reduction (NDCPP) was approved by the Cabinet in 2019.

## Sustainable Development Goals (SDGs) of the United Nations

The NEP supports a subset of the 17 SDGs shown below (Figure 3), most notably: climate action, affordable and clean energy, sustainable cities and communities, industry, innovation and infrastructure, and responsible consumption and production.

► **FIGURE 3: SUSTAINABLE DEVELOPMENT GOALS OF THE UNITED NATIONS.**



Source: United Nations Department of Economic and Social Affairs, Sustainable Development, The 17 Goals.

## Financing the Energy Transition

The availability of financing for energy transition is of paramount importance, as the creation of more resilient energy systems will require capital-intensive projects to develop and deploy clean-energy technologies: primary renewable energy, electric vehicles, energy-efficiency measures, and hydrogen technologies.

Global financial flows towards decarbonised energy transition totalled USD 501 billion in 2020, and lending for sustainable development reached USD 321.4 billion in the first half of 2021,<sup>30</sup> setting an all-time record for such financial flows. The main international financial institutions have affirmed their commitment to “green finance”<sup>31</sup> for developing countries.

These institutions include the World Bank, the Inter-American Development Bank (IDB), the Development Bank of Latin America (CAF), and the Caribbean Development Bank (CDB).

Carbon markets, trading systems in which companies or individuals compensate for the GHG emissions by purchasing credits from entities that reduce or remove their carbon emissions, recorded a notional value of emissions traded amounting to more than USD 1 billion in 2021. These markets are expected to continue expanding, with an increase in the price of CO<sub>2eq</sub> per ton over the next ten years, as offsetting obligations becomes more stringent globally.<sup>32</sup>

# **SAINT LUCIA**

## **NATIONAL ENERGY POLICY**

**(2023–30)**



### **Introduction to the Policy**

# INTRODUCTION TO THE POLICY

## Energy Vision for 2030

Saint Lucia's National Energy Policy (NEP) provides a path to attaining the vision of the energy sector by 2030: a modern energy sector based on cost minimization, energy security, and local enfranchisement. This will require a sustained transition from an economy that is highly dependent on imported fossil fuels to a substantially decarbonised economy by 2030.

Energy efficiency across all end-use sectors and increased substitution of renewable energy resources for fossil fuels will help achieve this decarbonisation, with a focus on 30 objectives supported by 145 actions (NEP).

Renewable energy sources, which account for less than 10 percent of primary energy supply for electricity production, will gain a more prominent role, increasing to around 50 percent of primary energy supply in the power sector by 2030, in line with the goals of the NEP.

The NEP puts energy sector resilience at the centre of energy planning. In addition to making Saint Lucia less vulnerable to international oil price rises, decarbonisation will help the country meet its NDC for GHG reduction, in line with its Paris Agreement obligations. Decreased vulnerability to the rises in oil prices will help keep energy affordable for households and allow businesses to remain competitive.

## Core Values

The foundation of the NEP is a set of 12 core values, (Figure 4), which can be divided into three main categories: (i) improved energy demand and supply management, (ii) institutional strengthening, and (iii) human resource development.

## Goals, Objectives and Actions Supporting the Energy Vision

Based on the aforementioned core values, Figure 4 provides a schematic overview of the NEP strategy to improve the country's energy sector by 2030. The strategy is built around the following seven goals:

- ▶ Ensure a secure, reliable, affordable, transparent, greener, and resilient electricity sector.
- ▶ Decarbonise thermal applications.
- ▶ Make reduction of energy intensity a key driver for decarbonisation.
- ▶ Decarbonise the transport sector.
- ▶ Ensure a safe, reliable, and affordable supply of petroleum products and their efficient and environmentally safe storage, handling and use during the transition phase.
- ▶ Ensure that human, technical, and institutional capacities are aligned with the needs of the energy sector and objectives of the policy by integrating social and gender aspects in the development of the energy sector.
- ▶ Facilitate access to renewable energy and energy-efficiency measures.

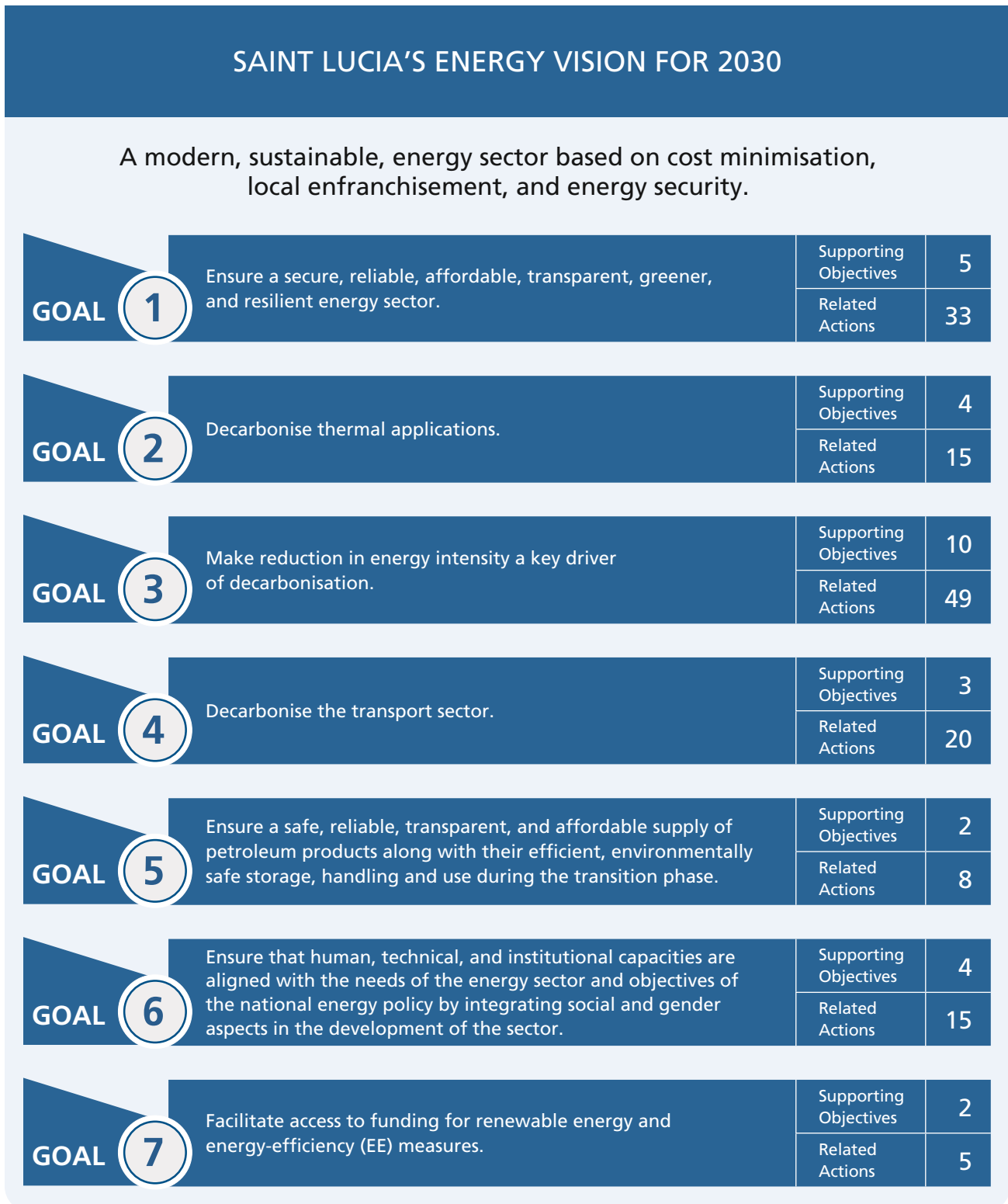
► FIGURE 4: CORE VALUES REFLECTED IN SAINT LUCIA'S NEP

Improved Energy Demand and Supply Management	Institutional Strengthening	Human Resource Development
Reliability, resiliency, and affordability of energy services.	Transparency and consistency in legal and regulatory frameworks.	Education, public awareness, and capacity-building.
Efficiency in production and consumption of energy in all sectors.	Maximum level of collaboration and coordination across sector authorities.	Promotion of investments with a high level of local participation.
Security of energy supply by reducing dependency on imported fossil fuels.	A multidisciplinary and cross-cutting sector approach.	
Maximum development of renewable energy sources in all sectors.	Regulatory and price stability within the sector.	
Systematic development of energy infrastructure prioritising the use of renewable energy sources.		
Environmental and social protection.		



Photo: Simone D. McCourtie / World Bank

► FIGURE 5: SEVEN GOALS SUPPORTING SAINT LUCIA'S ENERGY VISION FOR 2030



# **SAINT LUCIA**

## **NATIONAL ENERGY POLICY**

**(2023–30)**



## **Goals and Objectives**

# POLICY GOALS AND OBJECTIVES

<b>GOAL 1</b>	Ensure a secure, reliable, affordable, transparent, greener, and resilient energy sector
OBJECTIVE 1	Meet the target of 50% penetration of renewable energy in the electricity mix by 2030.
OBJECTIVE 2	Establish a consistent and stable legal framework that enhances predictability in the energy sector and fosters investments in renewable energy.
OBJECTIVE 3	Ensure a stable, predictable and consistent institutional framework.
OBJECTIVE 4	Reduce the environmental impact of electricity production and distribution.
OBJECTIVE 5	Integrate resilience considerations into energy planning.

## Objective 1: Meet the target of 50 percent penetration of renewable energy sources in the electricity mix by 2030.

The path to Saint Lucia’s planned energy transition requires massive deployment of an applicable set of proven clean-energy technologies, taking advantage of the country’s full renewable energy potential, particularly solar, wind, and geothermal resources.

This will help align the country’s energy sector development with its nationally determined contributions (NDCs), under the Paris Agreement. Decreasing the current heavy reliance on imported petroleum products will make Saint Lucia’s power supply more resilient and reliable. When installed, this renewable energy capacity is also expected to help mitigate and resolve potential service disruptions.

To achieve this, the NEP has established a target of 50 percent penetration of renewable energy sources in the electricity matrix by 2030. Renewable electricity capacity in Saint Lucia will be developed on-grid at utility scale, managed by LUCELEC, and by independent power producers (IPPs).

In addition, the development of distributed energy resources (DERs), such as rooftop solar energy, will be promoted, to be installed by individual customers of the power utility, businesses or municipalities, in order to help reduce electricity bills and the amount of power generated by fossil fuels.

Integrating such large amounts of variable renewable energy into the network will require measures to ensure grid stability and enhanced resilience of the system. An appropriate mix of technologies needs to be carefully identified and the inclusion of grid-tied energy storage systems—battery energy storage systems (BESS), or other types of feasible energy storage—should be central to the overall system.

These measures will help compensate for the variability of renewable energy generation, providing support to the grid at peak hours (often off-solar hours), and contribute to the quality and reliability the system.

To facilitate investments in renewable energy projects, Saint Lucia will develop an appropriate fiscal structure, primary and secondary legislation, and technical capacity-building programmes to promote the participation of local developers and empower them as active players in the transition.

## **Objective 2: Establish a consistent and stable legal framework that enhances predictability in the sector and fosters investments in renewable energy.**

The electricity sector is currently governed by the Electricity Supply Act, which entered into force in 1994 and was amended in 2016, and the National Utilities Regulatory Commission Act (the NURC Act) of 2016. The amendments to the Electricity Supply Act have limited the monopoly of LUCELEC in renewable energy generation, opening up generation to other suppliers. However, these amendments have not established the related licensing and market entry requirements, including procurement, applicable to independent power producers (IPPs), and self-generators who wish to obtain a licence to generate power from renewable energy sources.

The absence of an appropriate legal framework for the electricity sector and for the renewable energy subsector, is a challenge for renewable energy projects and related decarbonisation of the energy sector. This legislative gap has a direct impact on investments and on the country's ability to replace imported fossil fuels with locally-generated renewable energy, ultimately impacting energy supply security and resilience.

A draft revised Electricity Act has been prepared to address and solve this problem; it is expected to be finalised and sent to Parliament for discussion and enactment by December 2023. The regulations necessary to implement the new Act, many of which have already been prepared, will likely be approved at the same time. The Geothermal Resources Development Bill, an important milestone for the development of geothermal energy, drafted in 2011, will also be finalised and sent to Parliament in 2025 for enactment.

## **Objective 3: Ensure a stable, predictable and consistent institutional framework.**

The transition to a decarbonised and resilient energy sector requires appropriate resource planning as well as adoption and implementation of a comprehensive cross-sector policy. Within this framework, the functions and roles of authorities and stakeholders involved in policy

implementation need to be properly and consistently assigned, preferably within a single authority, in order to facilitate coordination to a progressive reduction of fossil fuels and integration of more renewable energy.

The Ministry of Sustainable Development, Energy, Science and Technology will be assigned the planning function, which will also encompass markets for electricity and oil, as well gas, should a gas market be developed. A new bill establishing the legal and institutional frameworks for the petroleum sector will be submitted to Parliament in the near future. However, no major changes are expected.

The National Utilities Regulatory Commission (NURC) is the legislated regulator of electricity supply services in Saint Lucia. This commission is responsible for addressing consumer complaints and granting licenses for generating, transmitting, and distributing electricity as prescribed by the NURC Act of 2016. The NURC serves as a guarantor of transparency of operations in the electricity sector.

## **Objective 4: Reduce the environmental impact of electricity generation and distribution.**

Burning fossil fuels results in the release of harmful gases into the atmosphere, with negative impacts on the environment. Carbon dioxide, sulphur dioxide, and nitrogen oxide, from the combustion of fossil fuels, are contributors to increased GHG emissions, leading to poor air and water quality.

Greener energy technologies, for example, using renewable energy instead of fossil fuels in power generation, or using fossil fuels with a lower sulphur content, will help reduce pollution during the transition to energy sector decarbonisation.

Batteries needed to store the energy from greener technologies need to be carefully handled according to a dedicated waste management plan. Safe storage, disposal of oil, decommissioning of existing generation and distribution assets associated with the use of fossil fuels also need meticulous care and disposal. Sound environmental standards governing these, and other environmental considerations will be adopted.

## Objective 5: Integrate resilience considerations into energy planning.

Saint Lucia’s location in the hurricane zone of the Caribbean makes it vulnerable to extreme weather events, more recently exacerbated by climate change. Devastating hurricanes and floods have caused human losses and destroyed infrastructure in many Caribbean islands. Based on current climate projections, the Caribbean region is anticipated to face increased extreme weather events, threatening critical life-line infrastructure, including energy systems.

Resilience focuses on preparing for, absorbing, adapting to, and recovering from low-probability, high-consequence disruptive events.

It is, therefore, necessary to integrate resilience considerations into energy planning as well as operational protocols and processes in the energy sector. Resilience planning should also focus on the need for cybersecurity analysis, especially for the protection of the national grid in the event of cyber-attacks. Accompanying legislation to this effect must be established.

<b>GOAL 2</b>	Decarbonise thermal applications
OBJECTIVE 1	Promote installation of solar water heaters.
OBJECTIVE 2	Promote the use of innovative thermal applications in residential and commercial sectors.
OBJECTIVE 3	Promote the use of efficient cooking technologies.
OBJECTIVE 4	Promote the use of innovative thermal applications in the industrial and tourism sectors.

The provision of thermal energy for day-to-day activities, such as water heating, air conditioning and cooking is a major use of energy for households and industry. Harnessing the power of the sun in applications other than electricity generation, such as solar water heating, is a goal that Saint Lucia is also pursuing as part of the envisaged energy transition.

## Objective 1: Promote the installation of solar water heaters.

Solar water heating (SWH) is a proven and affordable technology, the simplest and most efficient way to provide hot water to residential, commercial and government buildings. Its expanded use will contribute to reducing electricity consumption, by using the sun’s thermal energy to directly heat water, instead of a hot water tank powered by electricity. SWH is both sustainable and cost effective.

The involvement of more local entities in the assembly and installation of SWH will contribute to the overall improvement of the economy through skill enhancement and job creation.

The NEP will include measures to incentivise the importation of SWH equipment. These measures, in addition to a reduction in the import duty for this equipment, include a proper assessment of training and standardisation needs, the implementation of public awareness campaigns, and the establishment of targets for SWH installation applicable to governmental buildings, hospitals, schools, etc. These users will be leaders in demonstrating the viability of the SWH technology.

## Objective 2: Promote the use of innovative thermal applications in the residential and commercial sectors.

Alternative energy sources to meet thermal demand needed in the residential and commercial sectors should be further explored and promoted. These sources could include solar-assisted, air-conditioning systems, based on absorption, or conventional compression systems powered by solar photovoltaic panels.

Promoting the use of innovative thermal applications can have multiple benefits for Saint Lucia given the expected potential for large-scale exploitation of renewable energy. These benefits include improving the country's energy resilience, further developing the private sector, and incentivising consumers to invest in applications that will allow them to reduce their energy consumption.

In addition to existing renewable technologies, considered economically viable in Saint Lucia, emerging technologies such as those for geothermal, tidal, and ocean thermal energy could also assist with the country's energy transition. Feasibility of these technologies could be further developed during the NEP's implementation period (2023 to 2030).

## Objective 3: Promote the use of efficient cooking technologies.

Saint Lucia relies heavily on the use of liquefied petroleum gas (LPG) for cooking. The replacement of LPG-fuelled kitchen stoves by energy-efficient, electric stoves will support the decarbonisation process of the electricity sector and will help reduce dependency on imported fossil fuels.

Substituting electricity for LPG in cooking will be combined with more efficient cooking technologies in order to address the financial needs of vulnerable sectors of the population. Increased usage of electric stoves on the electricity grid must also be factored into electricity planning given the potential increase in electricity demand, requiring reinforcements in local grids. The use of biogas from agriculture or waste will also be explored as an option for decarbonising cooking.

## Objective 4: Promote the use of innovative thermal applications in industrial and tourism sectors.

Decarbonisation requires a cross-sectoral approach to identify technologies most suitable to each economic sector and to assess the extent to which advances in each sector will help attain decarbonisation goals. The industrial and the tourism sectors, which are major contributors to the economy, will receive particular attention. Sustainable tourism will be promoted to market Saint Lucia as a green destination, as tourists become more environmentally aware and appreciative of environmentally conscious tourism opportunities.

Solar thermal systems can satisfy a large demand for heat in industrial and agricultural processes, complementing energy-efficiency measures as part of a decarbonisation strategy. These systems can provide heating, hot water, and steam for curing, drying, washing, boiling, pasteurisation and sterilisation in the agriculture, textile, hospitality and food processing industries.



Photo: St. Lucia Electricity Services, Limited

Saint Lucia's energy intensity of 3.51 BTU/ USD\$ is well below the weighted average for CARICOM countries. However, the ability to decrease electricity consumption by energy-efficiency improvements to buildings or the use of more efficient appliances can add value to the island's competitive advantage and increase the resilience of a power system, while lessening the adverse impact of the energy sector on the environment.

The NEP incorporates these energy-efficiency measures, helping to enhance the energy sector's sustainability on the demand side and on the supply side.

<b>GOAL 3</b>	<b>Make reduction in energy intensity a key driver of decarbonisation</b>
OBJECTIVE 1	Define and approve energy-efficiency targets.
OBJECTIVE 2	Demonstrate government leadership in energy-efficiency measures.
OBJECTIVE 3	Ensure that appliances are as energy efficient as possible.
OBJECTIVE 4	Reduce or eliminate soft barriers to the uptake of energy conservation and efficiency projects.
OBJECTIVE 5	Promote the use of energy-efficient technologies in water production.
OBJECTIVE 6	Ensure that energy-efficiency is incentivised through the correct tariff mechanism.
OBJECTIVE 7	Reduce the fuel consumption of vehicles with internal combustion engines.
OBJECTIVE 8	Retrofit existing buildings for energy-efficiency enhancement.
OBJECTIVE 9	Apply energy-efficiency measures in new buildings.
OBJECTIVE 10	Develop a suitable, effective regulatory and institutional framework to ensure timely, systematic implementation of energy-efficiency measures.

### Objective 1: Define and approve energy-efficiency targets.

There are significant opportunities for improving energy efficiency in all sectors of Saint Lucia’s economy: tourism, healthcare, building construction, transport, industry, electricity generation, and manufacturing. Such improvements require adoption of corresponding energy-efficiency targets and implementation of a monitoring mechanism to ensure their achievement. Therefore, new energy-efficiency targets aligned with international standards will be established to reduce the energy intensity of the country and, consequently, its dependence on imported fossil fuels.

### Objective 2: Demonstrate government leadership in energy-efficiency measures.

Broad-based adoption of energy-efficiency measures will be a critical element in the development of a sustainable energy sector.

The ministry with responsibility for the energy sector must inform, educate, and promote energy-efficiency policies throughout Saint Lucia’s society. The Government will take a leading role in the implementation of proposed energy-efficiency plans to take the following actions to promote sustainable generation of energy:<sup>33</sup>

- ▶ A 20 percent reduction of energy consumption in schools, by 2030.
- ▶ Replacement of 30 percent of the government transport fleet with electric vehicles, by 2030.
- ▶ Energy audits of government-occupied buildings, including schools, by 2025.
- ▶ Lighting retrofits in all government-occupied buildings.
- ▶ Installation of 400 kW of solar-PV systems in schools, averaging about 10 kW across 40 schools.

### **Objective 3: Ensure that appliances are as energy efficient as possible.**

The NEP will take the following measures to promote the use of efficient appliances and other electrical equipment:

- ▶ **Energy use in buildings:** retrofitting building appliances, replacing fluorescent bulbs with LED lights, installing solar water heaters, etc.
- ▶ **Electricity generation and distribution:** using more efficient equipment, such as variable frequency pumps, breakers with timers, waste-heat recovery, etc. These technologies can increase energy efficiency of power generation from the current level of about 40 percent (in conventional fossil-fuel fired power plants) to up to 80 percent.
- ▶ **Energy-efficiency labelling of appliances:** In order to ensure that appliances comply with the latest energy efficiency and international environmental standards, requirements for labelling energy use of imported appliances will be strengthened.

### **Objective 4: Reduce or eliminate soft barriers to the uptake of energy conservation and efficiency projects.**

Implementing energy-efficiency measures will require elimination of soft barriers, such as the lack of appropriate information or qualified personnel, as well as the absence of adequate economic incentives. The general public must perceive the substantial benefits of efficient energy use to the economy and the environment. A public education program explaining these benefits will therefore, be critical to success.

Demand-side management is the modification of consumer energy use through education and behavioural change. Energy-efficiency measures and financing incentives, such as utility tariff restructuring (e.g., time-of-day tariffs or incentivising the use of batteries) will help shift energy demand to off-peak hours or reduce peak load and use the stored energy from renewable energy sources at certain times of the day.

### **Objective 5: Promote the use of energy-efficient technologies in water treatment and production.**

The NEP will address the need for energy-efficient practices in the production of clean water and prospects for renewable energy use in collaboration with agencies managing Saint Lucia's water sector. Solar-powered systems offer a route to inexpensive water treatments and will help improve resilience in the water sector. Desalination of water at utility scale will also be explored.

### **Objective 6: Ensure that energy efficiency is incentivised through the correct tariff mechanism.**

Applying economically efficient rates consistent with long-term costs incurred by energy providers is essential for the deployment of renewable energy technologies and storage systems. At the same time, the NEP, together with the regulatory authority, will evaluate the cost of energy products to the various end-use sectors, to ensure that while supporting the energy transition, they do not place an excessive financial burden on residential consumers and that they allow businesses to stay competitive.

The current tariff scheme, with a single component based on energy consumption, promotes inefficient energy use and could have negative consequences for energy sustainability in Saint Lucia. It also undermines potential competition from alternative supply options and weakens the finances of energy providers by hampering full cost recovery for services provided. Without an appropriate tariff mechanism, an increasing number of distributed solar-PV (DPV) systems may impede a utility from meeting its fixed costs.

To remove the negative aspects of the current tariff regime, new energy tariffs will be developed in collaboration with the NURC, setting prices that will incentivise energy efficiency, allowing cost recovery and a fair financial return to utilities, while remaining affordable for consumers and encouraging entrepreneurship. The current subsidy structure in the tariff regime and the proposed measures to incentivise the electrification of the economy will be revised to protect the welfare of low-income consumers.

### **Objective 7: Reduce the fuel consumption of vehicles with internal combustion engines.**

The road transport sector accounts for about 38 percent of petroleum consumption in Saint Lucia based on the country's most recent available energy balance (2018). The share of hybrid/electric vehicles remains negligible, while the number of vehicles with internal combustion engines (ICEs) is increasing. Saint Lucia's Biennial Update Report to the United Nations Framework Convention on Climate Change of 2021 (BUR) states that, in 2018, there were twice as many vehicles as there were in 2000, and that *"... the official databases do not contain accurate information on vehicles taken off the roads due to accidents, obsolescence, and other factors, nor do they reflect the number of unlicensed vehicles."* This deficiency will be addressed through the development and implementation of a novel transport policy.

There are multiple ways to promote greater energy efficiency in the transport sector, including: (i) definition of efficiency standards; (ii) promotion of import, trade, and use of vehicles that comply with these standards; (iii) the adoption of a mandatory labelling system to provide reliable information on fuel consumption; and (iv) sustainable driving awareness campaigns. Obligatory vehicle inspections and the establishment of minimum standards to pass these inspections will be enhanced through regulation to ensure that vehicles meet specific minimum energy-efficiency standards.

### **Objective 8: Retrofit existing buildings for energy-efficiency enhancement.**

Existing buildings may require upgrades to improve their energy efficiency for a variety of reasons: an inadequate thermal envelope,<sup>34</sup> inefficient cooling systems, non-solar PV-based hot water systems, old electrical installations, incandescent and fluorescent bulbs, the lack of smart appliances, or outdated electrical cabling, all of which may contribute to high electricity costs.

The NEP will focus on building capacity for energy efficiency and conducting standardised energy audits geared towards understanding energy usage in government-owned and occupied buildings, while identifying opportunities to improve energy efficiency and the comfort of tenants.

Saint Lucia has already adopted standards for light-emitting diode (LED) and compact fluorescent light (CFL) bulbs, air-conditioning units, refrigerators, etc. Retrofitting existing buildings using these standards and the adopted CARICOM Regional Energy Efficiency Building Code (CREEBC) will be promoted.

### **Objective 9: Apply energy-efficiency measures in new buildings.**

New construction projects provide the opportunity to incorporate from inception or planning, the most recent energy-efficient designs, modern technologies, and eco-friendly materials.

As indicated above, Saint Lucia has adopted the CREEBC, which sets guidelines for its member states, establishing minimum energy-efficiency requirements for the building envelope, aligned with the mechanical, lighting, and water-heating systems present in the tropical climate zone.

The Government of Saint Lucia, through the Planning Division and the Saint Lucia Bureau of Standards, intends to transition from voluntary to mandatory standards for energy efficiency.

### **Objective 10: Develop a suitable, effective regulatory and institutional framework to ensure the timely, systematic implementation of energy-efficiency measures.**

Reducing the energy intensity of Saint Lucia's economy will require legislative measures along with appointed agencies capable of monitoring and enforcing standards. The Energy Efficiency Bill was drafted in 2015 but has not yet been presented for public consultation. This draft will be revised, consulted upon, and finalized before being sent to Parliament for enactment. The bill will define functions for agencies responsible for adopting and implementing energy-efficiency measures and related training for staff.

<b>GOAL 4</b>	<b>Decarbonise the transport sector</b>
OBJECTIVE 1	Promote the use of alternative fuels where feasible.
OBJECTIVE 2	Minimise the time use of vehicles.
OBJECTIVE 3	Encourage the adoption of a greater percentage of electric vehicles and hybrids in the national vehicle fleet and establish a framework for the development of sustainable road transport.

Saint Lucia is planning a shift to a greener transport sector by improving the efficiency of vehicles running on fossil fuels in the short term, and encouraging, over the long term, the switch to electric vehicles in the public and private sectors.

**Objective 1: Promote the use of alternative fuels where feasible.**

Harnessing the potential to develop alternative fuels for powering motor vehicles, such as biodiesel or bioethanol made from local biomass, or green hydrogen, obtained from splitting water into hydrogen and oxygen using renewable energy, will strengthen the transport sector’s energy resilience while reducing its carbon emissions, in line with Saint Lucia’s NDC targets.

Resource availability and economic feasibility of producing biofuels in the country will need to be evaluated, based on crop availability and the scale of the potential operation. The evaluation may also extend to the analysis of Sargassum seaweed as a potential substrate for the production of biofuels.

Legislation for the production of biofuels will be aligned to the objectives of promoting alternative fuels that can be locally developed. It will also tie in with the legal framework required to support fuel diversification in a safe and sustainable way, respectful of the environment and the health of Saint Lucians.

**Objective 2: Minimise the time use of vehicles.**

Considerable quantities of fuel are wasted during traffic congestion. A congestion analysis and the introduction of mechanisms to reduce congestion are therefore critical to diminishing the intensity of fossil-fuel use in the transport sector. The use of public transport, in addition to reducing the fossil fuel consumption of individual vehicles, cuts traffic congestion and, consequently, air pollution. At the same time, the use of single-person automobiles should be limited and carpooling options should be encouraged through related public education campaigns and incentives.

Promoting public transport may require improvements to transport infrastructure, area coverage, and timetables as well as the provision of economic incentives. These improvements and incentives should be supplemented with educational campaigns to increase public awareness of the benefits to minimizing the use of individual vehicles that run on fossil fuels, given that the *culture of the car*<sup>35</sup> could prove to be a major barrier to widespread adoption of public transport.

In addition to the promotion of public transport, bicycles and energy-charged, single-person transport that is not fossil-fuel intensive, such as e-scooters, e-bikes, or e-motorbikes, should be encouraged. Small, single-person transport using electricity will become even more advantageous as the electricity sector increasingly substitutes renewable energy for fossil fuels in power generation.

**Objective 3: Encourage the adoption of a greater percentage of electric and hybrid vehicles in the national fleet and establish a framework for the development of sustainable road transport.**

The Biennial Update Report (BUR) of the United Nations Framework Convention on Climate Change (UNFCCC), has established targets for penetration of electric vehicles in Saint Lucia’s vehicle fleet by 2030. The achievement of these targets will require incentives for the purchase of electric/hybrid vehicles and related public awareness campaigns.

The targets for electric vehicles in the transport sector by 2030 are: 33 percent share of all private vehicle sales, 30 percent of the government vehicle fleet, and 10 percent of the public transport and taxi fleet.

The Government has already adopted some measures supporting the switch to electric vehicles in cooperation with international institutions. These include the installation of a solar carport adjacent to the building of the Ministry of Infrastructure and the purchase of three electric vehicles for demonstration purposes, to promote the use of electric vehicles on the island. LUCELEC has also ventured into this initiative, with the installation of additional charging stations for electric vehicles throughout the island, and strategies for expansion.

Furthermore, in 2018, 15 automotive technicians were trained in the operation of electric and hybrid vehicles by the Institute of the Motor Industry in the U.K. There are plans to continue with capacity-building for the use of these new technologies.

Also in 2018, the Government of Saint Lucia completed its Fleet Transition Study, which analysed the possibility of transitioning from ICE vehicles to electric vehicles. A pilot project to analyse a variety of technologies for this transition has been designed. The study has recommended the replacement of 131 existing conventional vehicles in the Government’s fleet with electric vehicles. New targets for the share of electric vehicles in the government transport fleet and in public and private transport will be established by 2025.

In 2014, the Government introduced tax incentives to encourage the purchase and use of hybrid vehicles as well as vehicles that allow operation on sustainable fuels, and will study the need for additional incentives.

The Government will adopt a new transport policy by 2025. This policy will address electrical mobility, including the identification of options for infrastructure and charging stations (on-grid and off-grid), entities that might be authorised to operate electricity recharging stations, and the corresponding legal, institutional, and regulatory frameworks necessary for the policy’s implementation.

<b>GOAL 5</b>	Ensure a safe, reliable, and affordable supply of petroleum products along with their efficient, environmentally safe storage, handling, and use during the transition phase
OBJECTIVE 1	Foster a resilient and transparent supply of oil products.
OBJECTIVE 2	Ensure that oil supply meets the required environmental criteria.

The value of petroleum products imported into Saint Lucia during 2020 accounted for 4.81 percent of the country’s GDP. Phasing out the use of petroleum products will take many years and during the transition

period to a larger share of renewable energy in Saint Lucia’s energy mix, security of supply as well as safety and environmental protection in the use of these products will continue to be a major concern.

**Objective 1: Foster a resilient and transparent supply of oil products.**

Procurement, handling, and storage of petroleum products, as well as local transportation, will be managed in a safe, environmentally-friendly manner. The level of local stock must be continuously evaluated, and a minimum level should be defined by an authority to be established. The evaluation should address storage capacity, seasonal needs, costs of new storage, and the risk of supply constraints, as the economy gradually shifts away from petroleum products. Updated regulations will be issued to ensure predictability in the supply mechanism for all stakeholders involved in the petroleum subsector.

The mechanism to index local fuel prices to international prices, including a cap on fuel prices to address affordability issues, will be continuously monitored to ensure its effectiveness and efficiency.

**Objective 2: Ensure that oil supply meets the required environmental criteria.**

Petroleum products transported by ships risk spillage and related environmental disasters. Oil spills can devastate marine ecosystems, resulting in tremendous environmental losses, which, in addition to severely harming animal and plant life, ultimately can be extremely detrimental to the tourism sector. To prevent such incidents, clear standards and protocols for the safe supply of petroleum products will be compulsory for all stakeholders involved in petroleum transport: cargo companies, harbour authorities, environmental entities, ship maintenance companies, and others.

Imports of petroleum products will comply with environmental standards, according to international best practices. Likewise, proper disaster management plans will need to be defined and updated periodically. An authority will be appointed to monitor compliance with mandatory environmental criteria for transport and storage of petroleum products.

<b>GOAL 6</b>	Ensure that human, technical and institutional capacities are aligned with the needs of the energy sector and objectives of the national energy policy, by the integration of social and gender aspects in the development of the sector
OBJECTIVE 1	Improve education on sustainable energy issues.
OBJECTIVE 2	Ensure that the institutions required to implement the training programmes in the Action Plan have sufficient and adequately trained staff.
OBJECTIVE 3	Ensure adequate education on the content of the national energy policy so that it is widely known and accepted by society.
OBJECTIVE 4	Promote a gender balance in the energy sector.

**Objective 1: Improve education on sustainable energy issues.**

Measures to decarbonise Saint Lucia’s economy and build its resilience will require an understanding of certain issues that are likely not known to the general public.

Public awareness campaigns on the importance of energy sustainability to the country’s future are critical to achieving the NEP’s goals and objectives.

**Objective 2: Ensure that the institutions required to implement the training programmes in the Action Plan have sufficient and adequately trained staff.**

All official entities implementing the NEP Action Plan in the transport sector must be coordinated, trained and adequately staffed. Private institutions and individuals involved with the NEP may also need capacity-building; these include car dealers, mechanics, and insurance companies. Some educational campaigns have already been developed by the authorities in the transport sector, e.g., training for technicians on electric and hybrid vehicles. However, the Government is committed to extending training to all entities responsible for fulfilling NEP objectives.

**Objective 3: Ensure adequate education on the content of the national energy policy so that it is widely known and accepted by society.**

To ensure the involvement of civil society in the NEP's implementation, the Government is responsible for developing and implementing plans to disseminate its content at all levels of education, including schools, universities, and training courses for public administration.

Stakeholder engagement is a critical element in the effective execution of the NEP and its accompanying actions. This engagement must take place at all stages of project development in the energy sector. A participatory role in decision-making for the energy sector by all Saint Lucians is key to the NEP's acceptance and successful implementation.

**Objective 4: Promote gender balance in the energy sector.**

The capacity-building element of the NEP aims for greater gender balance in the energy sector.

Gender imbalances in certain professions persist at the global level. The restricted opportunities available to women compared to those available to men stem from a wide range of complex issues, including financial resources, educational capital, career projection based on representation, biased perception of capability, and self-censorship. In Saint Lucia, women represent 51.3 percent<sup>36</sup> of the population but only 22 percent are enrolled in tertiary education.<sup>37</sup> Only 16 percent of the seats in Saint Lucia's national Parliament are held by women.<sup>38</sup>

Because women traditionally have been less engaged in science, technology, engineering and mathematics (STEM) than men, the share of women in the workforce of Saint Lucia's energy sector is only 31.7 percent.<sup>39</sup> As part of its capacity-building effort, the NEP will seek greater representation of women in the energy sector, especially in STEM-related positions.

<b>GOAL 7</b>	Facilitate access to financing for renewable energy and energy-efficiency measures
OBJECTIVE 1	Facilitate local financing and enfranchisement for green-energy projects.
OBJECTIVE 2	Facilitate access to innovative ways of financing green-energy projects.

At its core, the NEP seeks to ensure that energy is affordable to all Saint Lucians, as well as promote entrepreneurship that will allow wealth generated by the transition to a decarbonised economy to remain within the country as much as possible. With these considerations in mind, the NEP will explore a variety of business models and financial instruments for decarbonisation to provide incentives for the majority of Saint Lucians to participate in the energy transition process.

### Objective 1: Facilitate local financing and enfranchisement for green-energy projects.

There are numerous financial instruments to support climate actions and green economic growth. Traditional debt instruments are actively used to channel most of global, climate-related finance (66 percent of total), primarily through project-level debts and balance-sheet borrowings, as well as project debt subsidisation. The second largest instrument is equity financing (29 percent). Risk management tools, such as state guarantees, represent a small share of total climate-related finance.<sup>40</sup>

Attracting private investment to Saint Lucia’s low-carbon energy path will be a major challenge given that local financing of green-energy projects has been limited. The country’s banking industry, not accustomed to financing these types of projects, tends to overstate their risks. Government policies will help address barriers to financing green-energy projects due to limited knowledge, by training financial institutions in risk assessment and mitigation measures for investment projects to develop renewable energy resources and improve energy efficiency.

The Government may also help develop a local financing market for green-energy projects by providing insurance to financial institutions that cannot tolerate the residual risk of using their own funds or multilateral funding. The latter can be used in many ways to leverage local financing capabilities and promote a local financial market. Options include: (i) blending funds, (ii) absorbing some risks, or (iii) syndicating green bonds. Many bilateral and multilateral development finance institutions (DFIs) have renewed their commitments to significantly increase financing for climate-related investments in the short term and to work towards making all development bank finance compatible with the SDGs of the United Nations in the long term.



Photo: Simone D. McCourtie / World Bank

Lending for renewable energy development is not new to Saint Lucia. For example, the Saint Lucian Development Bank offers blended financing comprised of grant and loan financing for energy efficiency and renewable energy projects in the residential, commercial, and agricultural sectors. The focus of this lending is on buildings: lighting replacement, improved cooling equipment, photovoltaic pumps, solar water heaters, solar dryers, low-flow plumbing technology, mini hydro, wind energy, and biogas systems.

As indigenous financial institutions gradually modify their lending products to facilitate green financing, there are avenues opening for a greater level of domestic entrepreneurship in green projects, thus promoting local enfranchisement. The Government will lend support to this by exploring incentives that can spur greater involvement in the provision of green services by Saint Lucians.

When implementing the NEP, ways to channel local savings to green-energy funding will be explored. The local banking industry will take the leading role to ensure that lack of financing will not be a barrier to successful transition to a sustainable energy sector by 2030.

## **Objective 2: Facilitate access to innovative ways of financing green-energy projects.**

To meet growing demand for energy financing, new financial instruments, such as green bonds and carbon market instruments, have been established, along with new financial institutions, such as green banks and green funds. In recent years, green financial products or services, in support of sustainable development, have been booming. The expansion of environmental, social and governance (ESG) policies in companies and funds (e.g., pension funds) has triggered investor appetite for such instruments. One example is the issuance of green bonds, which surpassed USD 500 billion in 2021 and it is expected to increase tenfold by the end of 2025.<sup>41</sup>

The private international financial sector views green funding as the financing instrument projected to have the highest growth in the coming years. And, multilateral funding in this field is expected to rise. For example, the Green Climate Fund is already operating in Saint Lucia, facilitating resilience-linked investments. However, in many cases, projects are not well enough structured to apply for such funding or are unknown to the financing source. In such cases, government intervention can have high added value.

Identifying multiple beneficiaries and monetising the benefits are at the core of innovation in financing green infrastructure. Carbon markets provide a clear example of this: in these markets, demand is created by those who want to offset CO<sub>2</sub> emissions due to country or regional regulations, or to ESG policies.

Compliance markets established by the Kyoto Protocol, such as the Clean Development Mechanism (CDM)/ Joint Implementation (JII), are currently limited to specific regions and are difficult to access. Companies can participate in the voluntary carbon market either individually or as part of an industry-wide scheme, such as the Carbon Offsetting and Reduction Scheme for International Aviation, which is more fluid, as it is unrestrained by boundaries set by nation states or political unions.

The voluntary carbon market has grown rapidly in the last five years, and is expected to reach USD 50 billion in 2030.<sup>42</sup> Carbon markets were in the spotlight at the 26<sup>th</sup> Conference of Parties (COP26), held in Glasgow, Scotland in 2021, a conference consisting of representatives from countries that have signed the United Nations Framework Convention on Climate Change (UNFCCC). At this conference, parties to the Paris Agreement of 2015 agreed on the rulebook for Article 6, determining how carbon credits may be used and traded under the Agreement.

Voluntary carbon markets are private initiatives that are not regulated by governments. However, governments can harness such markets to scale up emission reductions and direct finance into sectors where it is needed most. For example, under the new Article 6 Rulebook, governments will be responsible for determining which carbon credits may be used for climate-change mitigation commitments. Similarly, awareness of the existence of such markets, as well as assistance to local private investors, will be promoted.

# ANNEX 1: PROFILE OF SAINT LUCIA'S ENERGY SECTOR<sup>43</sup>

Energy Policies	National Energy Policy (2023)
	Updated NDC (2021)
	National Energy Transition Strategy (2018)
	National Energy Policy (2010)
	Saint Lucia Climate Change Adaptation Policy (2015)
Key Legislation and Regulations	Electricity Supply Act (2008)
	Electricity Supply Act Amendment (2016)
	NURC Act of 2016
Electric Power Company	Saint Lucia Electricity Services Limited (LUCELEC)
Regulator	National Utility Regulatory Commission (NURC)
Key Government Entities	Energy Division Department of Public Utilities Department of Transport
Installed Electricity Generating Capacity (2022)	88.4 MW (diesel)
Peak Electricity Demand (2022)	61.8 MW
Utility-Scale Renewable Energy Capacity (2022)	3.3 MW 3 MW
Distributed Electricity Generation (2022)	1.67 MW
Electricity System Losses (2020)	5.74% <sup>1</sup>
Energy Use Per Capita (2021)	1,826.5 kWh
Diesel Consumed for Electricity Generation (2022)	20,750,985 (imperial gallons)
Cost of Electricity per kWh <sup>2</sup>	Domestic rates (\$US 0.31-0.33)
	Commercial rates (\$US 0.35-0.36)
	Hotel/industrial rates (\$US 0.361-0.369)
	Streetlighting (\$US 0.367)
Incentives for PV Systems	Exemptions from import duties (and Value Added Tax (VAT) as of August 2023
Incentives for Electric and Hybrid Vehicles	Import duties at 5%
Value of Diesel imports (2020) <sup>3</sup>	\$66,119,532.64 EC
Total Gasoline Sold (2019)	13,844,999 (imperial gallons)

1 LUCELEC, Reliability in Disruption, 2020 Annual Report

2 July 2023 rates following a fuel surcharge adjustment

3 Data obtained from Saint Lucia's CCREEE 2021 Energy Report Card

## ANNEX 2: FOSSIL FUEL CONSUMPTION IN SAINT LUCIA, BY SECTOR (2018)

(in thousand barrels of oil equivalent)

Sector	Gasoline (unleaded)	Aviation Gasoline	Diesel Oil	Jet Fuel	Kerosene	LPG	Total Petroleum Products	Sector Share (%)
Transport								
Road Transport	388.2		178				566.2	37.7
International Aviation		14.5		205.9			220.4	14.7
Domestic Aviation		0.8		10.8			11.6	0.8
International Maritime Navigation			8				8	0.5
Domestic Maritime Navigation			8				8	0.5
Transport Subtotal	388.2	15.3	194	216.7			814.2	54.2
Electric Power Production			587.8				587.8	39.1
Agriculture			14.6				14.6	1.0
Manufacturing	0.9		16.4		4.8		22.1	1.5
Commercial						13.72	13.72	0.9
Residential						50.57	50.57	3.4
All Sectors	777.3	30.6	1006.8	433.4	4.8	64.29	1502.99	100.0

Source: Saint Lucia's Energy Balance (2000–2018).

# ENDNOTES

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- 3 Mercados-Aries International, "Technical Assistance Updating the National Energy Policy for Saint Lucia," June 14, 2022, page 11, Figure 4.
- 4 [Statista, Change in OPEC Crude Oil Prices from 1960 to 2023. https://www.statista.com/statistics/262858/change-in-opec-crude-oil-prices-since-1960/](https://www.statista.com/statistics/262858/change-in-opec-crude-oil-prices-since-1960/)
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**Government of Saint Lucia**