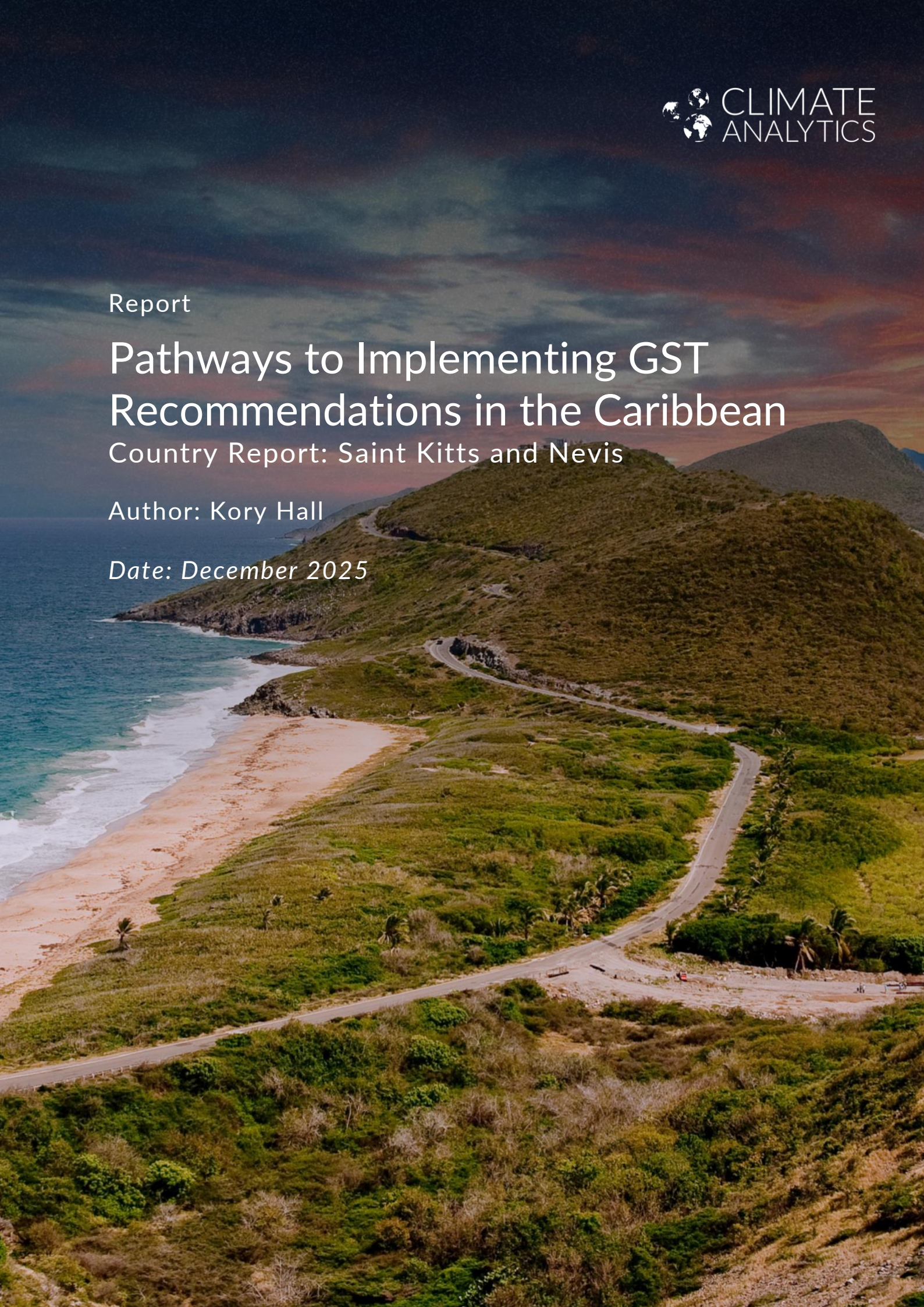

CLIMATE ANALYTICS

Report

Pathways to Implementing GST Recommendations in the Caribbean

Country Report: Saint Kitts and Nevis

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Introduction

This supplementary country report is developed to highlight the current endeavours of Caribbean SIDS on the road to addressing the recommendations of Paragraph 28 of the Global Stocktake, and staying within the 1.5°C global warming limit. It also will assess progress to date and identify areas to possibly further accelerate the achievement of targets in line with the findings of the regional analysis.

Recalling that the recommendations from the main report are:

1. **Strengthen Data and Monitoring Systems**

Expand the scope and reach of the joint CARICOM and OLACDE Energy Information System (sieCARICOM), to cover additional CARICOM member states thus creating a standardized data repository to facilitate improved analysis and decision making.

2. **Streamline Regulatory Frameworks**

Expand the remit of C-SERMS to review the legislation covering the generation of electricity in each territory, thus developing customized yet harmonious legal frameworks and permitting processes that promote more efficient inter-agency cooperation (regionally & nationally). It requires deliberate actions by governments to remove barriers to the development of RE projects the progression of the energy transition.

3. **Support Capacity Building**

Develop a regional skill improvement program that improves internal negotiating capabilities and development fundamentals. By investing in technical training and institutional capacity building for Caribbean nationals, countries will mitigate the risk of increased project costs and low investor confidence in RE projects.

4. **Promote Regional Collaboration**

Expand the remit of C-SERMS to advance the development of shared procurement mechanisms, and regional project development processes in the advancement of energy transition targets.

This country report focuses on Saint Kitts and Nevis and explores the work done to advance the expansion of renewable energy generation and move away from hydrocarbon-based operations. Based on the nation's progress to date, this report identifies policies and activities that might be considered best practice and can be replicated in other Caribbean countries, whilst also identifying gaps that other countries should address if the gap exists in their local context. For the rest of the region, Saint Kitts and Nevis demonstrates progressive thinking in the following areas, which offer opportunities for shared regional improvements:

i. For countries with older electricity distribution grids, there are severe operational risks associated with the introduction of intermittent RE sources to the generation matrix. In scenarios where funding for smart grid upgrades is not readily available, the application of Battery Energy Storage Systems (BESS) to provide operational stability is a recommended solution. These systems can store excess energy during peak generating conditions and allows a utility a window to respond to rapid changes in weather conditions without causing supply losses to customers.

ii. Classified as a medium to high income earner due to its tourism sector, Saint Kitts and Nevis' challenges in accessing concessionary funding has resulted in the development of a hybrid financing structure that limits risks to the country while still giving confidence to lenders. This blended program creates a template for other Caribbean nations to explore as they explore avenues to fund renewable energy projects.

By continuing the current trajectory, addressing the following observations/recommendations will further cement Saint Kitts and Nevis's role as a regional leader in progressing the energy transition:

i. **It is recommended that Saint Kitts and Nevis establishes an independent regulator to oversee the evolution of the country's electricity sector.** Regulators can be empowered to develop renewable portfolio standards (RPS) and establish procurement processes that create opportunities for private investment in the development of renewable generation projects. This move allows the resources of the national electricity utilities to be focused on operational implementation and the required system upgrades, while still ensuring that customer protections are maintained and government mandates achieved.

ii. **The National Energy Policy (last updated 2014) should be revised and updated to reflect current development in RE technologies as well as NDC targets.** This action enshrines the achievement of transition goals into future policy decisions. In the Caribbean context, a NEP also acts as a risk mitigation mechanism as it guides the removal of roadblocks to project development and investment.

Background – Saint Kitts and Nevis

The population of Saint Kitts and Nevis, a twin-island nation in the Eastern Caribbean, is approximately 46,758 people[1]. The country's economy is primarily driven by tourism, agriculture, and the Citizenship by Investment (CBI) program. In 2024, the International Monetary Fund (IMF) estimated the nation's Gross Domestic Product (GDP) at $1.13 billion, with a projected growth rate of 4.7% for that year[2].

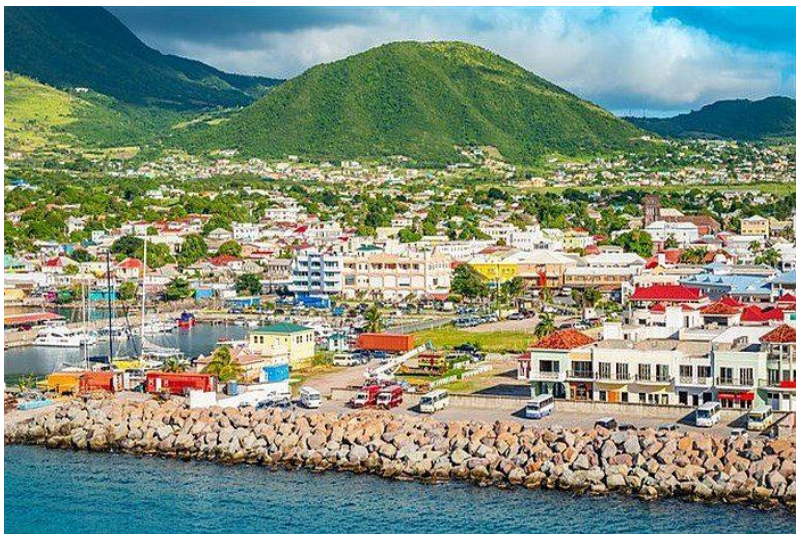

Figure 1: Basseterre, Saint Kitts. Source: Caribbean News Global

Saint Kitts and Nevis' energy sector is characterized by a high dependence on imported fossil fuels, leading to susceptibility to volatile market fluctuations and elevated electricity costs to end consumers[i]. In line with its Nationally Determined Contribution (NDCs) under the Paris Agreement, the country has been exploring renewable energy options, including solar and geothermal, to diversify its energy mix and enhance sustainability. The nation is one of only five Caribbean SIDS to set an ambitious target of 100% electricity generation from Renewable Energy by 2030[ii], which if achieved will satisfy the recommendation of Paragraph 28 of the Global Stocktake (GST).

[1] World Bank Data, https://data.worldbank.org/indicator/SP.POP.TOTL?locations=KN
[2] U.S. Department of State, https://www.state.gov/reports/2024-investment-climate-statements/saint-kitts-and-nevis/?utm

Figure 2: Nevis Peak, a potentially active volcano on the island of Nevis. Source Loop News

Looking ahead, Saint Kitts and Nevis aims to strengthen its economy through diversification and sustainable development, with a focus on renewable energy and infrastructure improvements to improve access to Affordable and Clean Energy under Sustainable Development Goal (SDG) 7[iiiiv]. These initiatives are expected to support economic growth and improve the country's resilience to global economic challenges.

Developing an enabling Regulatory Framework

Like St Lucia, Saint Kitts and Nevis has been in the process of developing a framework of policies and legal amendments targeted at improving access to and quality of energy supply to its citizens[v]. The framework can be viewed as having three basic pillars, they are.

- **Developing Strong Legal Instruments** – Legal amendments that address the need for grid infrastructure upgrades, advocating the development of Power Purchase Agreements and Public Sector Investment Programs (PSIPs).
- **Institutional Integration** – Aligning targets and policies within its borders (main government and Nevis), identifying synergies with the Organisation of Eastern Caribbean States (OECS), and communicating progress via C-SERMS/CCREEE.
- **SMART[3] Incentives** – Developing competitive pricing instruments, applications for solar in housing and water distribution, as well es encouraging private sector participation

In enacting these changes, the Government has actively taken the necessary steps to address some of the challenges and barriers faced by the region in implementing RE projects as identified in the main body of this report.

[3] Specific, Measurable, Achievable, Relevant, and Time-bound

Figure 3:Enabling policies enacted by the Government of Saint Kitts and Nevis

A review of the current framework and comparison to other territories that are actively pursuing their energy transition, identifies the following two key additional measures that can enhance the effectiveness of the island nation's efforts in developing net-zero pathways.

The first is establishing the role of a regulator, that will provide oversight and guidance as the interface between government policy, private sector investment, and consumer protection. Utility regulators often create the rules and supervisory mechanisms that create an alignment with national energy transition goals. Regulators have been observed implementing renewable portfolio standards (RPS), which are policies that require electricity suppliers to use a certain percentage of renewable energy sources by a specific date as well as feed-in tariffs (FITs) and auction based RE generation procurement mechanisms to incentivize renewable generation, as observed in Jamaica. This addresses an investment risk as it provides process predictability and transparency to private capital investors[vi].

Regulators also facilitate the development of modern grid distribution systems by developing policies that promote the addition of RE generation sources, smart grid monitoring system upgrades, Battery Energy Storage Systems (BESS), and at the consumer level community micro grids and rooftop solar systems[vii].

Secondly, in Saint Kitts and Nevis' framework, there is an opportunity for an updated National Energy Policy (NEP) (last updated from 2014), which if developed and implemented could offer additional notable benefits to the achievement of transition goals. Energy Action Plans are responsible for documenting the long-term vision for renewable energy penetration levels, efficiency gains, or greenhouse gas reduction goals. They are implemented to avoid the risks related to fragmented implementation, uncoordinated and reactive policy development and execution[viii], however they must be reviewed and revised regularly. Additionally, the Renewable energy policy should be progressed from draft stage to support the efforts of the overall NEP.

Progressing to net-zero

Current electricity generation sources

In the release of the CCREEE Energy Report Cards (ERC) which detailed renewable energy (RE) statistics for the region up to End of Year 2022, Saint Kitts and Nevis had a total of 2.7MW of RE capacity installed. This included 0.5MW of Utility Generation and 2.2MW of Distributed Generation. This represents just 3% of its total installed capacity of 78.7MW. Most of the country's electricity is produced from a single cycle diesel fuelled generation portfolio comprising:

- 15 diesel sets in Saint Kitts managed by The Saint Kitts Electricity Company Limited (SKELEC),

Figure 4: Needsmust Power Station, Saint Kitts. Source: SKELEC

- 7 diesel sets in Nevis managed by the Nevis Electricity Company Limited (NEVLEC).

Figure 5: Prospect Power Station, Nevis. Source: The Saint Kitts Nevis Observer

Combined, these satisfy the islands' base demand load of 26.4MW and peak demand load of 37.67MW.

Proposed capacity additions

Scheduled for completion in 2025, SKELEC is anticipating the start-up of a newly constructed 35.7 MW utility scale solar plant and an associated 43.6 MWh lithium-ion battery energy storage system (BESS). As recommended in the main report, **this newly installed capacity will not add to the existing generation matrix but will replace existing diesel generation, leading to the elimination of an estimated 4 million gallons of diesel fuel per annum, and an associated 45,300 metric tons of CO_2 emissions[ix]. This single installation will increase the country's share of RE generation to approximately 49% from just 3% in 2022, satisfying the recommendation of the GST.**

Also announced by the Government of Saint Kitts and Nevis is the intention to explore the possibility of 100% renewable energy for the country, via a project with the name 'SKN-100'[x]. Funded by the Global Environment Facility (GEF), it is the project's goal to accelerate the country's transition to 100% renewable energy as well as 100% energy efficiency in public buildings by 2028. Achieving this target will be heavily supported by the Nevis Island Administration's (NIA) proposed geothermal project that targets 10MW of base load generation from Nevis' strong geothermal potential. According to CCREEE's ERC, Saint Kitts and Nevis has a geothermal potential in the range of approximately 1280MW, making a 10MW installation a small window into what is possible for the island. These estimates still require further assessment to determine true potential.

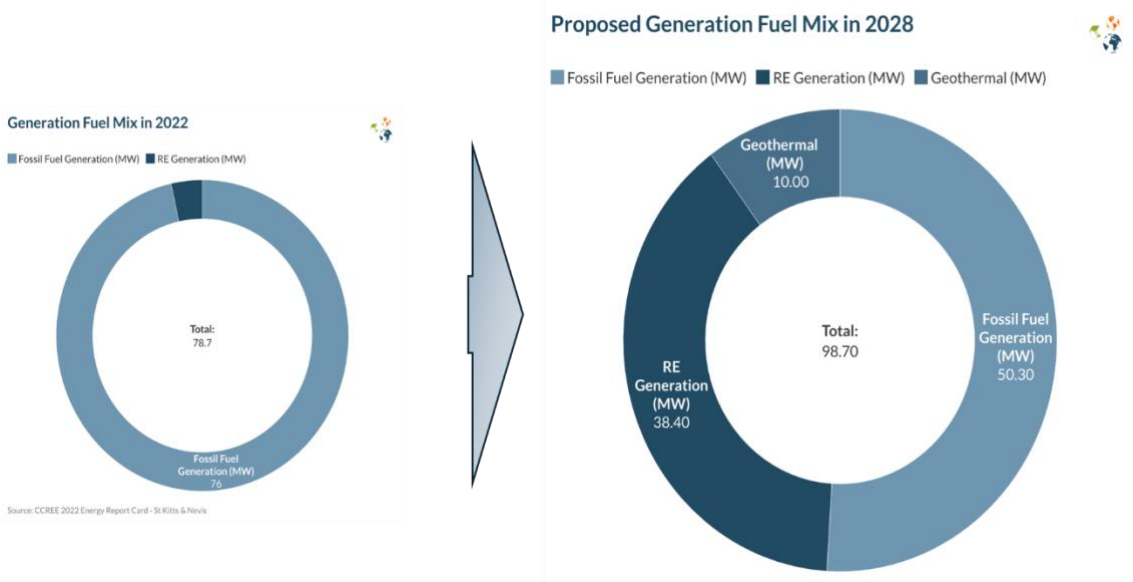

Figure 6: Saint Kitts and Nevis' short term energy transition plan shows at least 49% of generation will come from renewable sources by possibly as early as 2028.

Best practice in Integrated grid management and leveraging international climate finance

The announcement of SKN-100 displays a commitment to achieving the energy transition without the use of a hydrocarbon-based transition fuel by the Government of Saint Kitts and Nevis. In pursuit of this target, Saint Kitts and Nevis is employing two practices that are indicative of the type of deliberate action that other regional entities should consider exploring.

The decision that led to the establishment of Saint Kitts' solar facility, with an associated BESS installation, is an excellent example of best practice in grid management. Older grids, typically built for centralized, dispatchable generation sources, frequently lack sufficient flexibility to be effectively managed when intermittent energy sources are included in the matrix, presenting operational limitations for traditional grid operators[xi]. Battery storge has been identified as an interim measure that gives a utility the ability to effectively dispatch power without the limitation of the traditional intermittency associated with solar power[xii] By considering this option, Saint Kitts and Nevis is not limiting its ability to progress energy transition activities in the absence of a grid modernisation program. **For Nevis, the selection of geothermal for the provision of baseload is ideal, as the technology is one of the two renewable sources that can accommodate stable baseload supply[xiii].**

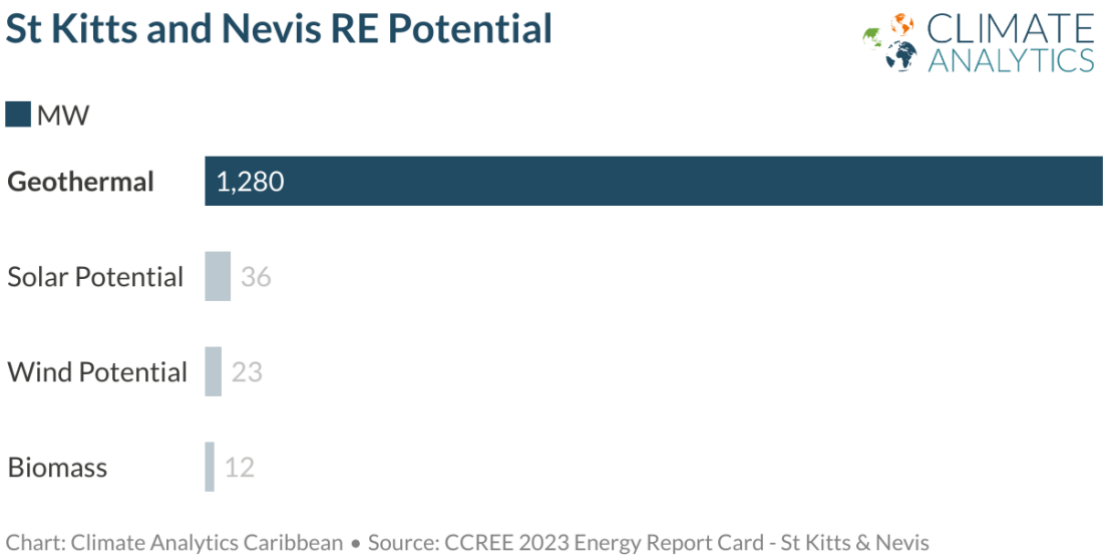

Figure 7: Saint Kitts and Nevis RE Potential.

There is a shared experience between Saint Kitts and Nevis and other Caribbean nations in the fact that due to their economic earning, they are not considered for concessionary funding to advance green energy projects, despite their vulnerability to climate change[xiv]. Overcoming this hurdle requires innovative measures to create accessible financing opportunities while lending agencies deliberate amending accessibility criteria to make avenues available to SIDS.

In exploring novel financial risk mitigation measures, Saint Kitts and Nevis is on its way to harnessing geothermal, a process that after years of obstacles, is overcoming challenges through cooperation and innovation. **Through the Caribbean Development Bank (CDB), Saint Kitts and Nevis accessed a "contingently recoverable grant facility," which will provide $17 million USD for drilling and technical support for the project. This risk-sharing mechanism is structured to treat funding as a concessionary loan if drilling succeeds, however if the drilling program proves unsuccessful, the facility becomes a grant, and in so doing reducing the financial risk exposure for the nation**[xv]. This represents the level of creative thinking that is required to progress projects through the development pipeline. As a result of this creative solution, Saint Kitts and Nevis officially received five (5) bids to conduct the production drilling exercise from a diverse group of operators. The project now aims to develop a 30MW of geothermal facility, commencing early 2026[xvi].

Promoting regional collaboration

The successful completion and commissioning of a 30MW geothermal plant on Nevis can single handedly create the pathway to 100% renewable energy for both islands. Expansion of the geothermal plant and the installation of a subsea cable to Saint Kitts will guarantee stable base load electricity supply with support from BESS assisted solar installations. The opportunity now presents itself for Nevis to support the energy transition targets of its neighbours Anguilla and Antigua & Barbuda.

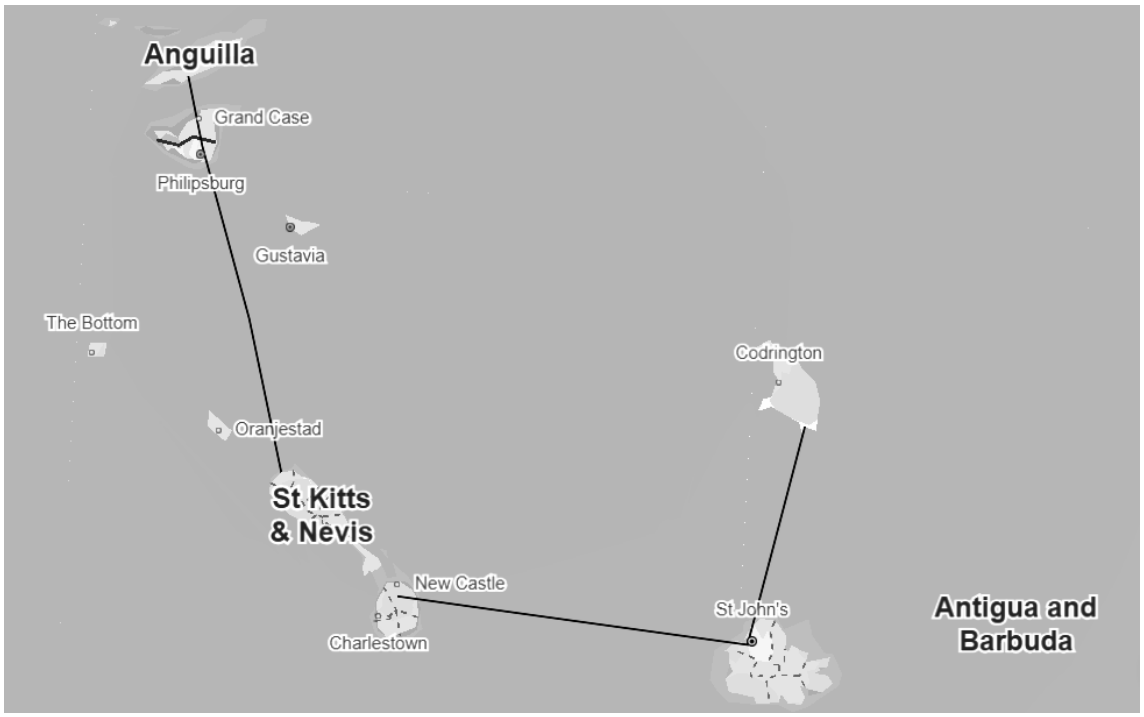

Figure 8: Possible inter-island electricity distribution network

Via subsea cables, the geothermal plant on Nevis could theoretically supply the baseload generating needs of the three countries, approximately 85MW with clean renewable power. This is not a simple undertaking and will require the implementation of supporting agreements and commercial structures to enhance the projects feasibility and profitability. Key agreements should include:

- **Joint Development Agreements** between Saint Kitts and Nevis, Anguilla and, Antigua and Barbuda – This agreement will define the roles and responsibilities of each partner country in the development of the project.
- **Power Purchase Agreements** that will govern the financial terms for the supply of power from Nevis to the partner nations
- Other associated Memorandums of Understanding.

Though the laying of subsea cables represents substantial cost, approximately US$2.5Million per kilometre[xvii], the pursuit of this endeavour and its potential success, will establish Saint Kitts and Nevis as a regional net exporter of clean energy. In this specific situation it is cost prohibitive, however it identifies the potential of collaboration in expanding the transition to clean energy sources within the region.

Conclusion

Saint Kitts and Nevis is positioning itself as a regional leader in the clean energy transition through a combination of bold commitments, innovative financing, and strategic infrastructure development. Through smart investments in solar and geothermal energy, supported by modern battery storage systems and forward-thinking policy frameworks, the country is not only charting a path to 100% renewable electricity and net-zero but also laying the groundwork for regional energy cooperation.

If successfully implemented, these efforts will not only reduce/eliminate reliance on imported fossil fuels and lower emissions but also unlock economic opportunities, increase climate resilience, and elevate Saint Kitts and Nevis as a model for other small island developing states, not only regionally but internationally, in navigating the complexities of energy transformation in a world threatened by climate change.

To further reinforce the nation's energy transition drive, consideration should be given to:

- Establishing a National Energy Policy that enshrines goals identified in and GST aligned revised 2025 NDC.
- Creating a Regulator that will work towards establishing clear policy-aligned targets for the utilities to execute, grid modernisation regulations, and competitive procurement instruments that will address the issue of balancing investor security with consumer affordability.

As a member of CARICOM, via C-SERMS, Saint Kitts and Nevis can further explore the proposed collaboration between Anguilla and, Antigua and Barbuda to improve technical capacities, and advance shared renewable procurement practices with another high geothermal potential island like St. Lucia.

References

[i] IMF. (2024). St. Kitts and Nevis: Selected Issues (IMF Country Report No. 2024/127). IMF. https://www.imf.org/en/Publications/CR/Issues/2024/05/15/St-549021

[ii] CARICOM. (2024). St. Kitts and Nevis Leading Decarbonisation Efforts in the Caribbean. https://caricom.org/st-kitts-and-nevis-leading-decarbonisation-efforts-in-the-caribbean/

[iii] Government of St. Kitts & Nevis. (2024). Revised National Energy Policy. Basseterre, St. Kitts & Nevis. https://www.gov.kn/wp-content/uploads/2024/04/Revised-National-Energy-Policy-1.pdf

[iv] IMF. (2024). Staff Concluding Statement of the 2024 Article IV Mission: St. Kitts & Nevis. Washington, DC: IMF. https://www.imf.org/en/News/Articles/2024/03/01/cs30124-st-kitts-and-nevis-concluding-statement-of-the-2024-article-iv-mission.

[v] Ministry of Public Works, Utilities, Energy and Housing, Government of Saint Kitts and Nevis. (2011). National Energy Policy, Saint Kitts and Nevis. http://faolex.fao.org/docs/pdf/stk221481.pdf

[vi] Simshauser, P. (2020). Regulation, competition and the future of energy markets. Energy Policy, 146, 111793. https://doi.org/10.1016/j.enpol.2020.111793

[vii] Poudineh, R., & Jamasb, T. (2017). Grid capacity expansion for renewable energy integration: An analysis of regulatory risk and investment incentives. Energy Policy, 101, 343–356. https://doi.org/10.1016/j.enpol.2016.10.016

[viii] Cherp, A., et al. (2018). Integrating techno-economic, socio-technical and political perspectives on national energy transitions: A meta-theoretical framework. Energy Research & Social Science, 37, 175–190. https://doi.org/10.1016/j.erss.2017.09.015

[ix] Government of St. Kitts and Nevis. (2023) Federal Government and SKELEC Successfully Renegotiated Solar PV and Battery Energy Storage Project to the Benefit of Residents of Saint Kitts and Nevis. https://www.gov.kn/2023/11/29/federal-government-and-skelec-successfully-renegotiated-solar-pv-and-battery-energy-storage-project-to-the-benefit-of-residents-of-saint-kitts-and-nevis/

[x] Government of St. Kitts and Nevis. (2024). Energy Minister Outlines Key Benefits of the SKN-100 Project. https://mopieudt.gov.kn/energy-minister-outlines-key-benefits-of-the-skn-100-project/

[xi] Alshahrani, A., Omer, S., Su, Y., Mohamed, E., & Alotaibi, S. (2019). The Technical Challenges Facing the Integration of Small-Scale and Large-scale PV Systems into the Grid: A Critical Review. Electronics, 8(12), 1443. https://doi.org/10.3390/electronics8121443

[xii] Shukir, Samhar. (2022). Solar Energy Batteries-A Critical Review.

[xiii] Matek, B. & Gawell, K. (2015). The Benefits of Baseload Renewables: A Misunderstood Energy Technology. The Electricity Journal, Vol 28, Issue 2, 101-112. https://doi.org/10.1016/j.tej.2015.02.001

[xiv] ARICOM. (2024). “CARICOM needs very concessional financing for climate resilience – Secretary-General LaRocque says”. Statement at the 29th Inter-sessional Meeting of CARICOM Heads. https://caricom.org/caricom-needs-very-concessional-financing-for-climate-resilience-secretary-general-larocque-says/

[xv] Think Geoenergy. (2025). Saint Kitts and Nevis: Islands leading big changes in renewable energy. Cariaga, C. https://www.thinkgeoenergy.com/st-kitts-and-nevis-islands-leading-big-changes-in-renewable-energy/

[xvi] Think Geoenergy. (2025). St Kitts and Nevis receives five bids in geothermal production drilling tender. Cariaga, C. https://www.thinkgeoenergy.com/st-kitts-and-nevis-receives-five-bids-in-geothermal-production-drilling-tender/

[xvii] Zhao, Xiaoling & Liu, et al. (2020). Technical and economic demands of HVDC submarine cable technology for Global Energy Interconnection. Global Energy Interconnection. 3. 120-127. 10.1016/j.gloei.2020.05.004.