

Jamaica Public Service Company

POWERING JAMAICA'S FUTURE





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RESEARCH BY Wisner Gomes

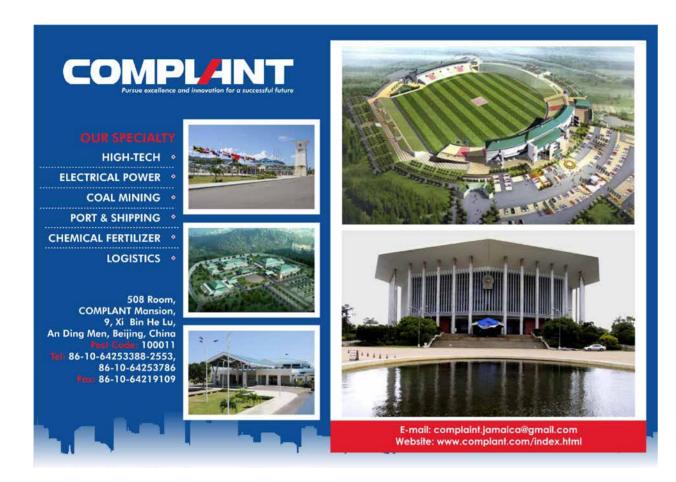


he Jamaica Public Service Company Ltd. (JPS), has been Jamaica's primary energy company for over 90 years. In that time, it has expanded from a modest energy network with just a few thousand customers, to one capable of serving the country's roughly 2.8 million residents. With a current customer base of just over 650,000 accounts, the company is the sole distributor of electricity in Jamaica and has a generating capacity of about 620 Megawatts (MW), provided by a combination of steam, gas turbines, combined cycle, diesel, windfarm and hydroelectric technologies. The Company also purchases electricity from four Independent Power Producers (IPPs).

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Expanding and improving JPS' generation, as well as its transmission and distribution capabilities, has not been without challenges. An island's electricity system, such as that of Jamaica, is inherently more complicated than that of a mainland system of comparable size. Certainly one of the major considerations at this point is the focus on increasing fuel diversity and the proper integration of renewables.

At present, Jamaica ranks favourably among countries with high levels of renewable penetration - a testament to the investments that have been made by the Company and the Ministry of Energy over the years. One of those available renewable resources is





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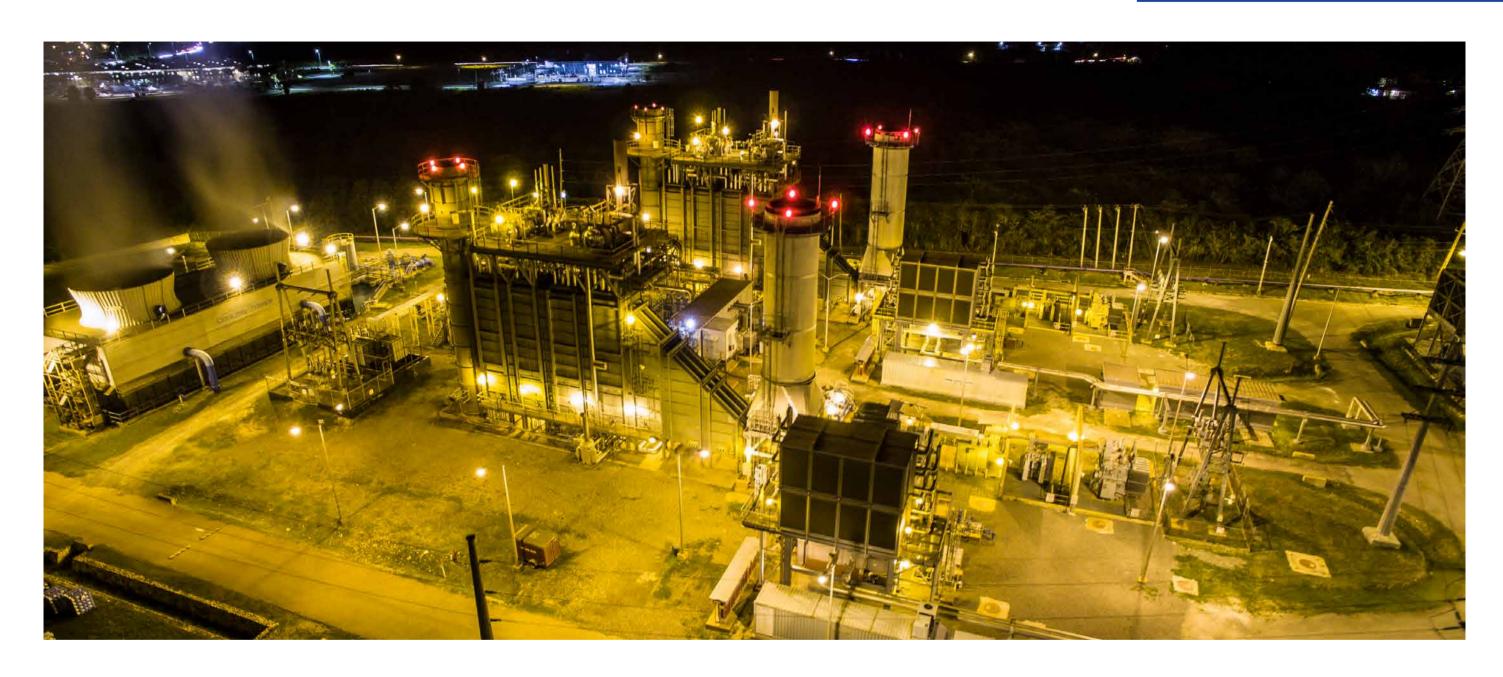
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"Hunts Bay B6 and all the Old Harbour Bay units are scheduled to be retired by the end of 2020,"

wind - which constantly blows over Jamaica, sometimes affectionately referred to by residents as the 'Undertaker Breeze' and the 'Doctor Breeze'. This wind resource will be among the key components necessary, to move Jamaica away from the market risk that comes with importing heavy fuel oil and diesel, towards a future of increased energy security. This is all part of the Caribbean Community's (CARICOM) energy policy, which factors in energy security, mitigating the effects of ongoing climate volatility, as well as improving environmental standards across the board. Achieving increased fuel diversity involves continuing evolution of all the energy companies in Jamaica, and not least of them - JPS.

CEO Emmanuel DaRosa explains that one of the Company's key priorities is to find a solution for every Jamaican "through expanding the options available to our customers. That requires an ability to integrate renewables in an effective way and to partner with diverse and innovative providers."



He further adds that "One of the facilitators of renewable integration is the procurement of gas".

Finding the right balance is a delicate act for JPS. While their earlier projects depended on heavy fuel, they're constantly seeking more environmentally-friendly alternatives, while looking to balance this with the economic imperative. At the moment 22% of the electricity JPS supplies is by gas, however, the plan has that increased to around 50% by 2020. This they hope to achieve by

afullswitchover from oil fuel, HFO to LNG, this program will go beyond 2020. It will decommission all its plants that run on heavy fuel oil, HFO whilst constantly increasing its use of LNG. "Hunts Bay B6 and all the Old Harbour Bay units are scheduled to be retired by the end of 2020," said Winsome Callum, director of communications at JPS. "However, the Rockfort units are to be retired at a later date, subject to the finalised Integrated Resource Plan, which is being developed by the Ministry of Energy,"

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Another example is, the country has a small but growing amount of distribution-connected solar. Present estimates indicate that they'll have a total of about 110MW of renewables by 2017, with about 80MW of that currently under construction. And then there's the heat-rate workhorse, which runs on distillate. As more renewable units are integrated into the system, however, it has become clear to management at JPS, that the Company alone cannot provide the full capacity of electricity required, due to its intermittency rates.

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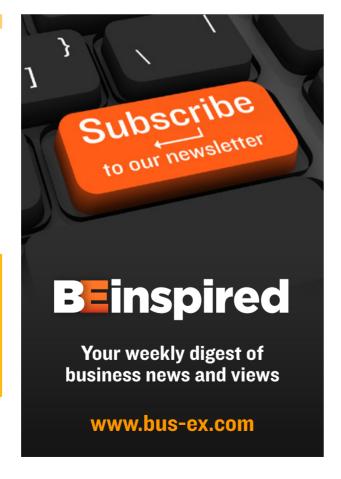
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JPS will, therefore, introduce gas to its combined cycle plant at the Bogue Facility in Montego Bay, Jamaica. This particular project is driven by two motives: to enable the long term reduction in the cost of electricity and pass those reductions on to JPS customers; but also to provide the flexibility that comes with gas, to the system, in order to integrate the 80MW of new renewable units. An IRP (Integrated Resource Plan) is to get underway soon. This IRP is looking at the dynamics of system stability with those intermittent resources and what the business will require to integrate them.

What's evident from looking at JPS is an ongoing effort on their part to improve on their energy resources and feed that back to its customers. In 2019, the company expects to have some additional gas plants operating, and the government is looking to pursue additional resources through a 37MW solicitation for renewables. When all of the planned resources come online in 2019, management will have a better overview of the dynamics and flexibility of the JPS system and where it stands in relation to the Jamaican Energy Policy, which is aiming for 20% renewables by 2030, but given the

inroads that JPS is making in this evolution, some are speculating that the target could be reset to 30%. For example, in 2016 alone, the country's' renewable energy capacity is set to double.

The evolution to renewables at JPS is already having an effect on the culture at the company: the oil-is-the-only-possibility mentality that once existed at energy firms has been replaced with a philosophy which is more open to change. This is having an effect on the bottom line already: in 2014, profits at JPS were up to \$23 from \$9 million the previous year. This result was achieved through

improvements in operations and is doubly impressive given the continuous slide of the Jamaican dollar against its US counterpart: the currency has experienced a slide of over 30% against the greenback since 2011.

Strategic Partnerships

Naturally, JPS cannot achieve all of this without a sophisticated support network of local and international partners. This network has been established over its 90-year history and it continues to be fostered. The list includes both local and international companies. Its local partners have been crucial to optimizing

"It's encouraging to see that in the midst of such fast-paced change that attention to CSR clearly hasn't diminished at JPS"





the company's value chain in Jamaica. The scale of the JPS operation means that services such as haulage, professional services and chemical sales can all be outsourced to local companies, in turn contributing to stable employment on the island.

There's also a sizeable list of international partners on the JPS books, which not only provides the firm with access to economies of scale but also exposure to the best equipment, know-how and advances in the industry as they occur. Energy companies need to keep abreast of changes arguably more than companies of other industries. Its international partners provide it with gas turbines, pumps and controls, consulting services, as well as parts and maintenance. These partners include Quantex International Limited, GE International Parts, IMCA Jamaica Ltd, Corrosion Control Limited and Wood Group/Ethos Energy.

American based New Fortress is also supplying 60,000 t/yr of LNG from another FSRU for JPSCo's 120MW Bogue power plant. The company looks to expand its offering in the region with the completion of a second FSRU installation in Jamaica in December 2018 that will supply 200,000 t/yr of LNG to a 190MW power station that utility JPSCo plans to commission by June 2019. These contracts are especially important in relation to the JPSco's goal of a total switchover from Oil fuel, HFO to LNG at its plants.

Community Engagement

JPS work in the community starts with its workforce. It has instilled a set of values in its 1,600 workforce and work practices using the acronym ASPIRE (Accountability, Service, Passion, Integrity, Respect and Excellence). One of its strategic objectives

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is to 'attract, develop and retain the best talent in Jamaica.' It has enhanced its employee engagement program and now records over 80% total satisfaction among its employees, a number which is on an upward trend. Likewise, the firm continues to invest substantially in communities across Jamaica in education, and youth development through the JPS Foundation. In 2013, the Foundation included an Early Childhood Nutritional Support Program which benefitted more than 26,000 children and opened a partnership with the United Way. Whilst in 2018, the company in partnered with USAID and John Hopkins University of the USA, hosted a "Train the Trainer Enterprise Entrepreneur Training" as part of the Social Intervention initiatives that will be used to train customers from the company's Community Renewal project areas. The expectation is that this initiative will empower residents in these communities to be more efficient entrepreneurs, with the capacity to be socially mobile.

It's encouraging to see that in the midst of such fast-paced change that attention to CSR clearly hasn't diminished at JPS. Indeed, it is part of the change that continues to drive the firm forward. Satisfying customers continues to be the most important part of our business. Our commitment to Corporate Social Responsibility supports our customer, our community, and Jamaica. It is well established that the utility rises and falls with the fortunes of its market. We are committed to supporting Jamaica at all levels.

JAMAICA PUBLIC SERVICE COMPANY

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