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## **ENERGY PROFILES**

**TRINIDAD AND TOBAGO**

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# Energy Profiles: Trinidad and Tobago

*By Chaitram Mohamed*

*BSc Economics (Distinction) MA Economics (Distinction,  
University of Hyderabad)*

*Energy Analyst*

University of Guyana's Institute for Energy Diplomacy

*The opinions contained in this publication are those  
of the author and do not necessarily reflect the view  
of the University of Guyana.*

## **Background**

Trinidad and Tobago (T&T) is the largest producer of oil and natural gas in the Caribbean. It is located to the south of Grenada and just off the northeastern coast of Venezuela. Trinidad, the larger of the two islands, is about 4,800 square kilometres in size. Tobago has an area of circa 300 square kilometres and lies 20 miles to the northeast of Trinidad. The country's major economic sectors are agriculture, forestry and fishing (1.03 percent), industry including construction (42 percent) and services (55.11 percent).

The economy is highly dependent on its oil and gas industry, which accounts for about 45 percent of its gross domestic product. The energy sector accounts for 22 percent of government revenue and 29 percent of merchandise imports. The country recorded a GDP per capita of 17,397.982 (current USD) in 2019 with a population of 1,394,973 (The World Bank, 2021). In 2019, Trinidad and Tobago exported a total of \$9.51B, making it the number 91 exporter in the world with top destinations such as the United States \$3.14B and Guyana \$864M. The top exports are petroleum gas \$3.21B, acyclic alcohols \$1.4B and crude petroleum \$1.14B.

Like many other Caribbean territories, the economy has experienced several economic shocks as a result of COVID-19. The implementation of the "stay at home" measures severely affected the services sector as tourist arrivals decreased by more than 60 percent. According to the latest estimates of the International Monetary Fund, GDP growth fell to -5.6 percent in 2020. The economy is expected to grow by 2.6 percent in 2021 as global economic recovery takes hold.

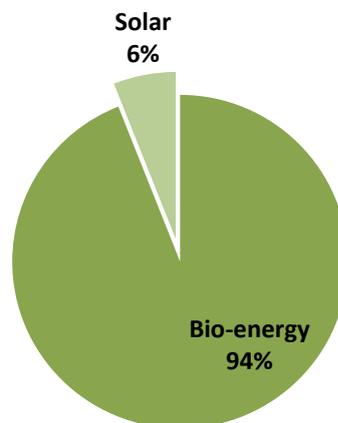
## **Energy Sector**

The country has a market centered primarily on natural gas with 90 percent of energy generated from natural gas and 10 percent from oil. Of the total

primary energy supply, non-renewable and renewable were represented by 767,345 TJ and 303 TJ respectively. Primary energy trade statistics show imports of 221,144 TJ and exports of 820,509 TJ, resulting in a net trade of 599,365 TJ, (IRENA Energy Profiles).

Renewable energy contributed 0.3 percent to total final energy consumption. Of the renewable energy supply, 94 percent was represented by bio-energy whilst the remaining 6 percent was represented by solar. Sources of renewable energy consumption include bio-energy direct use (93 percent) and electricity (7 percent). The main consumption sectors are households (95 percent), industry (4 percent) and other (1 percent), (IRENA Energy Profiles).

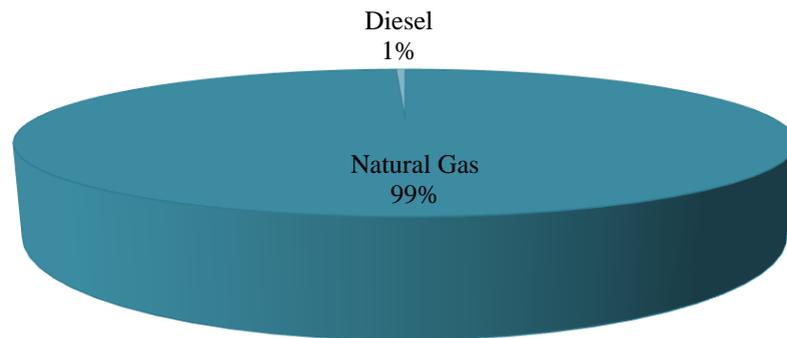
Diagram 1: Renewable Energy Supply | Source: IRENA (2016)



The entire population of Trinidad and Tobago has access to electricity. The country generates electricity mainly from natural gas. The electricity mix, according to the United States Department of Energy was as follows: natural gas (99.5 percent) and diesel (0.5 percent), (Office of Energy Efficiency and Renewable Energy 2020). The average electricity rates (USD/kWh) are currently as follows: residential (\$0.05), commercial (\$0.06), industrial (\$0.03) and street lighting (\$84/year), (Caribbean Center for Renewable Energy and Energy Efficiency).

Total electricity capacity in 2018 was 2158MW, with 2155 MW from non-renewables and only 3MW from renewables. Latest estimates show total electricity generation was about 10,713 GWh. Total installed capacity was recorded at 2,019 MW, with a base load of about 750 MW in 2019. The total annual system generation was 9,294 GWh in 2019. In the same year, the transmission and distribution losses totaled 892 GWh- which is approximately 9.6 percent of net generation. The electricity sector of T&T has a total customer base of approximately 487,877, (Caribbean Centre for Renewable Energy and Energy Efficiency).

Diagram 2: Electricity Mix | Source: OEERE (2020)



## Energy And Electricity Sector Regulatory Framework

The Ministry of Energy and Energy Affairs (MEEA) monitors, controls and regulates the energy and mineral sector. In the Petroleum Act (1969), the Petroleum Regulations (1970) and Petroleum Taxes Act (1974), the MEEA is also responsible for issuing licenses for oil exploration and production, and receiving applications for the competitive bidding process. The Natural Gas Company of Trinidad and Tobago (NGC), established in 1975, is the sole buyer and seller of gas in T&T. NGC owns, maintains and operates the natural gas transmission system in the country, (Inter-American Development Bank).

T&T's electricity market is controlled by the state-owned Trinidad and Tobago Electricity Commission (T&TEC). T&TEC is the sole transmission and distribution company in the country. Until 1988, T&TEC operated as a vertically integrated utility company that held a monopoly on the generation, transmission and distribution of electricity. Now, the company purchases electricity from three Independent Power Producers (IPPs): The Power Generation Company of Trinidad and Tobago (POWERGEN), Trinity Power Limited and Trinidad Generation Unlimited.

The electricity market in Trinidad is regulated by the Regulated Industries Commission (RIC), which was established in 1988. RIC sets overall electricity prices. It has two categories of administration, ensuring that T&TEC does not neglect its responsibilities (Overall Electricity Standards) and ensuring customers rights (Guaranteed Electricity Standards).

Overall Electricity Standards (OES) includes specifications for meter reading, billing, maintenance, provisioning of notice and responding to complaints. Under the Guaranteed Electricity Standards (GES) customers are entitled to compensation if the responsibilities outlined in the OES are not fulfilled. In the event of failure to meet any one of these Standards, T&TEC is required to pay compensation in prescribed amounts to the affected customer.

## **Managing the Transition to A Low Emissions Economy**

The renewable electricity target is set at 10 percent by 2021 whilst the energy efficiency target is 10 percent by 2024, (United States Department of Energy). Renewable energy will be incorporated into the energy supply (2016-2025) medium term goals and the country's energy efficiency improvement is a long term goal.

The Minister of Planning and Development with the Environmental Management Authority's (EMA) Managing Director jointly announced the

establishment of the first National Council for Sustainable Development (NCSD) in Trinidad and Tobago on September 9, 2020, with one major objective being the development and timely reviews of an action plan for T&T's National Environmental Policy (NEP), 2018.

The OECS Green-Blue Economy Strategy and Action Plan – the first of its kind to combine green and blue economy strategies for sustainable development – will be developed under a memorandum of understanding (MOU) signed in June 2019 between the Caribbean Natural Resources Institute (Canari) and the Organisation of Eastern Caribbean States (OECS) Commission.

A green economy is one which minimises ecosystem degradation, and is low carbon, resource efficient and socially equitable. Within this, a blue economy focuses specifically on coastal and marine resources. This will improve the ability of the OECS to access global funding for climate change resilience and direct foreign and local investment towards inclusive and sustainable economic activities.

The National Development Strategy of Trinidad and Tobago is categorised into five themes based on their areas of focus: Putting People First: Nurturing Our Greatest Asset, Delivering Good Governance and Service Excellence, Improving Productivity through Quality Infrastructure and Transportation, Building Globally Competitive Businesses, and Placing the Environment at the Centre of Social and Economic Development. Tobago is committed to incorporating the SDGs in its National Development Strategy

While the country is facing the effects of falling energy prices, it has revealed a weakness- the lack of economic diversity. The NDS states that investment in public utilities will be pursued, specifically when it concerns energy, investments will be made in renewable energy implementation e.g. house solar energy systems, photovoltaic generators and small wind turbines. Carbon footprint reduction methods will be implemented in keeping with the SDGs along with greenhouse gas mitigation actions, (Vision 2030).

The country will assess the renewable energy potential by conducting a wind resource assessment survey to determine the feasibility of wind-generated power and citing of potential wind farms. A similar examination to maximises the potential of solar power will be undertaken, including deployment of commercially available technology such as solar street lighting. A demonstration project of solar lighting on the Priority Bus Route will be implemented. The Government will provide the incentives for investment in and utilization of renewable energy power plants.

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