

2023 ENERGY REPORT CARD STAKITIS & NEVIS





# CREEE CARIBBEAN CENTRE FOR RENEWABLE ENERGY & ENERGY EFFICIENCY



#### Introduction

This is the Energy Report Card (ERC) for 2023 for St. Kitts and Nevis

The ERC provides an overview of the energy sector performance, highlighting the following areas:

- Installed Conventional and Renewable Power Generation Capacity
- Annual Electricity Generation, from Conventional and Renewable Plants
- Other Electricity Sector Metrics, such as Losses, Consumption, and Tariffs
- Renewable Energy Targets
- Renewable Energy Resource Potential

The ERC also includes sectoral data and information on policies and regulations; workforce; training and capacity building; and related areas.

The data and information that are available in the ERC were mostly provided by the government ministries, agencies, and departments, that have responsibility for statistics and planning, in general, and the energy sector and electricity subsector including the electric utilities, in particular. The data and information collected was supplemented by desk-based research and, in instances, information was generated from calculations and analyses that were performed by the CCREEE.

#### **Quality Assurance**

The collection and treatment of data and information that is produced for the ERC is consistent with the International Recommendations for Energy Statistics (IRES), which provides a comprehensive methodological framework for the collection, compilation, and dissemination of energy statistics in all countries irrespective of the level of development of their statistical system. The ERC is produced in accordance with these performance standards that seek, as far as is possible, to ensure the quality (i.e., objectivity, utility, and integrity) of data and information that it disseminates to the public.

The CCREEE strives for transparency on the information and methods that are used within the production of the ERC, with a view to improve understanding on how the information should be treated and to facilitate reproducibility of the information. Nevertheless, the Centre recognizes that quality may be limited by the nature and source of the data and information disseminated.

#### **Disclaimer**

The ERC includes data and information that is contained in a variety of public sources and, though every effort is made to validate the accuracy and validity of the contents, reliance on the information herein is strictly at the user's risk.

#### **Correction of Errors**

If a substantive error is detected after the ERC is disseminated, the CCREEE will make correction and issue an errata notice, or other notification as appropriate. Also, the information contained within the ERC may be revised, after initial dissemination to reflect more complete information or other significant changes in the underlying data. The ERC may, from time to time, include information that is preliminary and is expected to be revised, or information that is revised from previously disseminated versions. In such instances, those cases are clearly noted.

#### **Requests for Correction**

The CCREEE has established administrative mechanisms to allow persons to seek and obtain, where appropriate, legitimate correction(s) to information maintained and disseminated through the ERC. Any request for corrections should be sent to: <a href="maintained-angle-eng-specific black-noise-eng-specific black-noise-eng-

#### **Acknowledgements**

The CCREEE acknowledges the contributions of the Ministry of Ministry of Public Infrastructure, Energy, Utilities, & Domestic Transport, St. Kitts and Nevis, and thanks Mr. Denasio Frank Energy Officer, in the Energy Unit of the Ministry, for his supervision of the intern, Stewart Mangan who supported the preparation of the ERC.





# **Energy Sector Summary**

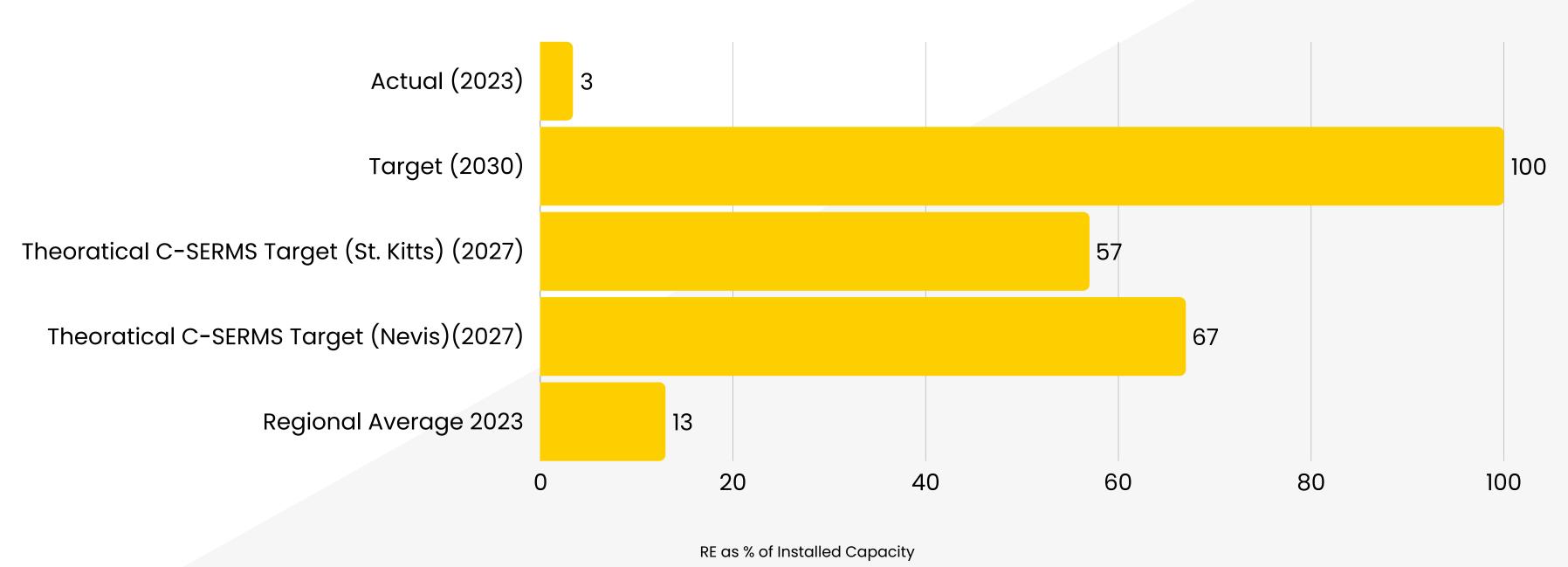
Population (Estimation)	51,320 [1]
GDP (USD)	\$ 1,065,663,392 [1]
GDP (USD) Per Capita	\$ 20,765.07 [1]
Gross National Income (GNI) Per Capita (USD)	\$ 32,540 [2]
Debt as % of GDP	60.71% [3]
Human Development Index	0.838 [4]
National Development Plan/Overall Country Development Strategy	St. Kitts and Nevis National Development Planning Framework 2023-2037 <sup>1</sup>
National Energy Policy	St. Kitts and Nevis Revised National Energy Policy (2014) [5]
Renewable Energy (RE) Policy	None
Renewable Energy Target	100% RE based generation of electricity by 2030 [6]
Energy Efficiency Target	None
Total Installed Conventional Capacity (MW)	76 MW [9] [10]
Total Installed RE (MW)	2.7 MW [9] [10]
Electricity System Losses (%)	4.1% [9] [10]

Energy Use (kWh) Per Capita	2,865.51 kWh
National Repository for Energy Data	None
Energy Performance Standards/Appliance Labelling	CARICOM Regional Energy Efficiency Building Code (CREEBC) [11]
Climate Change Policy	St. Kitts and Nevis National Climate Change Policy [7] The National Climate Change Adaptation Strategy for St. Christopher and Nevis (2018) [8]
Nationally Determined (NDC) Summary [9]	<ul> <li>Transition to 100% renewable energy in power generation*</li> <li>Improve efficiency in transmission and distribution of electricity</li> <li>Electrification of 2% of the total vehicles</li> <li>Development of EV infrastructure</li> <li>*35 MW of renewable energy proposed to be sourced from a solar farm that will be constructed through private capital, beyond which, all other interventions are conditional.</li> </ul>





#### Renewable Energy Capacity Against Targets



The information presented reflects the most recent year—2022—for which complete and verified energy data are available.





#### Government Ministries, Departments and Agencies

Ministry of Public Infrastructure, Energy and Utilities, Domestic Transport [12]

- Energy Unit [13]
- Transport Board

Ministry of Sustainable Development

• Department of Statistics [15]

Ministry of Environment, Climate Action and Constituency Empowerment [14]

- Department Environment
- Department Climate Action [13]

Ministry of Tourism, Civil Aviation and international Transport [18]

• Department of Maritime Affairs

# **Key Energy Stakeholders**

#### **Independent Power Producer**

None

#### **Electricity Regulator**

None

#### **Electric Utility**

St. Kitts Electricity Company Limited (SKELEC) [22]

Nevis Electricity Company Limited (NEVLEC) [23]

#### **Fuel Importers & Suppliers**

Delta Petroleum [19]

Sol EC Limited (St. Kitts and Nevis) [18]





# Policy, Legal and Regulatory (PLR) Framework

	Year	Status
Energy Policy [5]	2014	In Force
Energy Action Plan		Not Established
RE Target [6]	2021	In Force
EE Target		Not Established
Electricity Regulator		Not Established
Net Billing/Net Metering		Not Established
Interconnection Policy/Standards [22] <sup>2</sup>	2018	In Force
Feed-In-Tariff		Draft in Progress <sup>3</sup>
Integrated Resource and Resilience Plan		Draft in Progress
RE/EE Act		Not Established

<sup>2 -</sup> The document is not publicly available.

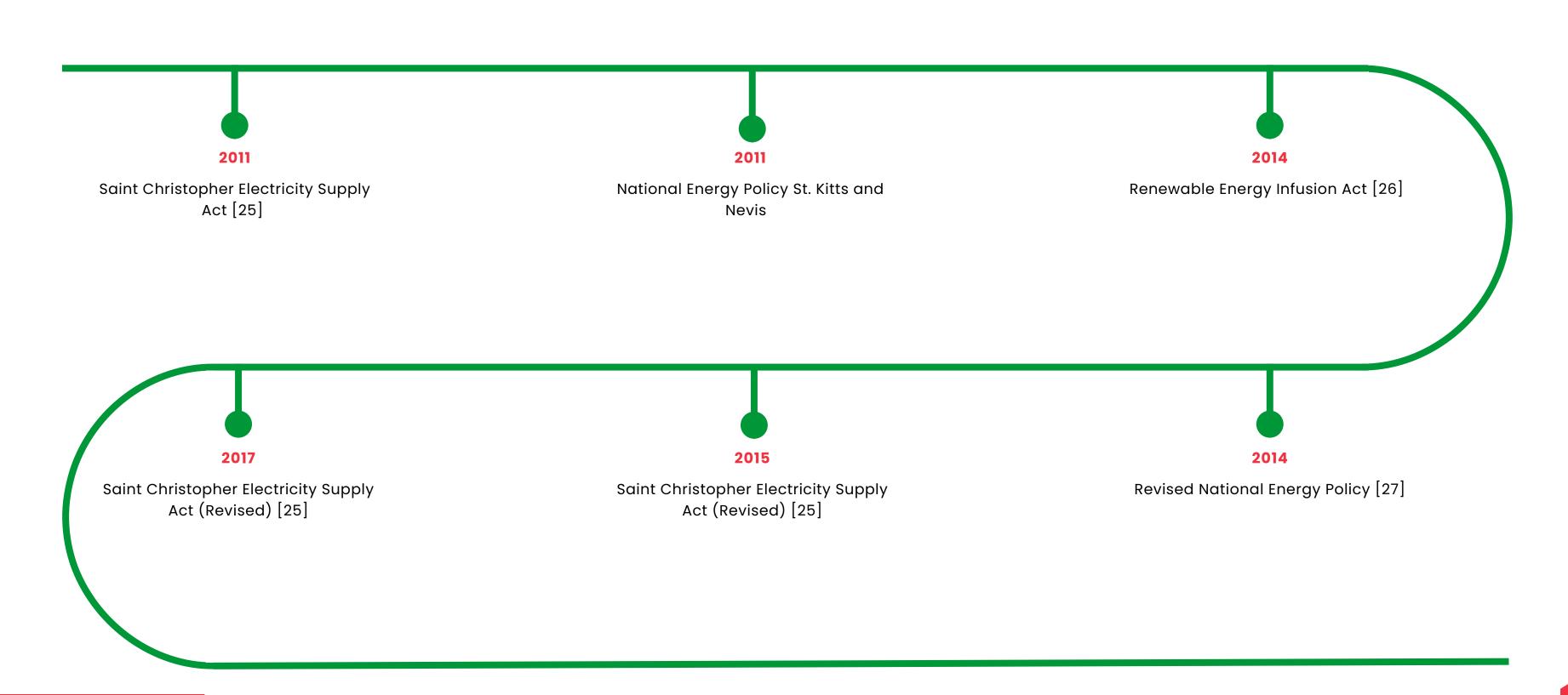
<sup>3 -</sup> A draft was published in 2024 [23].





### Policy, Legal and Regulatory (PLR) Framework

Key Achievements: PLR Framework Timeline for Electricity Sub-Sector







# Policy, Legal and Regulatory (PLR) Framework Policies Relevant to the Energy Sector

Year	Name	Status	Description
2003	Medium Term Economic Strategy 2003 - 2005	In Force	
2014	National Energy Policy [5]	In Force	The Policy outlines the framework for the country to become energy secured and urges the diversification of the energy mix. The use of renewable energy to including solar, geothermal and waste-to-energy is encouraged as the country makes a transition in the energy sector. The Policy addresses the electricity sector and the transportation sector in the transition.
2017	Integrated Resource Plan [28]	In Force	The Plan evaluates supply resource options in response to demand growth on a comprehensive basis and provides an analysis of the options.
2021	Integrated Resource and Resilience Plan	Draft	





# Policy, Legal and Regulatory (PLR) Framework

#### Legislation Relevant to the Energy Sector

Year	Name	Status	Description
1947	Public Utilities Commission Ordinance (Revised 2009)[32]	In Force	An Ordinance to make provision for the establishment, functions and procedures of a Public Utilities Commission for Nevis.
1949	Nevis Electricity Ordinance [31]	In Force	This Act allows for the provision of the supply of electricity on the island of Nevis by a public supplier and details the regulations and process to obtain the supply of electricity.
1995	Nevis Geothermal Resources Development Ordinance [31] (Revised 2009)	In Force	The Ordinance allows for the survey, exploration, drilling, productions and use of geothermal resources, in which entities may apply for a license. Any benefits gained from geothermal resources would be owned be the Government of St. Kitts and Nevis.
1963	St Christopher Electricity Supply Act (Amended 2015)[29]	In Force	Provides for the establishment of the legal framework ruling the electricity sector, to make provisions for the promotion of renewable energy sources and related matters.

#### Renewable Energy and Energy Efficiency Fiscal Incentives

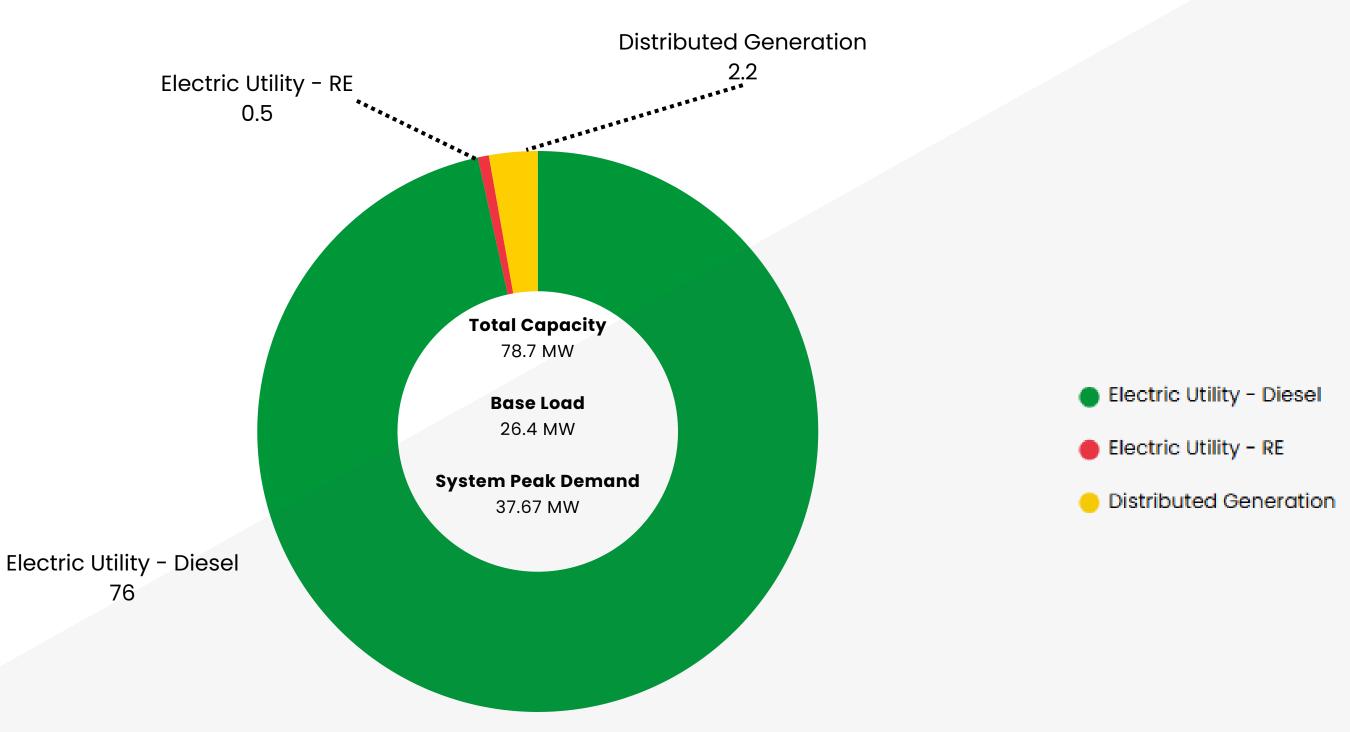
Year	Name	Status	Description
2012	Alternative Energy Equipment Incentive[33]	In Force	Under the National Energy Policy, selected alternative energy equipment, including solar panels, hydrogen fuel cells, and low-energy lighting, has been approved for import duty and Customs Service Charge (CSC) exemptions.





## Electricity and Energy Efficiency [9] [10] [11]

Installed Capacity (MW)



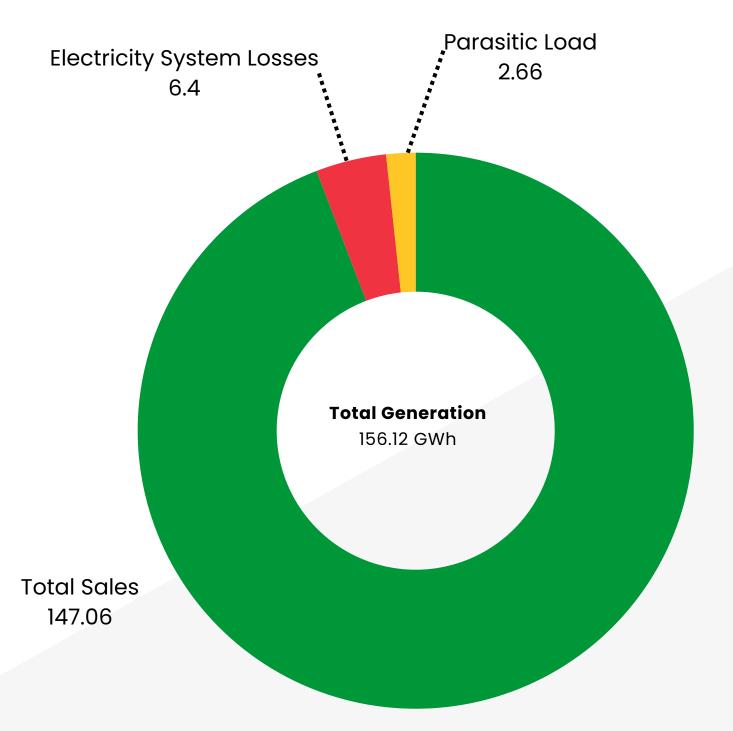
The information presented reflects the most recent year-2022-for which complete and verified energy data are available.

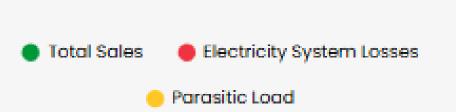




# Electricity and Energy Efficiency [9] [10] [11]

Energy Generation (GWh)

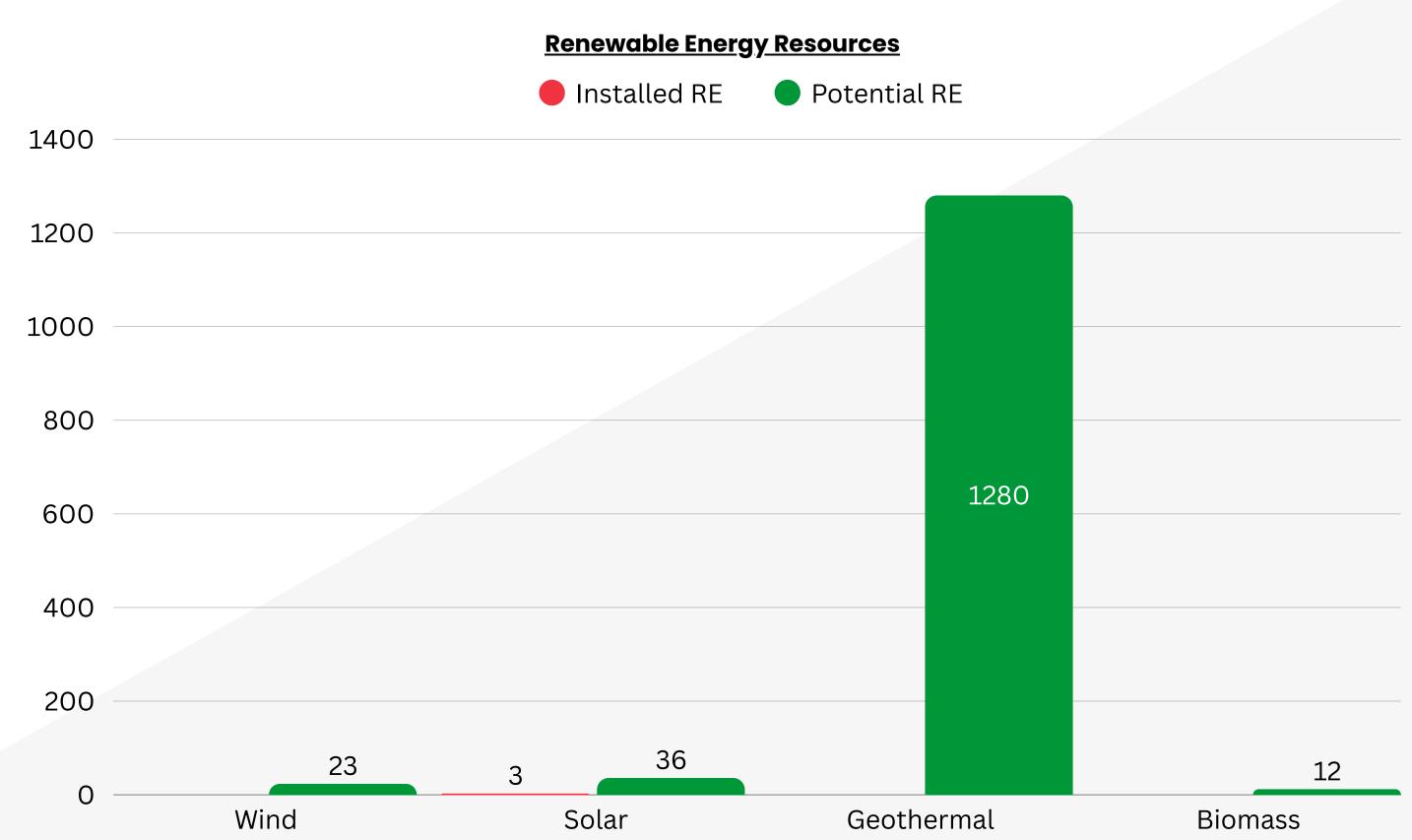








## Electricity and Energy Efficiency [9] [10] [11]







#### St. Kitts Electricity Company (SKELEC) [34]

Rate Class	Monthly Consumption/Demand	Tariff (US\$/kWh)	Tariff (US\$/kVA)
General	Application for all services	0.33 (per unit)	
Services	and temporary supplies	US\$ 4.07 (Minimum	
	First 50 units	total)	
	Next 100 units	US\$ 0.24	
Residenti al	All units exceeding 150 units	US\$ 0.25	
αi	Demand Charge - For 15 Amps of fuse rating or part thereof of fuse protecting		US\$ 4.81
	First 50 units	US\$ 0.29	)
Industrial	Next 75 units	US\$ 0.28	3
and	Next 125 units	US\$0.26	
Commerci	All units exceeding 250 units	US\$ 0.24	<u> </u>
	Demand Charge - Every kVA of demand or part thereof		US\$ 5.55



#### Nevis Electricity Company (NEVLEC) [35]

Rate Class	Monthly Consumption/Demand	Tariff (US\$/kWh)	Tariff (US\$/kVA)
	First 50 units	US\$ 0.19	
	Next 75 units	US\$ 0.18	
	Above 125 units	US\$ 0.17	
Residentia	Standing Charge		
1	Consumption up to 120 units	US\$ 2.66	
	Consumption above 120 units up to 250 units	US\$ 4.44	
	Consumption above 250	US\$ 6.66	
	Demand Rate = Ener	gy Charge + Standing Ch	narge
	Demand Charge (Energy Charge)		US\$ 0.21
	First 50 units		US\$ 0.19
Industrial and	Next 75 units		US\$ 0.18
Commerci	Next 125 x kVA units		US\$ 0.17
al	For the remaining units		US\$ 0.16
	Standing Charge (based on c	cost per kVA = \$4.88) whe	ere 1 kVA = 250
	NOTE: Commercial r	ates include a fuel surch	arge







#### **Projects in the Pipeline**

#### **Programmes**

Programme Name	Executing Agencies	Implementing Partner	Funding Awards	Funding Source
SKN100: Achieving a Rapid Decarbonization of the Energy Sector in Saint Kitts and Nevis [36]	Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE)	United Nations Environment Programme	\$11,120,000 - Co-financing \$3,318,995 - GEF Project Grant \$ 14,438,995 - Total	GEF Trust Fund

Energy Efficiency Projects
There were no Energy Efficiency Projects reported for 2023.

Renewable Energy Projects

There were no Renewable Energy Projects reported for 2023.

Renewable Energy Source	Project Name	System Size (kW)	Implementing Partner	Total Estimated Cost	Funding Source
Solar Photo-Voltaic	Leclanche Solar Farm [36]	35,000 with 44 MWh storage	Leclanche S.A.	\$ 70,000,000	Equity
Geothermal	St. Kitts Nevis Geothermal Energy Project (SKNICE)[36]	50,000	Department of Environment	\$ 505,000,000	Caribbean Development Bank Saudi Fund for Development









#### **Associate Degree**

- Environmental Science 5
- Architectural Design Technology 6



<sup>5 -</sup> Environmental Science is a Caribbean Advanced Proficiency Examinations (CAPE) subject offered. The CAPE Associate Degree is awarded for the completion of ten (10) CAPE Units. 6 - This programme includes a course on Renewable Energy





# Climate Change Framework

Climate Change Policy	St. Kitts and Nevis National Climate Change Policy [8]
Climate Change Policy	The National Climate Change Adaptation Strategy for Saint Christopher and Nevis [9]
Nationally Determined Contributions Summary [6]	<ul> <li>Transition to 100% renewable energy in power generation*</li> <li>Improve efficiency in transmission and distribution of electricity.</li> <li>Electrification of 2% of the total vehicle</li> <li>Development of EV infrastructure</li> <li>*35 MW of renewable energy proposed to be sourced from a solar farm that will be constructed through private capital, beyond which, all other interventions are conditional.</li> </ul>
Green House Reduction Target	St. Kitts and Nevis pledges a 61% total CO2 emissions reduction against a 2010 base year. [6]
Priority Sectors for NDC	All sectors, with a focus on the energy sector (power generation and transportation) [6]
National Communications (NC) to the	St. Kitts and Nevis' Initial National Communication on Climate Change (2001) [38]
UNFCCC	The Second National Communications Report of St. Christopher and Nevis under the United Nations Framework Convention on Climate Change (2015) [39]







#### **Climate Change Framework**

#### Summary of St. Kitts and Nevis' GHG Emissions and Removals (Gg) for 2018 [39]

	Emissions (Gg CO2 Equivalents)			
Categories	Net CO2	CH4	N2O	NOX
Energy	648.75	0.0260	0.005	0
Industrial Processes and Product Use	3.14	0	0.002	6.051
Agriculture, Forestry, and Other Land Use	191.53	0.6290	0	0
Waste	0.83	0.8624	0.042	0





#### References

- [1] Department of Statistics, "Personal Communications," Corniel Williams, Basseterre, 2024.
- [2] World Bank Data, "GNI per capita, Atlas method (current US\$)," 2023. [Online]. Available: https://data.worldbank.org/indicator/NY.GNP.PCAP.CD?locations=BB. [Accessed 19 03 2025].
- [3] Eastern Caribbean Central Bank, "Debt to Gross Domestic Product," 2024. [Online]. Available: www.eccb-centralbank.org. https://www.eccb-centralbank.org/statistics-category/public-sector-debt/debt-to-gross-domestic-product. [Accessed 10 July 2024].
- [4] UNDP, "Human Development Index," United Nations Development Programme, July 2024. [Online]. Available: https://hdr.undp.org/data-center/human-development-index#/indicies/HDI. [Accessed August 2024].
- [5] Government of St. Kitts and Nevis, "Revised National Energy Policy, 2014," October 2022. [Online]. Available: https://energyunit.gov.kn/wp-content/uploads/2022/10/Revised-National-Energy-Policy.pdf. [Accessed June 2024].
- [6] Government of St. Kitts and Nevis, "St. Kitts and Nevis Revised NDC," Jun 2022. [Online]. Available: https://unfccc.int/sites/default/files/NDC/2022-06/St.%20Kitts%20and%20Nevis%20Revised%20NDC\_Updated.pdf. [Accessed Jun 2024].
- [7] Government of St. Kitts and Nevis, "St. Kitts and Nevis National Climate Change Policy," Department of Environment-Ministry of Agriculture, Marine Resources, Cooperatives, Environment and Human Settlement, Basseterre, St. Kitts and Nevis, 2017.
- [8] Government of St. Kitts and Nevis, "National Climate Change Adaptation Strategy," 01 October 2018. [Online]. Available: https://faolex.fao.org/docs/pdf/stk215045.pdf . [Accessed 16 August 2024].
- [9] St. Kitts Electricity Company, Electricity Data, Basseterre, St. Kitts and Nevis: Private Communication, 2023.
- [10] Nevis Electricity Company Limited, Electricity Data, Basseterre, St. Kitts and Nevis: Private Communication, 2023.
- [11] A. Ochs , M. Konold, K. Auth, E. Musolino and P. Killeen, "Caribbean Sustainnable Energy Roadmap and Strategy (C-SERMS) Baseline Report and Assessment," Worldwatch Intitue, Washington, D.C., 2015.
- [12] Energy Unit, "Stakeholders and Contacts," Government of St.Kitts and Nevis, 2024. [Online]. Available: https://www.gov.kn/ministry-of-public-infrastructure-energy-and-utilities-domestic-transport-information-communication-and-technology-and-posts/. [Accessed 10 June 2024].
- [13] Energy Unit, "Ministry of Sustainable Development, Environment, Climate Action and Constituency Empowerment," Government of St. Kitts & Nevis, 2024. [Online]. Available: https://www.gov.kn/ministry-of-sustainable-development-environment-climate-action-and-constituency-empowerment/. [Accessed 10 June 2024].
- [14] Energy Unit, "Stakeholders and Contacts," Government of St.Kitts and Nevis, 2024. [Online]. Available: https://www.gov.kn/ministry-of-sustainable-development-environment-climate-action-and-constituency-empowerment/. [Accessed 10 June 2024].
- [15] Energy Unit, "Department of Statistics," Government of St.Kitts and Nevis, 2024. [Online]. Available: https://www.stats.gov.kn. [Accessed 10 June 2024].
- [16] Energy Unit, "Ministry of tourism, labour, civil aviation and urban development," Government of St. Kitts and Nevis, 2024. [Online]. Available: https://www.gov.kn/ministry-of-tourism-labour-civil-aviation-and-urban-development/. [Accessed 10 June 2024].
- [17] Energy Unit, Stakeholders and Contacts, Basseterre : Government of St. Kitts and Nevis , 2024.
- [18] Energy Unit, "Stakeholders and Contacts," Sol Petroleum, 2024. [Online]. Available: https://solpetroleum.com/about-us/our-network/st-kitts-nevis/. [Accessed 10 June 2024].
- [19] Energy Unit, "Stakeholders and Contacts," 2024. [Online]. Available: https://www.deltacaribbean.com/stkitts/. [Accessed 10 June 2024].
- [20] Energy Unit, "St. Kitts Electricity Company Ltd (SKELEC)," 2024. [Online]. Available: https://www.skelec.kn. [Accessed 10 June 2024].
- [21] Energy Unit;, "Nevis Electricity Company Ltd (NEVLEC)," 2024. [Online]. Available: https://www.nevlec.com. [Accessed 11 June 2024].
- [23] Government of St. Kitts and Nevis, "Draft Small-scale Renewable Energy Regulation," July 2024. [Online]. Available: https://energyunit.gov.kn/wp-content/uploads/2024/07/Draft-St.-Kitts-Distributed-Generation-Regulatory-Framework.pdf. [Accessed 16 August 2024].
- [24] Energy Unit, "Acts Energy Unit," Government of St. Kitts and Nevis, 2024. [Online]. Available: https://energyunit.gov.kn/publications/. [Accessed 16 August 2024].
- [25] Government of St. Kitts and Nevis, "Saint Christopher Electricity Supply Act (Revised)," 2017. [Online]. Available:
- https://aglcskn.info/documents/Act17TOC/Ch%2016.01%20Saint%20Christopher%20Electricity%20Supply%20Act.pdf. [Accessed 30 June 2022].







#### References

- [26] B. Browne, Interviewee, Energy Unit, Ministry of Infrastructure, Post, Urban Development and Transport. [Interview]. 10 June 2022.
- [27] Government of St. Kitts and Nevis, "Revised National Energy Policy," July 2014. [Online]. Available: https://energyunit.gov.kn/wp-content/uploads/2022/10/Revised-National-Energy-Policy.pdf. [Accessed 15 August 2023].
- [28] Nevis Electricity Company Limited, "Integrated Resource Plan for St. Kitts and Nevis Public Stakeholder Sessions," Jan 2017. [Online]. Available: http://www.nevlec.com/pdf/SKN\_IRP\_PublicStakeholderSession\_20170126.pdf.. [Accessed 15 April 2024].
- [29] Government of St. Kitts and Nevis, "Saint Christopher Electricity Supply Act (Revised),"," January 2016. [Online]. Available: https://aglcskn.info/documents/Act17TOC/Ch%2016.01%20Saint%20Christopher%20Electricity%20Supply%20Act.pdf.. [Accessed 30 June 2022].
- [30] Government of St. Kitts and Nevis, "Nevis Electricity Ordinance," 31 December 2009. [Online]. Available: https://energyunit.gov.kn/wp-content/uploads/2024/03/Ch-05\_02N-Electricity-Ord1.pdf... [Accessed 15 April 2024].
- [31] Government of St. Kitts and Nevis, "Nevis Geothermal Resources Development Ordinance," 31 December 2009. [Online]. Available: https://energyunit.gov.kn/wp-content/uploads/2022/10/Nevis-Geothermal-Resources-Development-Ordinance.pdf.. [Accessed 15 April 2024].
- [32] Government of St. Kitts and Nevis, "Public Utilities Commission Ordinance," 31 December 2009. [Online]. Available: https://energyunit.gov.kn/wp-content/uploads/2024/03/Ch-05\_01N-Public-Utilities-Commission-Ordl.pdf.. [Accessed 15 April 2024].
- [33] Government of St. Kitts and Nevis, "Documents Energy Unit," n.d. [Online]. Available: https://energyunit.gov.kn/documents/. [Accessed 13 June 2024].
- [34] St. Kitts Electricity Department, "Electricity Tariff Effective January 2011 Schedule," January 2011. [Online]. Available: https://energyunit.gov.kn/wp-content/uploads/2023/05/Electricity-Tariff-Structure-1-1.pdf. [Accessed 18 March 2024].
- [35] NEVLEC Nevis Electricity Company Ltd, Electricity and Energy Efficiency Data Collection, St. Kitts and Nevis: Private Communication, 2024.
- [36] Energy Unit, Stakeholder Data Collection, St. Kitts and Nevis: Ministry of Public Infrastructure et al, 2024.
- [37] M. Rowtham, Clarent Fitzroy Bryant College Courses, 2024.
- [38] Saint Kitts and Nevis Initial National Communication, "United Nations Framework Convention on Climate Change (UNFCCC)," 1994. [Online]. Available: https://unfccc.int/resource/docs/natc/kitncl.pdf. [Accessed 16 Aug 2024].
- [39] United Nations Framework Convention on Climate Change (UNFCCC), "Saint Kitts and Nevis. National Communication (NC). NC 2.," 2015. [Online]. Available: https://unfccc.int/documents/64787. [Accessed 18 July 2024].