

Small but Mighty: Why the Caribbean Can Lead the Global Energy Transition

By Giovanni Buckle

In global energy conversations, small island developing states (SIDS) are often portrayed as vulnerable. Vulnerable to climate shocks, vulnerable to rising fuel prices, and vulnerable to the decisions of larger economies. But what if we flipped the script? What if our small size is actually our superpower?

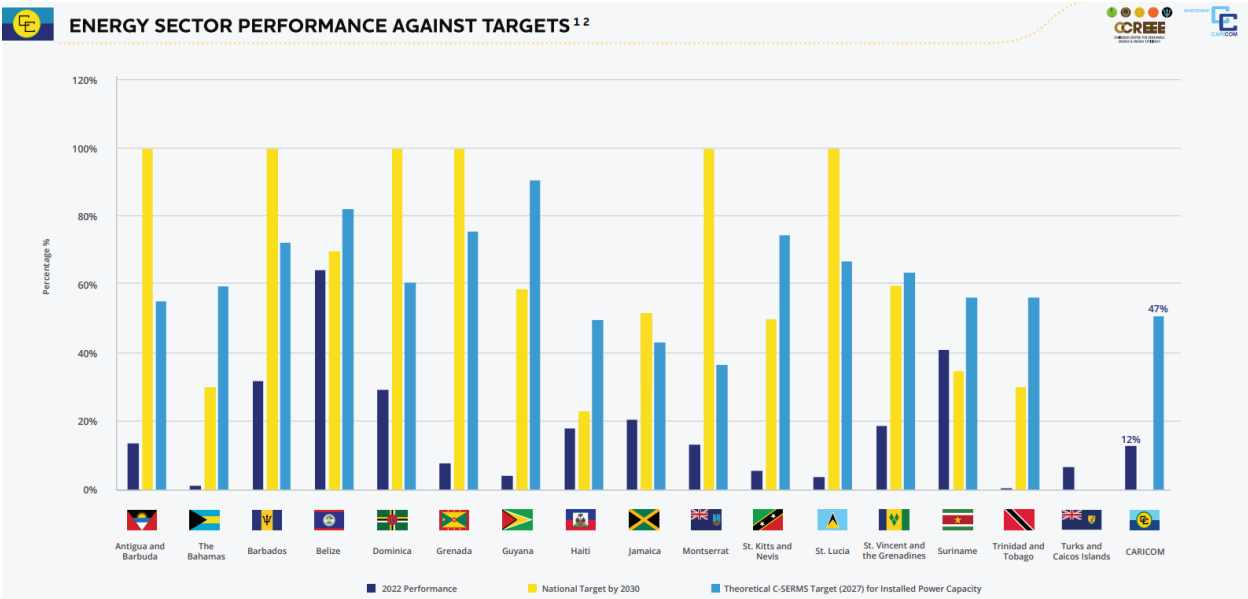


Figure: Renewable Energy Penetration by Country (CARICOM, 2022)

Source: CARICOM Energy Report Card (2022)

As of 2022, CARICOM states collectively have achieved approximately 12% renewable energy (RE) penetration, a level far from the 47% target set for 2027 under the Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS). This shortfall is significant, but it's not insurmountable. In fact, it represents one of the most powerful opportunities of our time. Because for small island developing states, a relatively small number of strategic projects can move the needle dramatically. With the right coordination, investment, and political will, we can move further and faster transitioning into a region that leads the world in renewable energy uptake, building climate-resilient, people-centered economies from the ground up.

The Climate Clock Is Ticking, Loudly for Us

The Caribbean's frontline position in the climate crisis is undeniable. Sea levels have already risen by 8 inches since 1950 and are projected to rise up to 1 meter by the end of the century. This is not just a coastal concern it threatens freshwater aquifers, agriculture, and tourism infrastructure, the lifeblood of many of our economies. Meanwhile, rising ocean temperatures are disrupting fish migration patterns and triggering coral bleaching events, devastating marine ecosystems and livelihoods.

Storms are becoming more intense and less predictable. Hurricanes Irma, Maria, and Dorian are etched into our collective memory, clear reminders of how a single event can set back years of development. But it's not just the catastrophic events that have adverse effects in the region but also the creeping, everyday stressors: prolonged droughts, inconsistent rainfall, and increased electricity demand due to hotter temperatures. These conditions compound existing vulnerabilities and stretch our infrastructure to its limits.

In this context, the energy transition is not just about hitting numerical targets. It's about protecting lives, preserving culture, and building economies that can withstand and adapt to change.

Small Islands, Big Leverage

Unlike large economies where decarbonization can take decades of restructuring, the Caribbean has the advantage of scale. For example, a single solar farm within the range of 10–20 MW, relatively small on the global scale, can radically shift national renewable energy performance metrics for most islands within the region. In addition to these utility-scale projects, distributed renewables such as rooftop solar PV systems play a pivotal role in achieving renewable energy goals. Barbados, for instance, is leading the region with approximately 100 MW of installed distributed renewable energy, an achievement made possible by the establishment of a regulatory environment that incentivizes renewable energy adoption.

This is the beauty of our position, we don't need thousands of projects, instead we need the right projects, strategically implemented, equitably distributed, and locally owned. With a few high-impact investments and supportive policies, countries can make major steps towards 100% renewable penetration in just a few years.

The Case for a Holistic, United Approach

Transitioning to sustainable energy is not simply about installing wind turbines or switching from diesel to solar. It requires a **holistic approach**, one where ministries, utilities, regulators, businesses, and communities are on the same bus, moving in the same direction.

This requires:

- **Integrated planning** through IRRPs that align national development goals with energy priorities.
- **Regional coordination** on procurement, regulation, and knowledge sharing.

- **Inclusive policies** that ensure women, youth, and marginalized communities are not just beneficiaries but drivers of change.
- **Investment in local capacity and innovation**, so the region is not just importing solutions but creating and exporting them.

At CCREEE, we see this as a systems challenge, not just a technical one. Electrifying transport, decarbonizing industry, digitizing the grid, and implementing energy efficiency are part of a broader shift toward resilient economies, not just greener utilities.

Innovation in the Face of Adversity

Resilience is not new to us. The Caribbean has always adapted, survived, and reimagined itself in the face of challenge. The energy transition is another such moment.

Barbados is leading the region in public transit electrification, now operating the largest electric bus fleet in the Caribbean. Trinidad and Tobago is exploring green hydrogen as part of its decarbonization strategy, showing that even fossil-based economies can pivot with purpose. Initiatives like the CCREEE **Energy Report Card (ERC) Internship Program**, and platforms such as **Gender and Women's Empowerment in Energy (G-WENT)** and **Women in Renewable Energy (WIRE) Network**, are equipping young people and women with tools, training, and networks to lead the next generation of energy innovators.

In Saint Vincent, where La Soufrière's eruption devastated parts of the island, local energy planning now incorporates **resilience-by-design**, ensuring that future infrastructure can better withstand climate and seismic shocks. These are not just responses to crises, they are **templates for transformation**.

From Islands to Influence: The Caribbean as a Global Example

What if our small size allowed us to be more agile? What if our regional cooperation became a model for others? What if our vulnerability was the very thing that fueled our innovation?

This is already happening. Through CCREEE's leadership in the **Global Network of Regional Sustainable Energy Centres (GN-SEC)** and alignment with global platforms like the **Blue Planet Alliance**, the Caribbean is shaping global energy discourse. Through the development of **regional pooled procurement frameworks**, we are testing models that aggregate demand, share policy frameworks, and attract investment allowing us to benefit from economies of scale and improved project affordability.

An opportunity for our islands to become laboratories for the future. What we innovate here through a holistic approach to establishing regional collaboration, distributed energy systems, microgrids and the electrification and greening of the transport sector, we will become global leaders in sustainable energy development.

What Comes Next?

First, we must acknowledge the urgency. The 47% renewable energy target by 2027 isn't just a "nice to have" target, instead it's a **minimum threshold** if we hope to meet our climate commitments, reduce import dependency, and build a future fit for our children.

Second, we must act **together**. Every delay in regulatory reform, every stalled procurement process, every siloed ministry is a barrier we can no longer afford. We need integrated, forward-thinking leadership that cuts across sectors and borders.

Third, we must invest, not only financially, but emotionally and intellectually in our people. Because the energy transition isn't about simply hitting a statistic. It's about **empowerment**. It's about ensuring that every Caribbean citizen has access to clean, reliable, affordable energy that powers not just homes and vehicles, but dreams and livelihoods.

Conclusion: Let the World Watch Us Lead

The chart above may show that we're behind, but it also represents an opportunity to tip the scale as we push to meet our renewable energy targets. This is our moment.

We are **small but mighty**, not in spite of our geography, but because of it. We are resilient not as a slogan, but as a lived truth. We don't have to wait for others to lead, we can, as a region, define what leadership in the age of climate change looks like.

As a region rich in solar, wind, geothermal, and ocean energy potential, we are blessed with resources the world desperately needs. We must not waste them. We must seize this moment to become the global leaders in renewable energy adaptation, not for prestige, but because it is our path to security, stability, and sovereignty.

The Caribbean is not waiting to be saved. **We are positioned to lead.**