Energy as an Enabler of Productive Chains

A Future-Fit Leadership Imperative for the Caribbean

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In the Caribbean, energy can no longer be treated as a standalone sector. It is economic infrastructure quietly but decisively shaping the competitiveness of tourism, water and sanitation, ports, food systems, digital services, and climate resilience.

High energy costs and volatile fuel prices in the Caribbean are not just numbers on a bill; they shape the entire economic landscape. Most Caribbean countries rely heavily on imported fossil fuels like diesel and oil for electricity generation and transportation. This makes them particularly exposed to global price swings. When international oil benchmarks rise, domestic energy costs jump almost immediately, squeezing businesses and households alike. For example, average gasoline and diesel prices across the region have ranged significantly, highlighting how imported fuel costs feed directly into energy prices that Caribbean economies must absorb[1].

But the deeper challenge is not merely the level of costs it is how leaders conceptualize energy.

When energy is treated narrowly as a commodity to be bought and sold, decisions tend to focus on short-term price management. Yet when energy is seen as **economic infrastructure**, leaders begin to recognize how energy choices ripple across sectors affecting investment competitiveness and economic stability. This shift in conceptual framing from energy as a cost centre to energy as an economic enabler is fundamental to unlocking system -level solutions that stabilize costs and strengthen resilience.

I have been exploring the concept of Future-Fit Leadership[2], which I coined while exploring the type of leadership required for the energy leader of the future. A key aspect of this leadership paradigm is that it starts with systems thinking. It recognizes that energy decisions ripple across entire value chains. When energy is planned as an enabler, rather

[1] American Petroleum, ***An overview of Caribbean diesel and gasoline markets***: https://americanpetroleumpr.com/en/caribbean-diesel-and-gasoline-markets/
[2] Kiesha Farnum (2026) ***The Architecture of Future-Fit Leadership***: https://open.substack.com/pub/kieshafarnum/p/the-architecture-of-future-fit-leadership?utm_campaign=post-expanded-share&utm_medium=web

than an endpoint, it becomes a strategic lever to lower operational costs, improve resilience to climate shocks, and unlock private investment across multiple sectors simultaneously.

From The Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE) regional experience, integrated energy interventions consistently deliver stronger economic returns than isolated power sector projects. The lesson here is not technical; it is leadership based. It requires the ability to see interdependencies, align incentives across sectors, and move beyond legacy planning models that no longer reflect how economies function.

Cross Sector Spillovers: Where Leadership Meets Complexity

The most transformative opportunities in the Caribbean sit at the intersections where energy converges with other productive systems. This includes the blue economy; fisheries, aquaculture, and marine services alongside ports and logistics, tourism, and food systems enabled by energy powered irrigation, storage, and processing.

Future-Fit leaders are comfortable operating in these intersections. They understand that value creation increasingly happens between sectors, not within them. Clean, reliable energy does more than reduce emissions; it enables new economic activities, supports MSMEs, strengthens export competitiveness, and creates more resilient local economies.

Leading in this space demands a core pillar of the Future-Fit leader, that of collaborative leadership, the ability to convene actors who do not traditionally plan together, align public and private interests, and design solutions that deliver shared value rather than narrow sectoral wins.

Cross Sector Spillovers: Ports as the New Energy Economy Interface

One of the most transformative opportunities in the Caribbean are emerging at the intersection of energy with other sectors particularly ports, shipping, and the blue economy.

This is not coincidental. The IMO's 2023 GHG Strategy sets explicit targets to reduce the carbon intensity of international shipping by at least 40% by 2030 and to increase the uptake of zero or near-zero GHG emission technologies to 5–10% by 2030. These targets require changes not only at sea, but at port[3].

Through Resolution MEPC.366(79), the IMO actively encourages port shipping cooperation to reduce emissions, promoting measures such as; Onshore Power Supply (OPS), allowing ships to plug into electricity ideally renewable while at berth, safe bunkering infrastructure for low and zero carbon fuels and Just-in-Time operations, reducing waiting time and fuel

[3] **IMO 2023 IMO Strategy on Reduction of GHG Emissions from Ships**
https://www.imo.org/en/ourwork/environment/pages/2023-imo-strategy-on-reduction-of-ghg-emissions-from-ships.aspx

use at port. Each of these measures transforms ports into energy nodes, linking electricity systems, fuel supply chains, logistics efficiency, and climate resilience.

Future-fit leaders are those who see ports not simply as transport assets, but as cross-sector platforms. Clean, reliable energy at ports enables new economic activities, strengthens MSMEs, improves export competitiveness, and positions countries to remain viable within a decarbonizing global trade system. Stay tuned for a technical article from CCREEE experts on the implications of IMO's 2023 GHG Strategy and the next steps for the Caribbean.

Reframing the Caribbean as a Frontier Market for Innovation

One of the dimensions of Future-Fit Leadership is the approach to technology, it requires data driven decision making and clean technology literacy. Technology is an enabler. The Caribbean is often framed primarily through vulnerability and while those realities are undeniable, Future-Fit leadership requires a more complete and more strategic narrative.

In reality, the Caribbean is a frontier market for innovation.

Small scale allows for faster piloting and learning. Climate pressures create clear demand signals. Natural endowments provide comparative advantage. Frontier markets are where technologies are tested, adapted, and proven and where global solutions often emerge.

This reframing is an act of leadership. It reflects strategic foresight, the ability to recognize opportunities where others see constraint, and to position countries not as passive recipients of solutions, but as active contributors to global innovation pathways. At its core, Future-Fit leadership is defined by the capacity to embed sustainability and resilience into systems, to anticipate shocks rather than merely react to them, and to articulate a vision that is systems oriented, climate aligned, ethically grounded, and anchored in long term societal benefit.

Why Marine Energy Is Strategic Not Speculative for SIDS

A great example of this future focus systems thinking can be found in the marine energy sector, particularly wave and tidal. This opportunity sits squarely at the intersection of foresight, geography, and economic strategy.

For the Caribbean, marine energy aligns directly with ocean geography, the growth of the blue economy, and the need for predictable, resilient renewable energy sources that complement solar and wind. For Large Ocean States, this is not experimentation for its own sake. It is about strategic optionality, building a diversified energy portfolio that reflects coastal demand centres and long-term resilience needs.

Future-fit leadership does not reject emerging technologies because they are unfamiliar or emergent. Nor does it pursue them uncritically. Instead, it asks better questions: Where does this fit in the system? What risks are worth taking now to avoid greater risks later? How do we move from potential to evidence? Is there an opportunity for gathering decision intelligence, assessing technical and economic viability, identifying links to ports, coastal infrastructure, and blue economy activities, and supporting countries in making informed, investment-ready choices. This is what adaptive, evidence-based leadership requires and looks like in practice. It translates uncertainty into structured learning and shifts frontier technologies from abstract potential into practical economic planning. Continue to follow CCREEE as 2026 progresses to find out more about our work in the marine energy space with our country partners and donors.

What It Will Take to Scale: The Leadership Challenge Ahead

Scaling frontier renewables in the Caribbean will not be achieved through technology alone. It will require leadership that is institutionally agile and partnership oriented. Countries will need cross sector coordination rather than siloed energy planning. They will need risk sharing partnerships between governments, development finance institutions, innovators, and the private sector. And they will need blended finance and early-stage support to crowd in investment where markets are not yet fully mature.

CCREEE's role within this ecosystem is to help de-risk early-stage opportunities, foster regional collaboration, and ensure that frontier technologies translate into scalable economic outcomes. But more broadly, this moment calls for leaders who are willing to rethink how value is created, how risk is shared, and how long-term competitiveness is secured.

Leading for the Future We Are Already In

The Caribbean is already operating in a world defined by climate volatility, shifting global regulations, and accelerating technological change. In this context, leadership cannot be reactive, incremental, or sector bound. Energy must be understood and governed as economic infrastructure integral to competitiveness, resilience, and long-term development. Frontier solutions, from green ports to marine energy, are not distant possibilities; they are emerging realities that demand systems literate, values driven, and Future-Fit leadership today.

As 2026 unfolds, CCREEE will continue to work with governments, partners, and innovators across the region to translate this vision into action; de-risking new technologies, strengthening cross sector collaboration, and supporting investment ready pathways that deliver real economic and social value. We invite readers to follow CCREEE's work throughout the year as we share insights, evidence, and practical lessons from the frontlines of the Caribbean's energy transition.