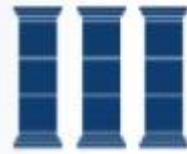




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ENERGY PROFILES

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Energy Profiles: Jamaica

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*The opinions contained in this publication are those
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Background

Geographically, Jamaica is the third-largest island in the Caribbean and the largest amongst the English speaking islands. The country, 11,000 square kilometers in size and a population of 2.97 million, registered a circa-US\$15.9 billion in 2019. The main sectors are agriculture, industry and services. Services, the most important sector contributed 59.33 percent of GDP. Industry and agriculture contributed 20.2 percent and 6.6 percent respectively. The country's foreign exchange is mainly sourced from tourism and remittances. The global pandemic's impact on tourism and trade facilitated a sharp economic contraction in 2020; the economy is expected to rebound in 2021 as domestic and foreign demands are expected to strengthen.

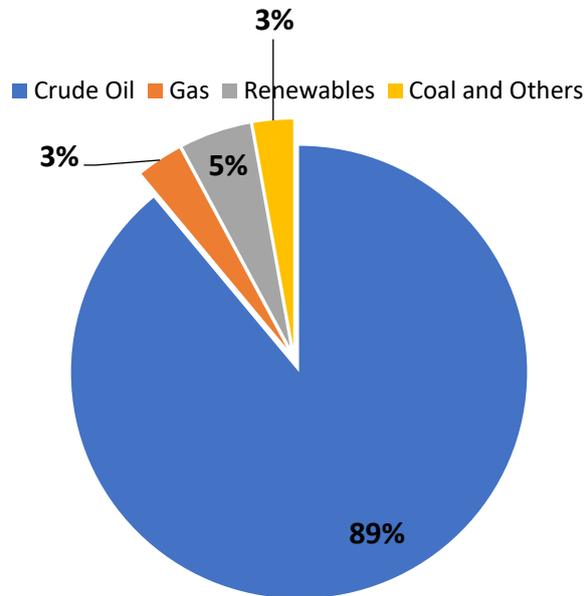
Energy Sector

Jamaica is highly dependent on imported fossil fuels. Estimates in 2016 also show that Jamaica consumed about 54,000 barrels of oil per day and per capita energy consumption was about 285 gallons. Energy consumption was recorded at 19.9 million barrels of oil equivalent. The energy intensity was recorded at 1.76 KWh in 2016. In 2019, energy imports represented approximately 26 percent (US\$1.66 billion) of overall imports in Jamaica, (Ministry of Science, Technology, Energy and Mining).

Crude oil satisfies most of Jamaica's energy requirements; it accounts for about 89 percent of total primary energy supply. Renewables and gas represent 5 percent and 3.2 percent respectively. The remaining 2.8 percent is represented by coal and others. (IRENA Energy Profiles, 2017). The petroleum consumption by activity in 2019 is as follows: road and rail transportation (34 percent), shipping (17 percent), electricity generation (21

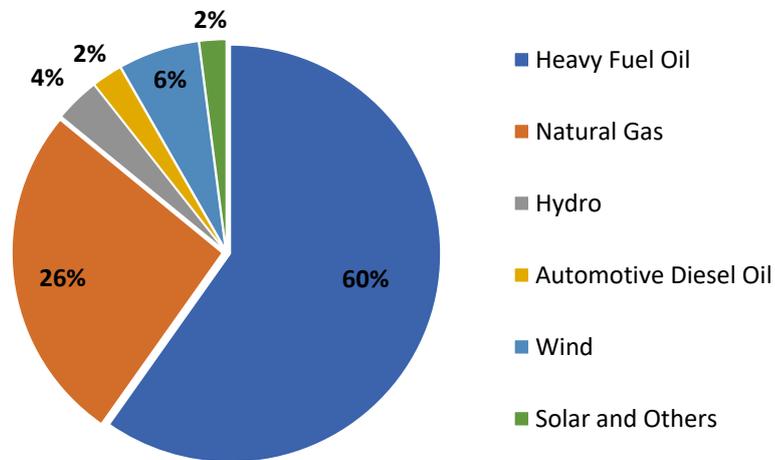
percent), bauxite and alumina processing (13 percent), residential cooking and lighting (6 percent) and others (1 percent).

Diagram 1: Primary Energy Supply | Source: IRENA, 2019



According to IRENA's Statistical Reports, 99.5 percent of Jamaica's population has access to electricity (2017). The primary fuel source for electricity production is Heavy Fuel Oil, which accounts for 59.76 percent in the electricity mix. Since its introduction in 2016, Natural Gas has been a significant and increasing portion of electricity generation. In 2019, Natural Gas contributed 26.24 percent to the electricity mix. Auto-Diesel Oil only contributed 2.32 percent of electricity generation. Renewables account for approximately 11.67 percent of electricity generation in 2019 with 6.2 percent coming from wind, 3.45 percent from hydropower and 2.03 percent from solar and others, (Office of Utilities Regulation Annual Report, 2019). The renewable energy target set by the Government of Jamaica is 30 percent by 2030, (National Energy Policy, 2009-2030).

Diagram 2: Jamaica's Electricity Mix | Source: OUR, 2019



Total installed capacity stands at 1214.2 MWh in 2019. The highest peak demand during 2019 was 660.9 MWh. The electricity sector has a total customer base of 672,425 customers. Of this customer base, 89.36 percent were residential customers. The annual system net generation was 4,429.83 GWh, with a load factor of about 77 percent. Total system losses were recorded at 1,153.90 GWh- which is approximately 26.05 percent of net generation. The system losses during transmission and distribution include both technical losses (7.92 percent of energy produced) and non-technical losses (18.13 percent of energy produced), (Office of Utilities Regulation Annual Report, 2019). As at June 2020, the prices for electricity in Jamaica are US\$0.302 per KWh for households and US\$0.242 per KWh for businesses.

Energy and Electricity Regulatory Framework

In Jamaica, the Ministry of Science, Technology, Energy and Mining regulates the energy industry as a whole and works to promote efficiency, diversification and competitiveness of the energy market. The sole distributor and the largest supplier of electricity is the Jamaica Public Service Company Limited (JPS). It is a vertically integrated electric utility company that is 80 percent privatized (20 percent is owned by the Government of Jamaica). The company has an exclusive right to generate, transmit, distribute and supply electricity for public and private purposes under license. It operates 24 generating units including 9 hydropower plants and 1 wind farm. JPS also purchases power from a number of Independent Power Producers (IPPs). The IPPs in Jamaica are:

1. The Jamaica Private Power Company Limited (JPCC)
2. Wigton Wind Farm Limited (Wigton)
3. Jamaica Energy Partners (JEP)
4. West Kingston Power Partners (WKKP)
5. Content Solar Limited (CS)
6. BMR Jamaica Wind Limited (BMR)

The IPPs account for about 30 percent of baseload generation capacity and 38 percent inclusive of Renewables. The dominance of JPS and the small number of IPPs demonstrates that there is little competition in the electricity sector, given JPS's control of Jamaica's electricity grid. The price control regime is a revenue cap, which limits the amount of revenue that can

be earned by JPS within a given year. According to JPS's Annual Performance Report, the group recorded an overall net profit after tax of US\$46 million in 2019. The profit represents a return on equity of about 9.5 percent.

Established in 1995 by the Office of Utilities Regulation Act, the electricity sector in Jamaica is regulated by the Office of Utilities Regulation (OUR). Section 4 of the OUR Act provides for the agency to encourage competition in the provision of prescribed utility services; protect the interests of consumers in relation to the supply of prescribed utility service; encourage the development and use of indigenous resources; promote and encourage the development of modern and efficient utility services and enquire into the nature and extent of the prescribed utility service provided by a licensee.

Managing the Transition to A Low Emissions Economy

The National Energy Policy (2009-2030) is one of the major policies of the energy industry in Jamaica. The policy calls for Jamaica to realise its energy resource potential through the development of renewable energy sources and enhances its international competitiveness and energy security whilst reducing its carbon footprint. By 2030, the policy articulates that 30 percent of the country's energy mix would be from renewable sources. The push towards renewable energy will ensure a transition to a more diversified energy mix, an increase in energy security and also a reduction of Jamaica's high dependence on imported fossil fuels. The National Energy Policy supports Vision 2030 Jamaica- National Development Plan on the Government of Jamaica's commitment to achieving energy security.

Vision 2030 Jamaica is the country's first long-term national development plan; it aims to put Jamaica in a position to achieve developed country status by 2030. It expresses the aspiration for Jamaica to become a country where its citizens enjoy a high quality of life and world-class standards in education,

health care, nutrition. Vision 2030 introduces a new paradigm which redefines the strategic direction for Jamaica and aims to put the country on the path to sustainable prosperity. The new paradigm will move the country from a dependence on tourism, minerals and agricultural commodities to the development of cultural, human, knowledge and institutional capital.

The Ministry of Science, Energy, Technology and Mining recently released the 2018 Integrated Resource Plan (IRP), which is geared towards the development of a modern energy sector in Jamaica. It was developed in substantial collaboration with Jamaica Public Service, the Office of Utilities Regulation, Independent Power Producers, and stakeholders who are impacted by Jamaica's investment in its electricity sector. The plan established the forecasted electricity demand over the next 20 years, determined the electricity generation capacity and technologies that can be used to satisfy this projected demand, and established agreements on the transmission and distribution infrastructure to generate and deliver the needed electricity and the resulting tariffs. The 2018 IRP gives all stakeholders, including the investment community, a clear view of the agreed suite of medium to long term investment opportunities necessary to achieve Jamaica's 2030 renewable energy target of 30 percent.

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