



greenCrowd®



RENEWABLE ENERGY OPPORTUNITIES IN JAMAICA

Supporting governments,
utilities, independent power
producers (IPPs), investors and
project developers to enable
power sector projects to happen
across the Caribbean region

www.greencrowd.energy

GREENCROWD AND JAMPRO

Our collaboration

I met with Laurence Jones, who leads the mandate for Jamaica Promotions Corporation (JAMPRO) in Europe last year, and we hit it off. I was captured by his infectious enthusiasm for his country and his descriptions of the boundless and exciting prospects Jamaica offers domestic and overseas businesses and individuals. So, we decided to collaborate and co-author a short, hopefully thought-provoking publication on Jamaica's renewable energy ("RE") opportunities.

Jamaica's 20-year energy plan can be seen as a test case for the whole Caribbean. However, urgent action is needed to get renewable projects underway and built before this can be achieved. Answering that call for action, on 18 September 2023, Jamaica's Generation Procurement Entity (GPE) invited applicants to submit proposals to provide generating capacity amounting to net 100 megawatts (MW) of electricity generation from RE-based power generation facilities on a build, own and operate (BOO) basis through a "take-as-available" 20-year PPA.

greenCrowd is entirely behind these initiatives. We encourage the Government of Jamaica (GOJ) and those institutions that can or should play a leading role in the energy transition to do all they can to make these projects happen.

Best wishes
Rick and the greenCrowd Team

October 2023

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JAMPRO VIEW

JAMPRO is equally pleased to collaborate with greenCrowd to raise the visibility of Jamaica's growing energy sector, especially now that the country is emphasising the generation of alternative, sustainable and environmentally friendly energy sources.

This publication is perfectly timed, as the Government of Jamaica recently developed a clearly defined renewable energy growth plan to be accomplished by 2037, which prioritises the generation of 1260 MW of wind and solar, 330 MW of liquid natural gas (LNG) and 74 MW of hydro, biomass or waste energy. The recently announced Request for Proposal for 100MW of power generation and the UK-Jamaica Trade and Investment Forum that took place in London in September 2023 is part of that plan.

But why now? Why is there a concerted public and private sector effort to shift to cleaner energy sources? Global initiatives such as The Paris Climate Accord have led to Jamaica focusing on increasing the necessary infrastructure and diversification of energy sources to achieve climate goals. The country seeks to decrease its dependence on imported fuel oils, which comprise around 88% of its energy sources.

With an expected industrial growth in economic sectors such as mining, tourism, and outsourcing, as well as the creation of special economic zones, there will be a sharp increase in the demand for additional energy. JAMPRO stands ready to support the development of the energy sector and welcome new projects that champion clean and sustainable energy.





JAMAICA – THE RENEWABLE ENERGY OPPORTUNITIES

All the ingredients

Like many tropical islands, Jamaica is endowed with abundant renewable energy resources. Its 3,000 hours of sunshine a year, consistent coastal breeze, and dozens of rivers have helped cultivate Jamaica's most significant export: tourism. However, they are yet to be significantly harnessed to guarantee cheap, reliable energy for the country's post-pandemic recovery.

While Jamaica has become less dependent on oil in recent years, it is still highly reliant on imported fossil fuels, which comprise 89% of its electricity generation. This vulnerability to oil price and currency exchange fluctuations presents challenges in maintaining a stable economy, further contributing to the rationale for the strategic shift towards renewable energy.

Given the current macroeconomic and geopolitical conditions, more and more countries, like Jamaica, are abandoning incrementalism and considering their options for shifting to sustainable energy sources.

JAMAICA – THE RENEWABLE ENERGY OPPORTUNITIES



Following in footsteps

The opportunities for Jamaica are apparent, and one only needs to look at other similar-sized countries in the region to see what could be achieved with more assertive policy changes, solid partnerships and prompt action. Small nation-states like Nicaragua and Costa Rica have almost reached carbon-neutral electricity generation with sustainable hydro, geothermal, solar and wind energy.

Uruguay, another small nation-state almost 100% powered by renewables, made the change after less than ten years of concerted effort. This incredible transformation – Uruguay's energy mix was just 40% renewables in 2012 – depended on strong leadership, transparent decision-making, a supportive regulatory environment and, importantly, a strong partnership

between the public and private sectors. Uruguay's policy of giving the private sector freedom to generate energy encouraged significant investment, and together with the public sector, it has invested more than 3% of its GDP annually in energy infrastructure over the past decade.

JAMAICA – THE RENEWABLE ENERGY OPPORTUNITIES

JAMPRO: Engaging the private sector

JAMPRO is the premier trade and investment corporation representing the Government of Jamaica.

Since its inception in 1990, it has facilitated countless investment and export projects and has been the government's critical business and policy advisor.

JAMPRO's ability to build relationships and realise business opportunities with investors will be vital as Jamaica makes bold strides to learn its National Energy Plan.

Given Jamaica's growing demand for renewable energy – and JAMPRO's track record in attracting private sector investment – it would be reasonable to expect Jamaica to achieve its target that 50% of Jamaica's energy is generated from renewable sources.

THE RACE FOR INVESTMENT

Business environment

The Jamaican business environment is investor-friendly, with no local restrictions on foreign ownership or profit repatriation. As a stable, English-speaking democracy with reliable institutions, Jamaica seems an obvious choice for international investors.

In fact, according to the US Department of State, Jamaica was a leading recipient of FDI in the Caribbean and among Small Island Developing States (SIDS) before the COVID-19 pandemic.

But FDI remains primarily focused on the tourism industry, with a total of \$359.5m in foreign direct investment (FDI) inflows in 2022 (up from \$320m in 2021, \$265m in 2020 and down from \$925m in 2015), according to the UN Conference on Trade and Development (UNCTAD).

Therefore, a concerted effort to diversify the electricity grid and the economy is now a top priority of the government.

There is no shortage of global capital looking for sound investment in sustainable, renewable energy.

UNCTAD's World Investment Report 2023 shows that, after a strong rebound in 2021, global foreign direct investment (FDI) fell by 12% in 2022 to \$1.3 trillion. Meanwhile, the International Energy Agency estimates that to reach net zero emissions by 2050, annual clean energy investment worldwide will need to triple by 2030 to around \$4 trillion.

THE RACE FOR INVESTMENT

Actions, now

The United Nation's Intergovernmental Panel on Climate Change (IPCC) report argues that a significant scaling up of wind, solar, hydrogen, and other renewable energy technologies could all be achieved at an affordable, upfront cost while unlocking massive economic co-benefits for countries like Jamaica.

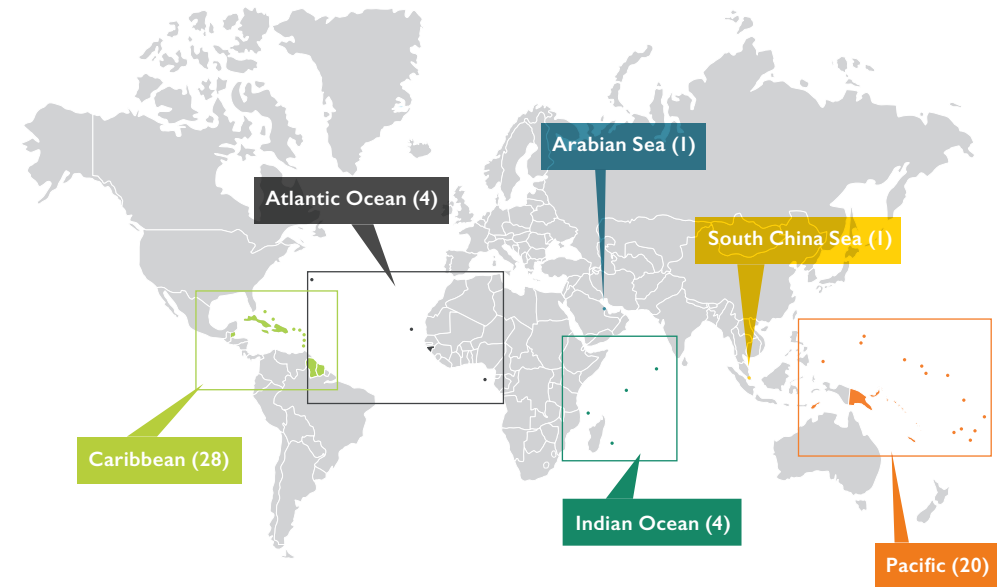
The incentives for states are apparent, but there are plenty of benefits for investors. Those who focus FDI on renewable energy have a better chance of futureproofing their finances and reputations as they decarbonise their portfolios.

The race is on for countries like Jamaica to demonstrate their ambition and potential. Climate activists argue that finance isn't being distributed or utilised quickly enough to either reach the carbon-reduction commitments set out at COP26 and COP27 or mitigate climate change's effects.

Bridging the gap between available and utilised capital must be at the forefront of the Jamaican government's thinking when implementing the National Energy Plan.

Small Island Developing States

58 SIDS in total





JAMAICA'S PLAN FOR INVESTMENT

Openness to trade

The government appears to be aware of the urgency. As Minister of Finance and Public Service, Dr. the Hon. Nigel Clarke, said during a briefing at the Ministry of Foreign Affairs and Foreign Trade in March 2022: "We hope that over the next three years, we would easily have more than US\$1bn of infrastructure projects coming in". Jamaica has always been open to FDI. While the US remains its leading trading partner, accounting for approximately 50% of total trade,

Jamaica has always been open to FDI. While the US remains its leading trading partner, accounting for approximately 50% of total trade, Jamaica maintains a global openness to trade and benefits from numerous trade agreements.

The country Jamaica maintains a global openness to trade and benefits from numerous trade agreements; it enjoys preferential tariff arrangements with the United States under the Caribbean Basin Economic Recovery Act (CBERA); European Union under the Economic Partnership Agreement (EPA); Canada under CARIBCAN (negotiations for a successor agreement has stalled); and with other English-speaking Caribbean states under CARICOM (CARICOM has bilateral trade agreements with Costa Rica, Cuba, the Dominican Republic, Colombia, and Venezuela).

JAMAICA'S PLAN FOR INVESTMENT



Favourable business climate

Over the years, these deals have encouraged the unrestricted flow of goods and services and reduced or eliminated quotas and tariffs. Given that the economy has returned to its pre-COVID level, real GDP growth for FY2023/24 is projected to moderate to a range of 1.0 to 3.0 per cent from 4.0 to 5.5 per cent for FY2022/23. In comparison, inflation is expected to decelerate to the Bank's inflation target range of 4.0 to 6.0 per cent by the December 2023 quarter.

In March 2023, Fitch Ratings affirmed Jamaica's Long-Term Foreign Currency Issuer Default Rating (IDR) at B+ with a positive outlook. It said the 'B+' rating was supported by World Bank Governance Indicators substantially more robust than the 'B' median, a favourable business climate, a declining debt trajectory and a robust policy framework.

JAMAICA'S PLAN FOR INVESTMENT

Favourable business climate

Now is the time for the Jamaican government to harness this attractive investment climate to transform the energy sector quickly. The Integrated Resource Plan (IRP) is a significant piece which outlines the country's electricity roadmap for the next two decades, projecting 1,600MW of new generation capacity at a total investment requirement of \$7.3bn, including plant replacement. Renewable energy sources are projected to generate 50% of electricity, with liquified natural gas (LNG) providing most of the remaining 50%.

According to the United States Department of Commerce Investment Climate Statement 2021, "the increased investment in new generation is expected to increase efficiency and reduce the price of electricity to consumers".



JAMAICA'S PLAN FOR INVESTMENT



Call to action

Like many forward-thinking governments, Jamaica wants to implement an integrated approach to climate-related FDI. The IRP provides a clear strategy for accelerating the flow of capital to projects that will decarbonise Jamaican power the quickest. Following in the footsteps of Uruguay and Costa Rica, the IRP is a clear call to action for the private sector to create a more sustainable, reliable energy grid in Jamaica that will then allow businesses to sell back power to the grid – be it solar, wind, or hydropower.

Jamaica's IRP has the potential to revolutionise the country's energy landscape.

The Jamaica Public Service Co Ltd (JPS) - controlled by the partnership between Marubeni Corporation and Korea East-West Power Co. Ltd. (each 40%), together with the Government of Jamaica (19%) - is the sole distributor of electricity in Jamaica.

Through consistent investment by JPS, it has ensured solid electricity access, with an impressive 97% of the total population connected; today, just over 12% of this energy comes from renewable sources.

Despite the relative success of JPS in providing electricity, the speed of the renewable energy revolution will require far greater cooperation with the private sector, innovative ideas, buy-in from multiple stakeholders and more competition.

ECONOMIC LIBERALISATION



Investment welcomed

The Jamaican economic activity has recovered from the deep pandemic recession; GDP growth was 4.6% in 2021 and 4.4% in 2022. The tourism rebound has boosted the recovery, especially for U.S. stopover visitors, the largest market.

The injection of continued and long-term capital investments into Jamaica is vital. However, creating the conditions for investment will also facilitate the transfer of ideas and expertise. This is needed to help navigate the unique situations surrounding the electricity grid of Jamaica. As UNCTAD's Financing for Sustainable Development Report

2022 says, "achieving the transition to sustainable energy would require a speedier transfer of finance, knowledge, and environmental technology to developing countries."

Over the past decade, the cost of renewable energy has plummeted. Increasing renewable energy capacity globally has massively driven down its price and made renewable sources – significantly solar – more attractive much earlier than widely anticipated.

ECONOMIC LIBERALISATION

Smart Grid Technology

The idea of exchange around energy is not a one-way street. In addition to FDI, Jamaica, through its National Energy Plan, asserts a modern and innovative vision to diversify energy sources.

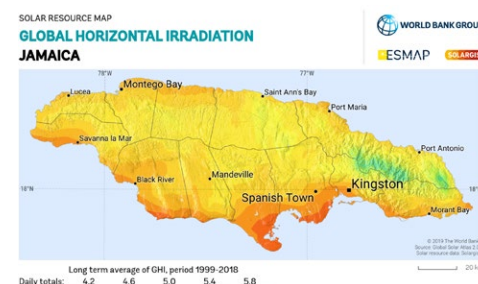
While small island developing states like Jamaica have long been recognised as particularly vulnerable to the impacts of climate change, they can also act as innovation incubators, showcasing to the world the speed at which local solutions can be scaled. Necessity is the mother of invention. Jamaica's size and vulnerability to the climate crisis give it more control over local governance and a smaller grid to provide an optimal testing ground for smart technology.

As such, modernising the grid is a significant goal of the country's energy plan. In May 2020, JPS committed to investing more than US\$100 million towards modernising the nation's electricity grid within the next five years.

This increased and sustained capital investment in Jamaica's energy sector will allow for microgrid-controlling devices, energy management, smart energy systems, and behind-the-meter solutions.

With this, Jamaica can continuously interrogate the data needed to improve the efficiency of its energy grid- an advantage that would be difficult to replicate in larger nations.

An integrated 'smart' grid will help identify potential issues before they arise, ensuring improved resiliency in their electricity systems and greater flexibility in meeting power requirements.

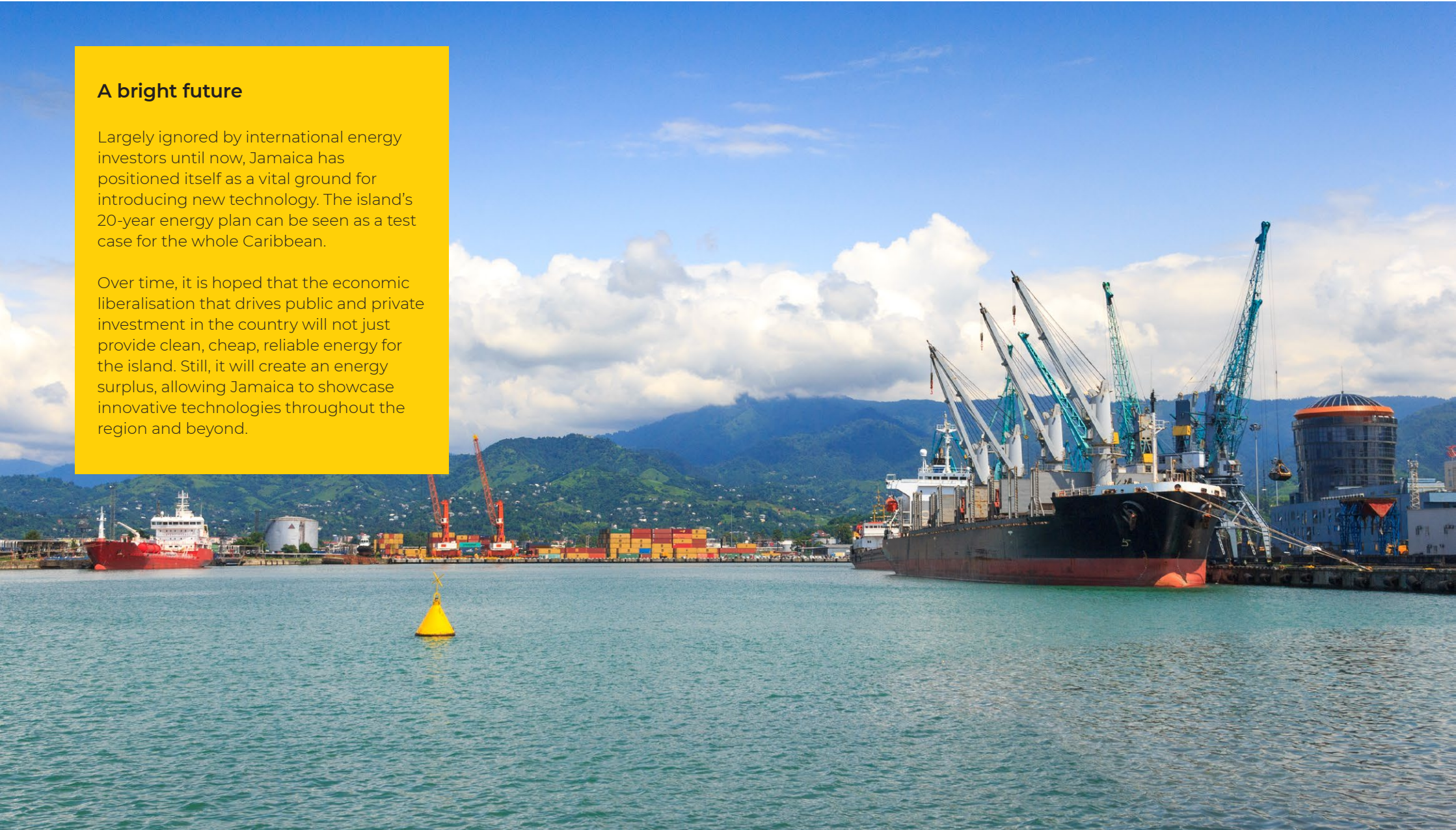


ECONOMIC LIBERALISATION

A bright future

Largely ignored by international energy investors until now, Jamaica has positioned itself as a vital ground for introducing new technology. The island's 20-year energy plan can be seen as a test case for the whole Caribbean.

Over time, it is hoped that the economic liberalisation that drives public and private investment in the country will not just provide clean, cheap, reliable energy for the island. Still, it will create an energy surplus, allowing Jamaica to showcase innovative technologies throughout the region and beyond.



JAMPRO PERSPECTIVE



Our role

The need for energy at lower costs to satisfy Jamaican consumers and heavy industries in a growing economy has led to a strong government commitment to developing the sector. To this end, JAMPRO leads Jamaica's foreign and local direct investment promotion across various sectors, including energy. Over the years, JAMPRO has been laser-focused on identifying and engaging opportunities to revolutionise the energy sector and unearth business success.

Through a vital advocacy role, JAMPRO has significantly contributed to a shift in energy policy direction, as evidenced by Jamaica's 20-year energy policy, which prioritises a more diverse, sustainable and renewable energy source.

JAMPRO's suite of customised services to investors includes providing market intelligence, facilitating site selection for business operations or accommodations, connecting investors with key stakeholders and service providers, and offering aftercare investment solutions to support expansion plans, work permits, and approvals.



JAMPRO PERSPECTIVE

Quick facts about Jamaica's energy sector

Jamaica's energy sector has expanded from a handful of entities to more than ten public and private energy producers due to a liberalised energy industry that has become an enticing prospect for investors.

The government's implementation of its ambitious Integrated Resource Plan has set a goal of adding approximately 1,600 megawatts (MW) of generation capacity over the next 20 years (2018 – 2037) as it seeks to diversify the island's energy resources to facilitate reduced energy prices and decreased vulnerability of the energy sector to fluctuating oil prices.

Why Jamaica?

- Jamaica's energy policy and diversification is ranked #1 in the English-speaking Caribbean and 92nd globally.
- In less than a decade, the renewable energy supply has grown to over 12%.
- GOJ has embarked on a path to ensure that 50% of Jamaica's energy is generated from renewable sources.
- Around 1,600 megawatts (MW) will be added to generation capacity by 2037 to expand and diversify the island's energy resources.

JAMPRO PERSPECTIVE



Renewable projects done to date

Jamaica has been working steadily to develop renewable energy.

In addition to the Renewable Energy Policy, several projects since 2004 have provided a solid foundation to grow the country's energy resource plan.

Wind

- Blue Mountain Renewable (BMR) Jamaica, Wind, BMR Energy, 34MW, 2016
- JPS Munro Wind Farm, Jamaica Public Service Company (JPS), 3MW, 2010
- Wigton Windfarm 2 Petroleum Corporation of Jamaica (PCJ), 18MW, 2011
- Wigton Windfarm, 3 PCJ, 24MW, 2016

Hydro

- Maggoty-B, JPS, 7.2MW, 2014

Solar

- PV Content Solar Limited, WRB Enterprises, 20MW, 2016
- PV Eight Rivers Solar, Eight Rivers Energy (Paradise Park), 37MW, 2019

JAMPRO PERSPECTIVE

Pipeline of projects to come

In September 2023, Jamaica's GPE launched a 100 MW renewable energy supply tender with eligible technologies being wind, solar PV, biogas, biomass and hydropower. JPS will be the off-taker for these projects, and the tender is open to local and international bidders.

According to press reports, in May 2023, GPE received expressions of interest (EOI) for 2.697 GW from 42 local and international companies in anticipation of this RFP. Competition will be strong.

GREENCROWD CONTACT DETAILS

We value creativity, resilience, independent strategic thinking and long-term partnerships.

Creativity is at the heart of everything we do at greenCrowd. To find out more about our Caribbean strategy and our market-leading services, please register at **www.greencrowd.energy** or contact Rick or Alex.

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