



RBC – TRINIDAD & TOBAGO

Renewable Energy Transition for Trinidad & Tobago

1 Preserve

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2 Pivot

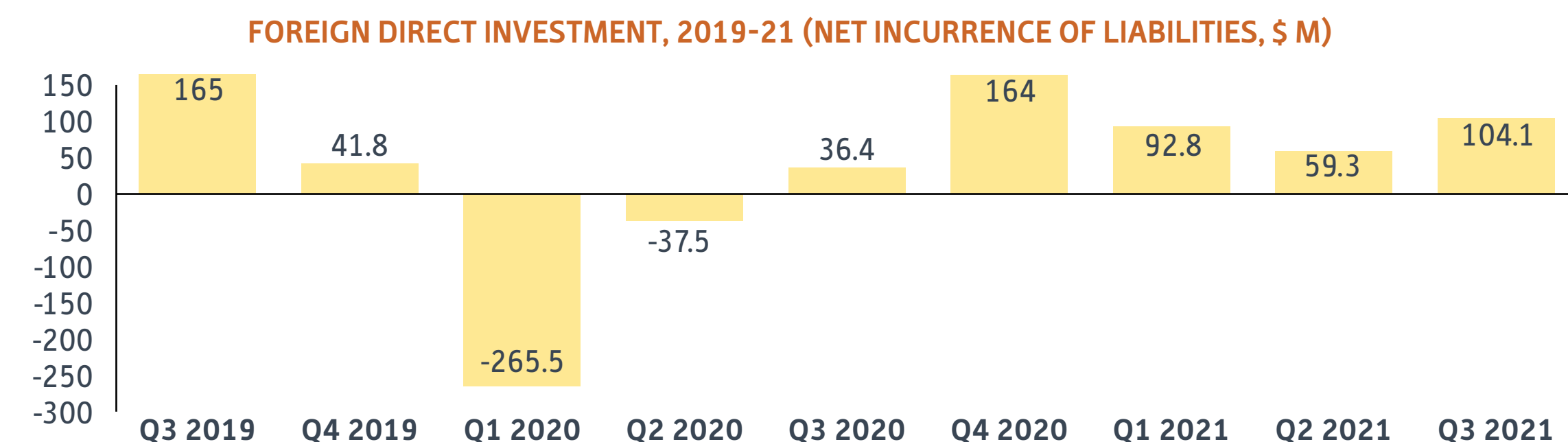
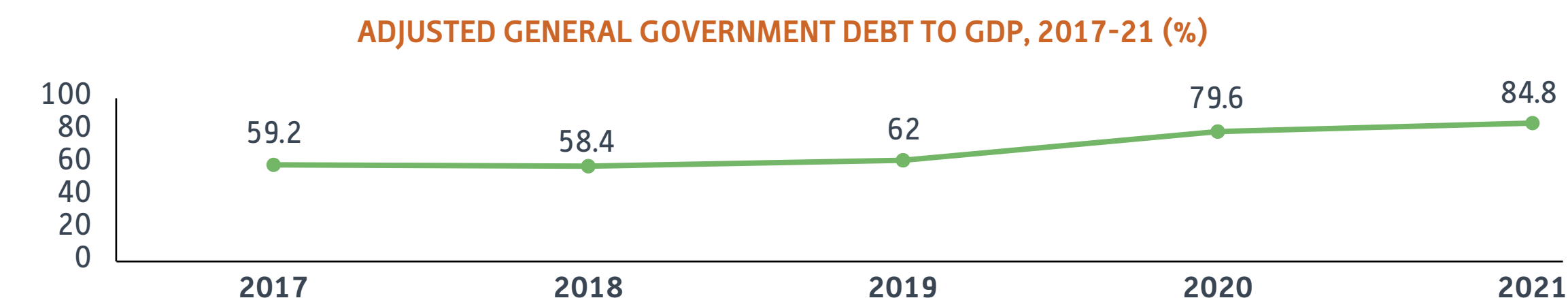
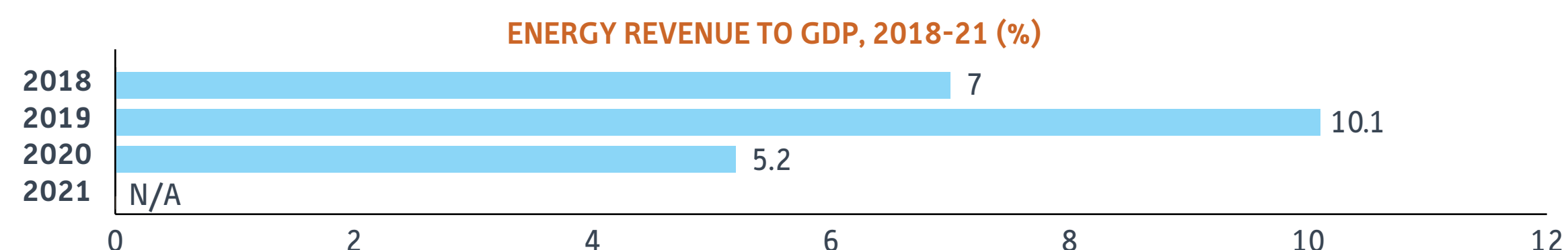
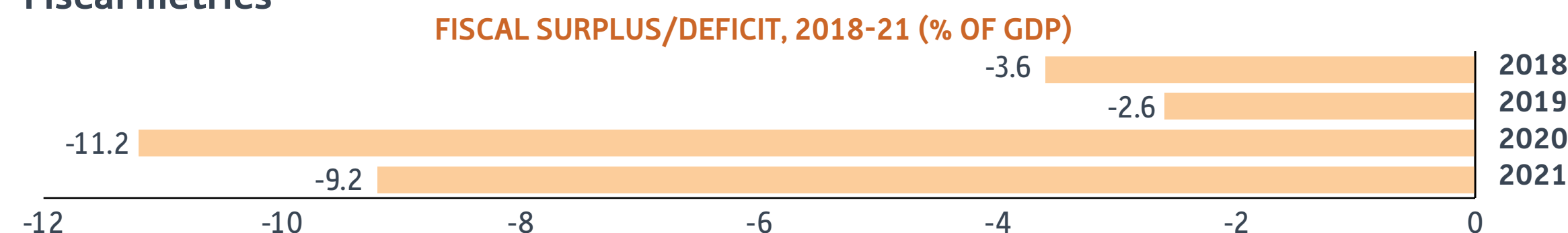
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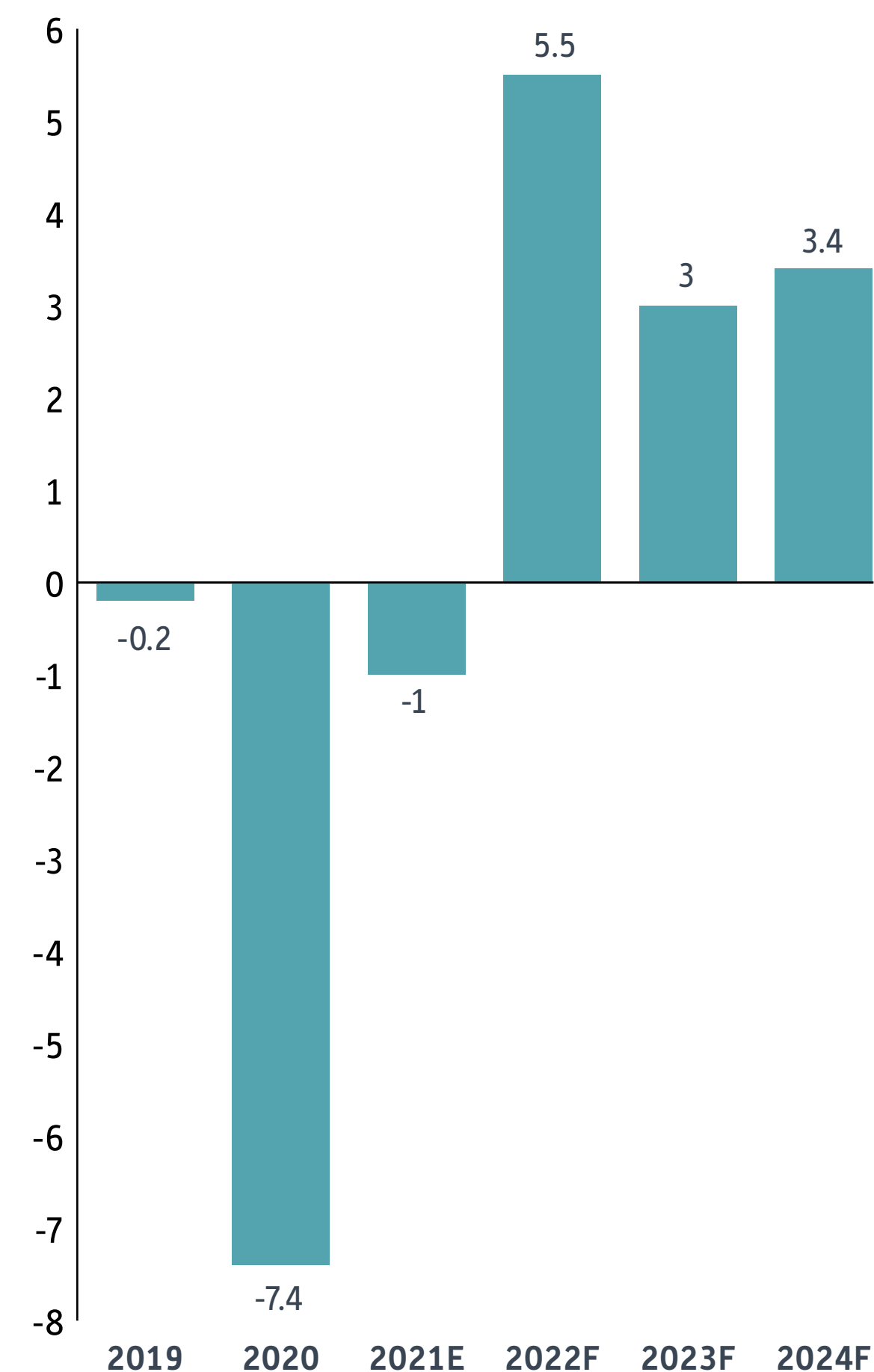
- 8 ESG considerations, energy efficiency and economic growth

After a number of years of difficult macroeconomic conditions, Trinidad & Tobago is set for solid growth from 2022 onwards

Fiscal metrics



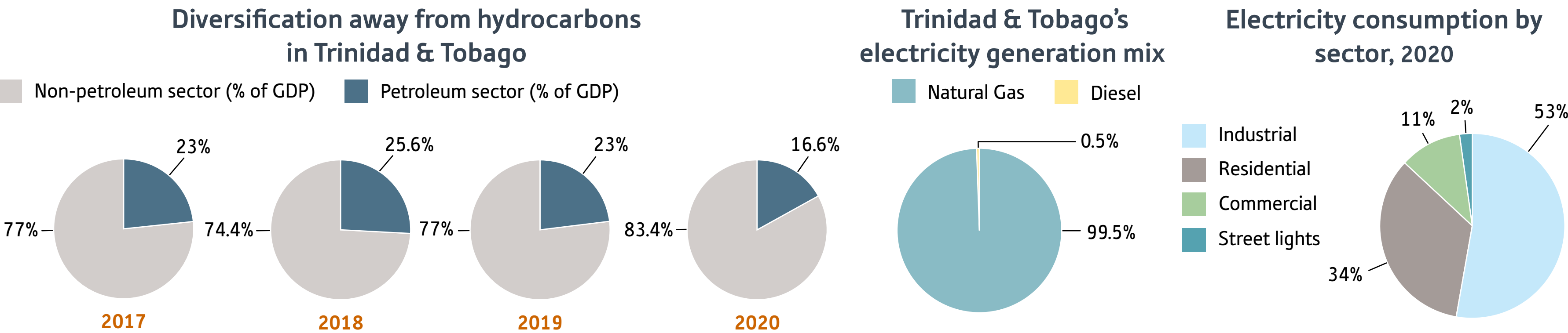
GDP growth, 2019-24F (%)



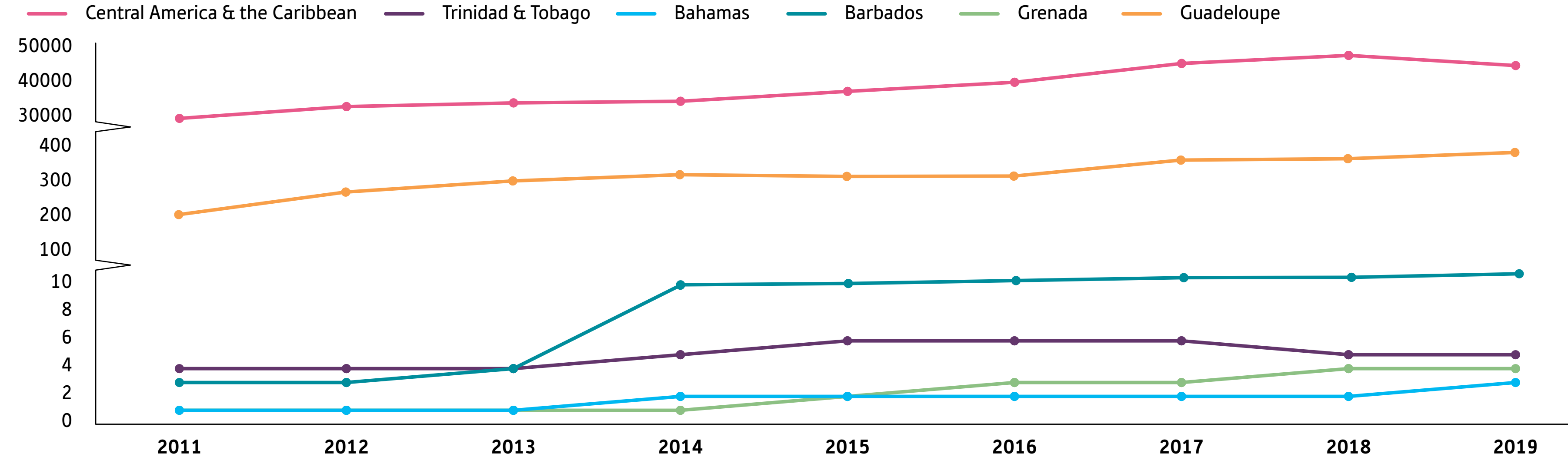
An improving outlook

Trinidad & Tobago was severely affected by the Covid-19 health crisis and related macroeconomic uncertainty. While the country remained relatively untouched by large outbreaks at the start of the pandemic due to the decisive nature of the government lockdown, it experienced a number of waves from May 2021 onwards. The decline in global oil prices throughout 2020 was a major hit to the economy; however, this spurred conversations around the need to diversify economic contributions. Nevertheless, the rise in oil prices in early 2022 provides a more positive economic outlook, with higher-than-expected revenue and foreign exchange reserves for the year.

While Trinidad & Tobago relies on hydrocarbons for electricity, it can emulate other island nations' experience in transitioning to clean energy



Renewable energy production in selected regional economies, 2011-19 (GWh)

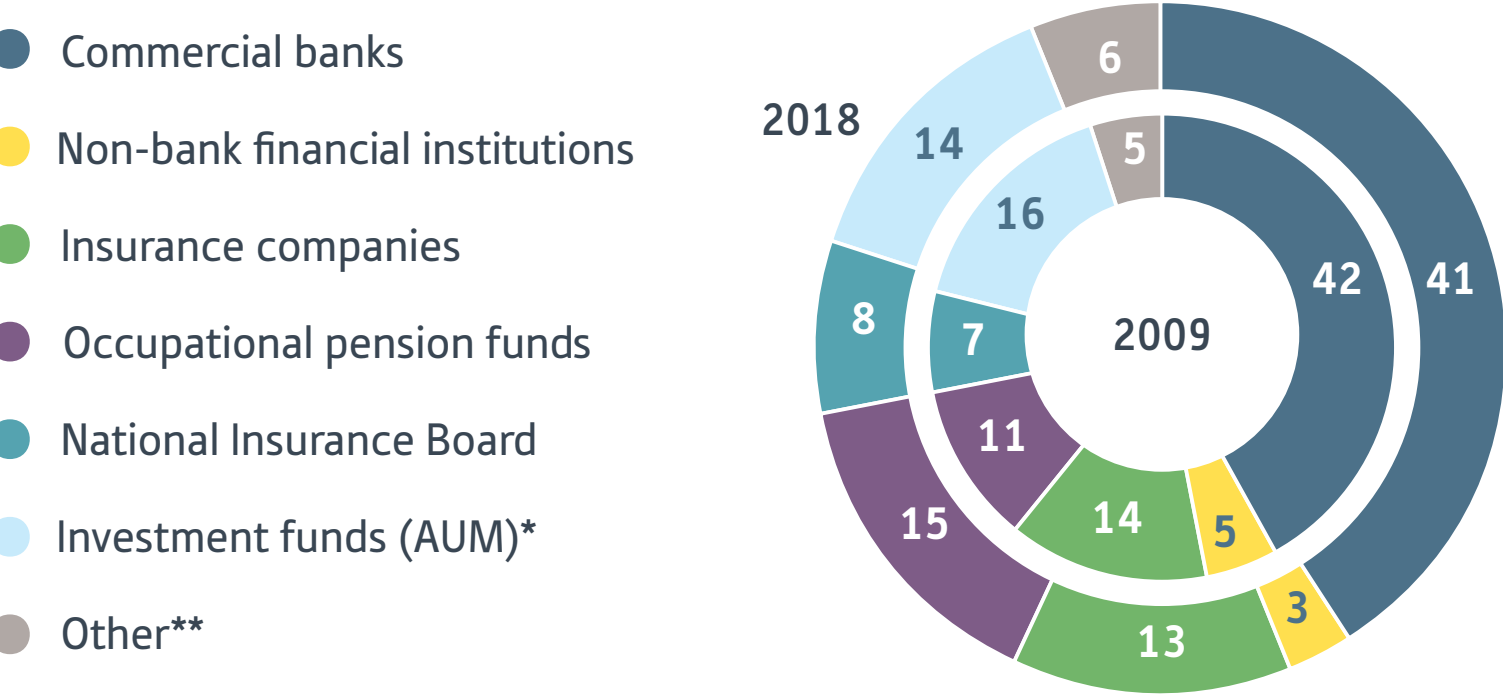


Transition potential

Trinidad & Tobago relies heavily on natural gas for electricity generation, and has missed its target of meeting 10% of energy needs with renewable sources by 2021. Lessons on how to increase its renewable energy capacity can be drawn from other countries and territories in the region, notably Barbados and Guadeloupe, with the former having committed to 100% renewable energy use and carbon neutrality by 2030. Tapping into Trinidad & Tobago's vast wind and solar resources for domestic electricity consumption would allow it to export more natural gas and use the extra revenue to finance its broader, long-term energy transition plans.

Financial institutions will be central to Trinidad & Tobago's transition away from traditional energy sources

Evolution of the financial system structure, 2009 vs 2018
(% of total assets)

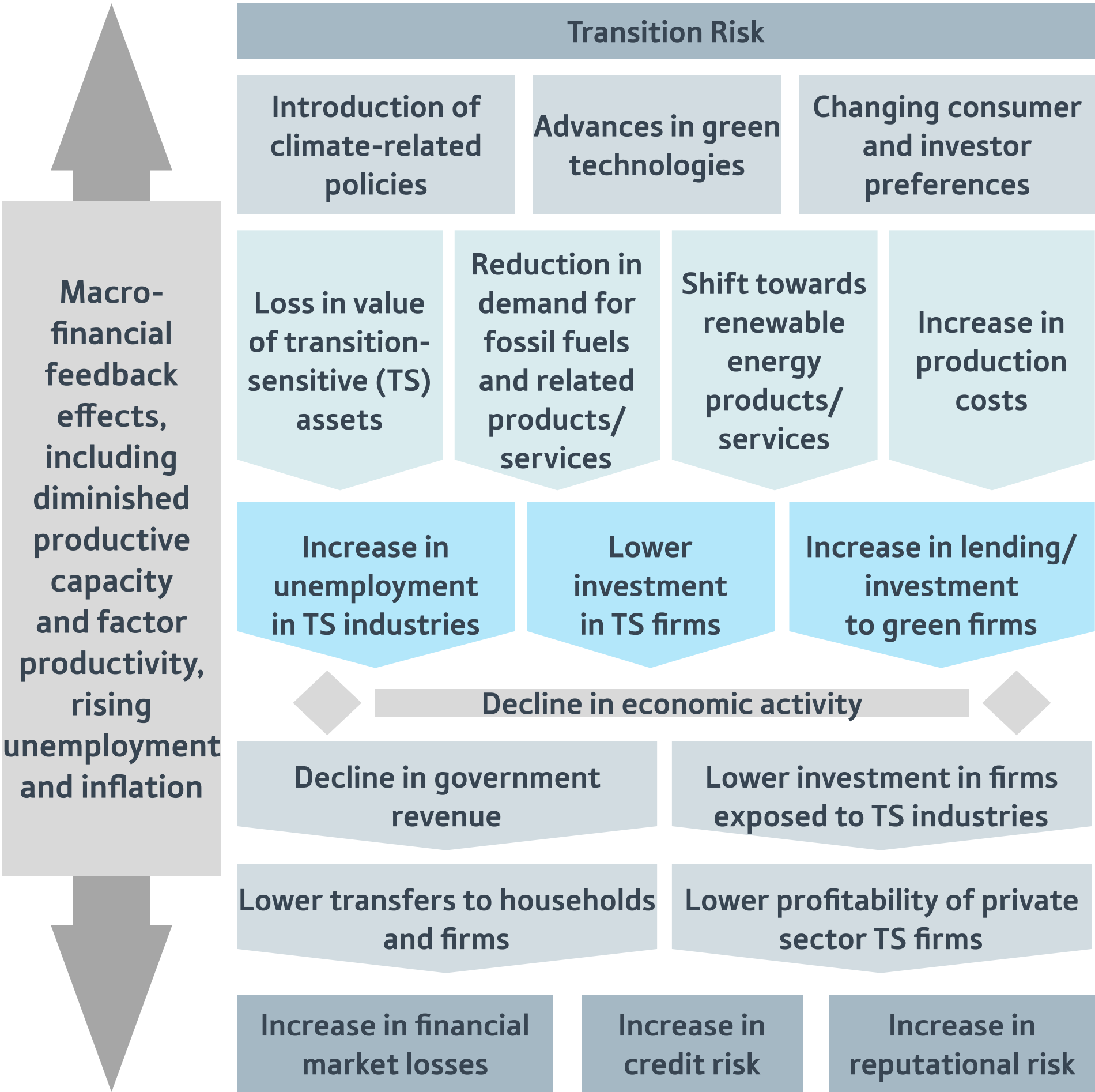


**AUM in 2009 shows January 2010 amount*
***This includes thrift institutions, credit unions and development banks*

Timeline of the actions taken by financial institutions to promote renewable energy

DATE	PROJECT	ACTOR	DESCRIPTION
2017 - ongoing	Various investments	MPC Caribbean Clean Energy	Company that enables investment in renewable energy projects in Trinidad & Tobago and the wider Caribbean region. The company is publicly listed on the Trinidad & Tobago Stock Exchange.
January 2022 - ongoing	Multisource financing facility	Caribbean Development Bank	The bank and the Minister of Energy and Energy Industries discussed a multisource financing facility that could have a transformative impact on the region's energy sector. The facility would combine various sources of financing, including from the private sector.

Why do financial institutions have a role to play in energy transition? The impact of climate-related shocks on the financial system in Trinidad & Tobago:

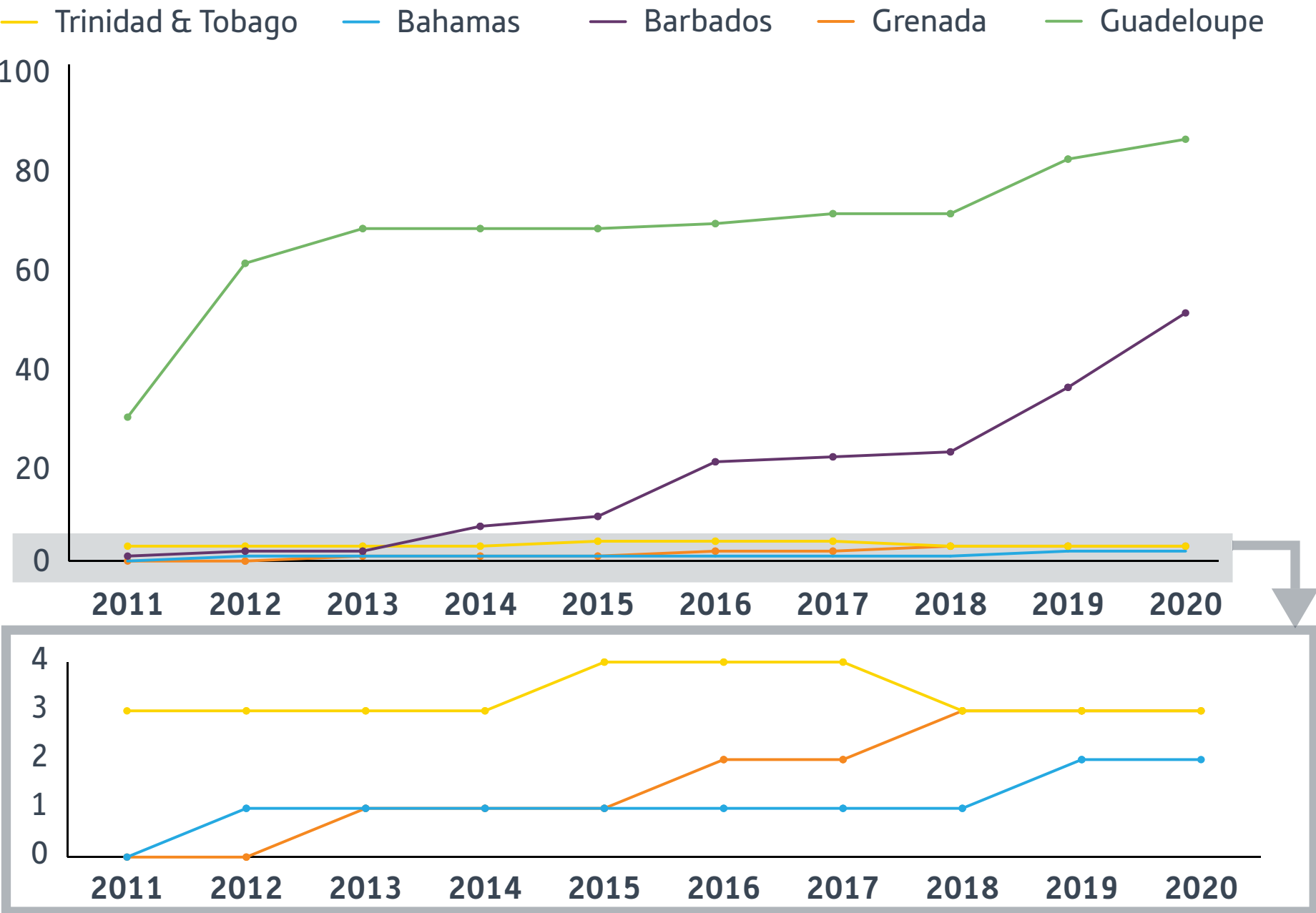


Green finance

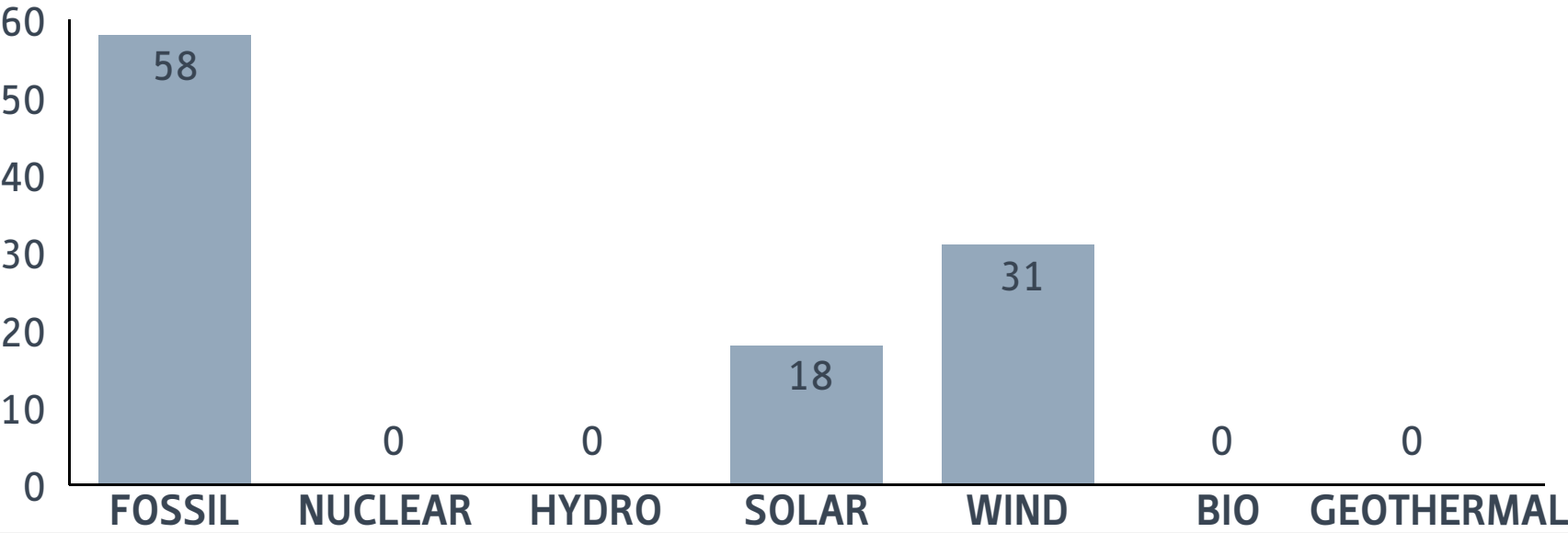
The clean energy transition will only be successful with the support of financial institutions with climate finance lending and broader investment in green infrastructure. In Trinidad & Tobago the framework comprises climate funds, green bonds and additional support from multilateral sources. However, banks and international organisations also have a role to play in setting the rules of the game. Members of Parliament and CEOs of major banks in the country have highlighted the pressing need for loans that encourage the promotion of sustainable energy, as well as a period of mergers and acquisitions activity to restructure and create entities fit for a new energy landscape.

Where does Trinidad & Tobago stand in terms of solar energy compared to other Caribbean countries?

Solar energy capacity of selected countries, 2011-20 (MW)

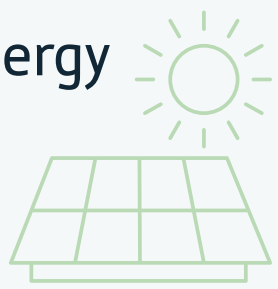


Trinidad & Tobago's energy capacity utilisation, 2019 (%)

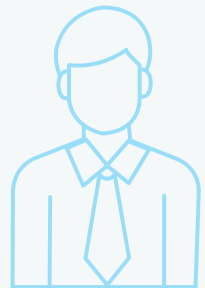


Key developments in solar energy in Trinidad & Tobago

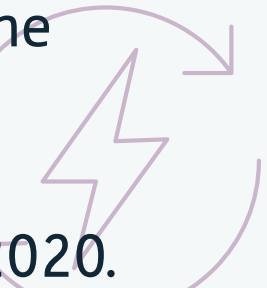
The country's installed capacity for solar energy is forecast to register a CAGR of **109%** between 2022 and 2027



In February 2020 the government floated a tender for **130 MW** of solar power to attract foreign investors



Renewable energy projects in Trinidad & Tobago have been limited to the pilot scale. Two 2-KW off-grid photovoltaic (PV) systems are in operation at the University of Trinidad & Tobago and the Trinidad & Tobago Electricity Commission. Twenty-one 1-KW PV systems had also been installed at schools around the country by 2020.



In July 2020 the Ministry of Planning and Development initiated a **€2.4m** solar energy project to support national efforts to reduce greenhouse gas emissions

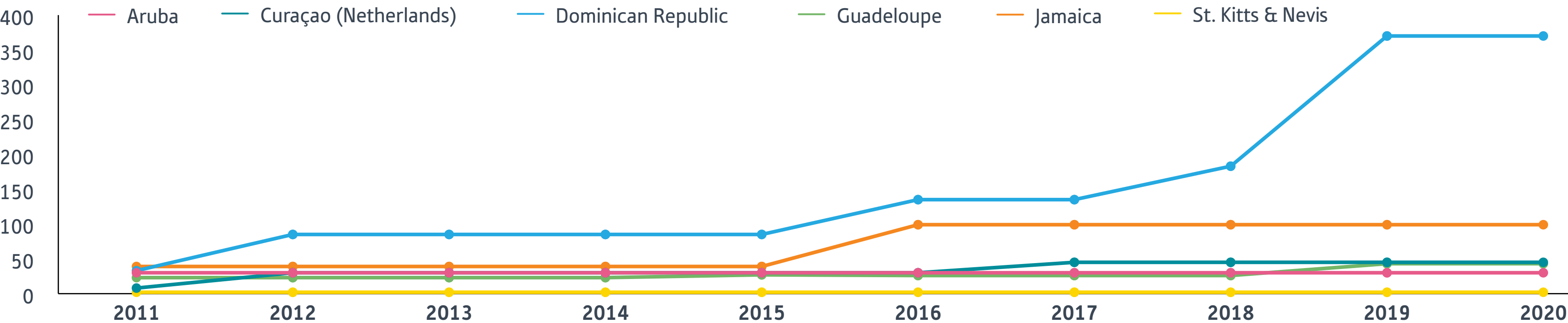


Steady growth in solar

The electricity generation mix in Trinidad & Tobago is still dominated by fossil fuels. In addition to this, there has been a significant lack of investment by foreign and domestic companies in the country's renewable energy sector, which has hampered the development of utility-size solar projects. However, increasing demand for clean and stable energy, in tandem with wider finance initiatives, is expected to be the primary driver for the solar power generation market in the country. Trinidad & Tobago has been one of the most active countries in the region in terms of designing and prioritising policies for solar energy.

Although Trinidad & Tobago has not yet fully explored its wind energy potential, other nations in the region log steady progress

Wind energy capacity of selected countries, 2011-20 (MW)

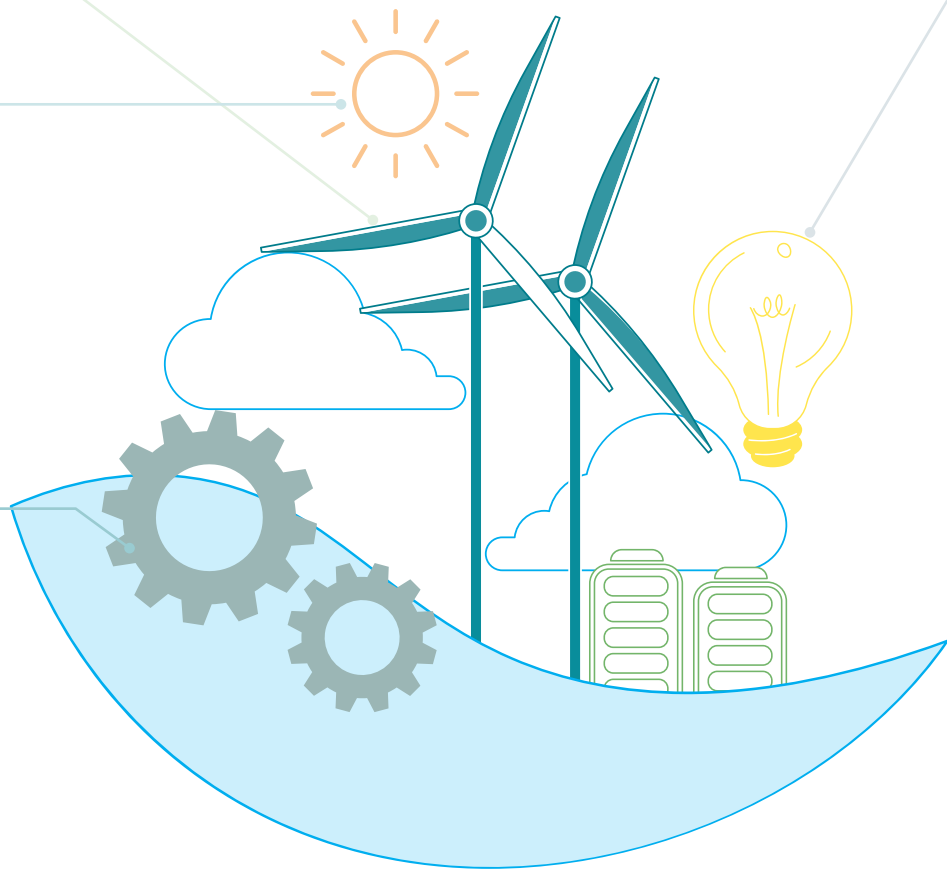


A possible model for Trinidad & Tobago? Wind energy in Jamaica:

Jamaica has set an ambitious target to generate **30%** of its energy from renewable sources such as hydro, wind and solar power by 2030.

Jamaica is currently seeking to procure **320 MW** of wind and solar power in 2022.

Wigton Windfarm is one of the largest facilities of its kind in the Caribbean, with a **20.7-MW** plant and an **18-MW** extension facility.



BMR – the largest electricity provider in the country – is currently setting up a windfarm

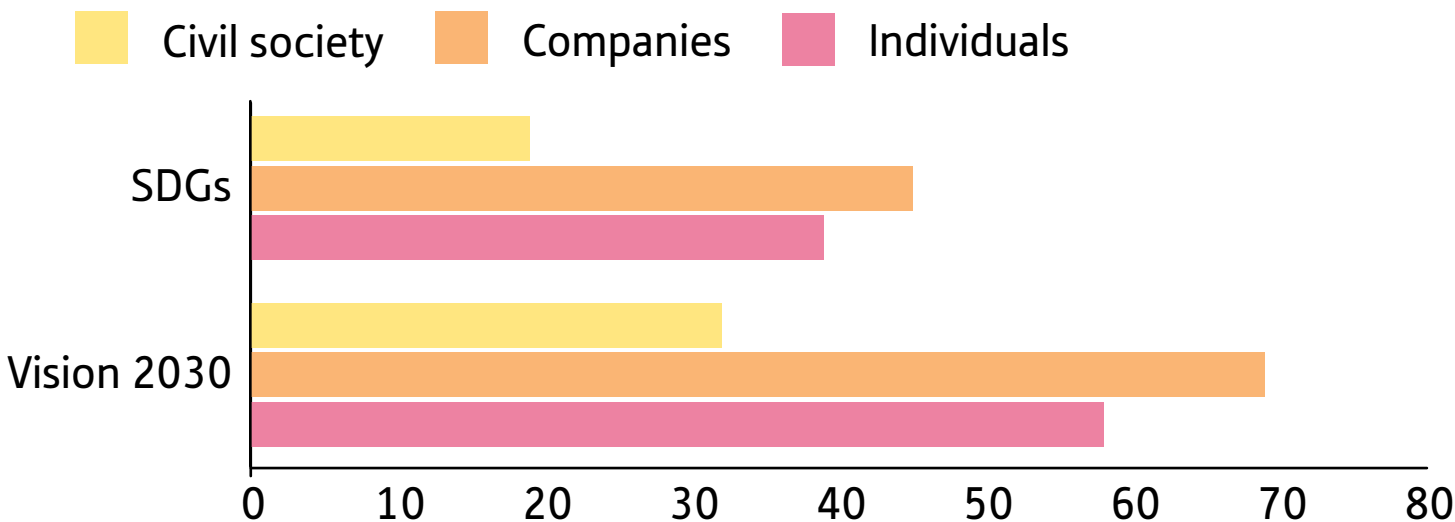
- 36 MW of power
- 11 Vestas V112 3.3-MW turbines already installed
- Located 90 km west of Kingston
- Commenced operations in July 2016
- Largest private sector-led renewable energy project in the country
- Expected to generate about 120,000 MW of energy per year – equivalent to 3% of Jamaica's energy demand

Limited wind growth

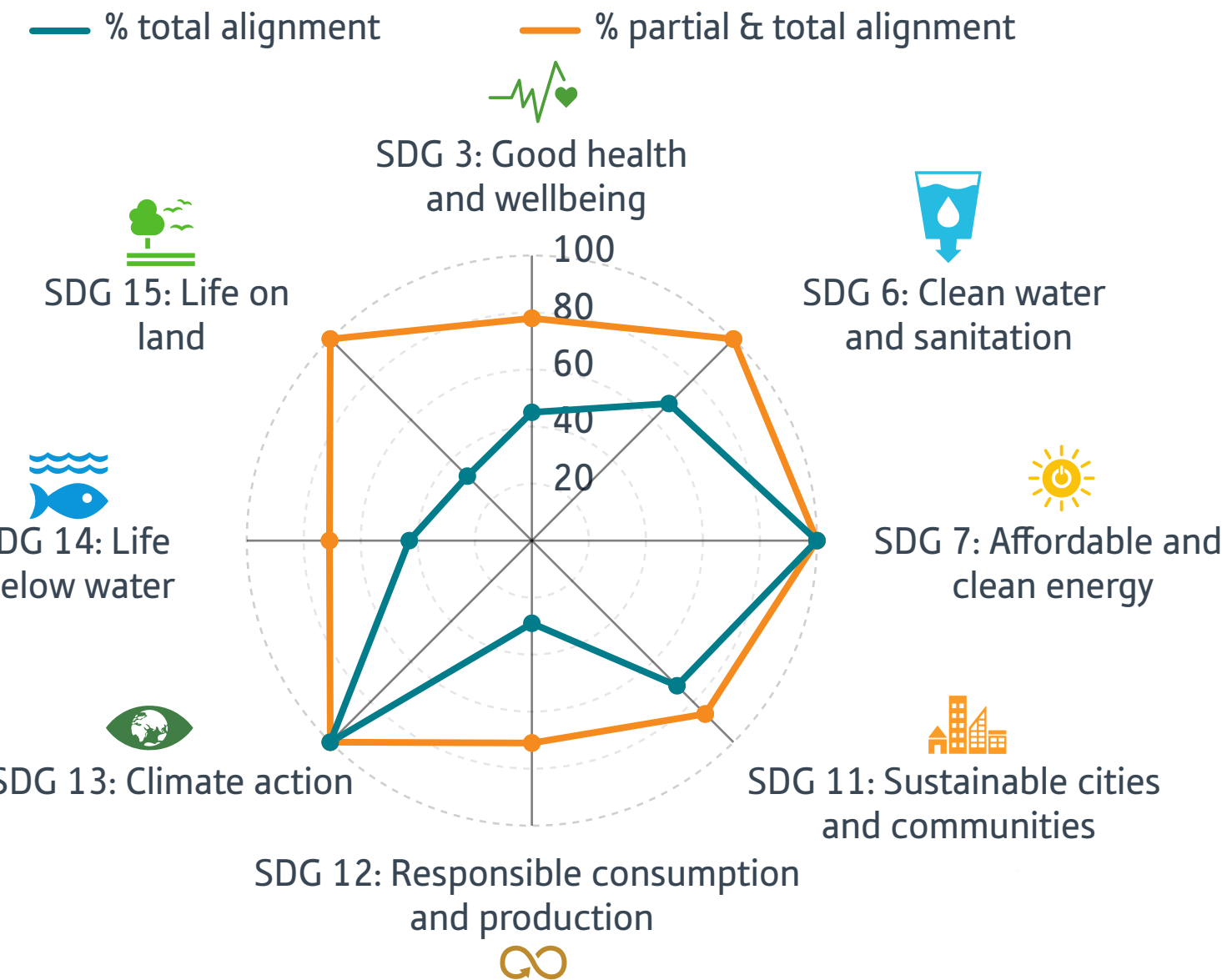
Wind energy is still in its infancy in Trinidad & Tobago. Despite the fact that many companies are now active in the renewable energy sector, many of these firms are not yet focused on wind, and for those that are, their wind-related activities are often marginal. Offshore wind energy nonetheless offers a promising alternative for an island nation like Trinidad & Tobago that has limited land resources and expansive territorial waters. In 2013 the government-approved National Wind Resource Assessment Programme outlined five candidate sites for wind farm development across the islands. However, there has been little concrete progress since.

How the Agenda for Sustainable Development can be applied to Trinidad & Tobago's energy transition and improve social wellbeing

Survey respondents with little or no knowledge of UN Sustainable Development Goals (SDGs) and Vision 2030 (%)



Alignment to SDGs of government planning documents



Type of activity	Established industry	Emerging/future industry
Harvesting living resources	Fisheries	Aquaculture Bioprospecting
Extraction and generation of non-living resources	Oil and gas Desalination	Renewable energy Deep-sea mining
Commerce and trade	Tourism	Ecotourism
	Coastal development	Sale of natural gas to commercial cargo ships to encourage less pollution
	Shipping and port infrastructure services	
	Marine services	
Response to ocean health challenges	Various	Technology and R&D
		Blue carbon
		Habitat protection and restoration

Green economy in Trinidad & Tobago

Date	Legislation	Description
2006 (revisited in 2018)	National Environmental Policy	Articulates the priorities determined as critical to achieving environmental sustainability.
2011	National Climate Change Policy	Guidance on transitioning to a low-carbon economy by establishing the main objectives to reduce greenhouse gas emissions, enhance carbon sinks, and build resilience and capacity through energy-efficient technologies.
2015	Carbon Reduction Strategy	Comprehensive plan to lower greenhouse gas emissions to 2040.
2016	National Development Strategy - Vision 2030	56 goals across five themes. Themes 1 (Putting People First) and 5 (Placing the Environment at the Centre of Social and Economic Development) focus on green economy issues.
2019	Water Pollution Rules	The primary goal is to reduce the level of water pollutants in effluent (point-source discharges), thereby improving the overall quality of inland and coastal water resources.

Forward-thinking policy

Trinidad & Tobago is taking steps to prepare the societal, regulatory and economic foundations necessary to support renewable energy and energy-efficient technologies. By partnering with institutions like the UN to assess wind resources and boost public awareness, the government is positioning the country for a more diverse and environmentally sustainable energy system. A regulatory environment in which alternative fuels, efficiency-driving technologies and renewable energy can thrive could reduce financial burden on the government, preserve the economic value of domestic energy reserves and spur the creation of a domestic clean energy sector.

CASE STUDY: The importance of financing for bolstering ESG practices in Trinidad & Tobago



HADCO Group

Founded in 1992, HADCO Group is focused on the distribution of premium imported brands to meet constantly evolving demands from consumers. Its operations extend across Latin America, the Caribbean, Europe and the US, and are focused on the following divisions:

Food & beverage

Electrical & lighting

Wine & spirits

Manufacturing

Recycling

Logistics & services

The company has a particular focus on environmental, social and governance (ESG) initiatives, including but not limited to an ecotourism division, recycling, and a foundation dedicated to assisting employees and communities.

HADCO Group’s ESG practices

Environment Ecotourism

- In 2021 HADCO won the bid to partner with the Asa Wright Nature Centre and Lodge to renovate and manage the facility for a reopening to the public in 2022. The lodge is a wildlife conservation and eco-resort renowned for its birth-watching ambience.
- Consistent with its launch of an ecotourism division, the company also supports/manages an eco-lodge facility at Mont Plaisir Estate, which is a nesting site for protected leatherback turtles and is well known for turtle watching by both local and international guests.

Recycling

- With a vision to help tackle the waste-management crisis in Trinidad & Tobago, the group’s recycling division includes Ecoimpact and New Age Recycling, with the latter focused on reutilising wastepaper, cardboard, TetraPak and aluminium cans.
- Ecoimpact is involved in the collection, processing and recycling of waste vegetable oil to be exported and re-used in the production of alternative fuels. Ecoimpact is also expanding to include a tyre recycling plant.
- The Recycling division provides free collection services to hundreds of private and public companies and institutions such as restaurants, government offices, grocery stores, banks, printers, churches, schools, hospitals and many others throughout Trinidad. It also partners with other recycling companies to retrieve recyclable material from Tobago.

The following captures waste material exported for the purpose of recycling:

	Jan-Dec 2021	Jan-May 2022
Old corrugated cardboard	2.6m tonnes	1.3m tonnes
Wastepaper	672,241 tonnes	158,414 tonnes
TetraPak	15,422 tonnes	20,467 tonnes
Waste vegetable oil	765,113 tonnes	292,886 tonnes (Jan-Apr22)

Waste material delivered to local paper mills for the purpose of recycling:

	Jan-Dec 2021	Jan-May 2022
Wastepaper	1.3m tonnes	502,463 tonnes

Social

- HADCO is the title sponsor of the Phase II Pan Groove steel orchestra. Led by a team of industry experts, Musical Instruments of Trinidad and Tobago Company is expanding its footprint at the ETECK Industrial Park in Diego Martin to support the manufacturing and storage of steel pans for sale both locally and internationally by July 2022.
- Established in the memory of the mother of the group’s co-CEOs, Maria Hadad, the HADCO Group Foundation was founded to assist employees with personal problems that might adversely impact them, their families or their communities.
- In further support of the well-being of its employees, the group made changes to its Group Health Plan to support diversity and inclusion by recognising same-sex couples.

RBC Royal Bank is the primary banker for the **HADCO Group of companies** and successfully raised **TT\$310m** in financing for the group in **September 2020**

“We need to work together. For us to all thrive and prosper, we need to aim for a future where the potential of people and communities can be realised in a healthier environment driven by cleaner energy.”

Marc Jardine, Vice-President,
Business Banking, RBC Royal Bank Trinidad & Tobago



Marc Jardine, Vice-President of Business Banking, Trinidad & Tobago; and Lead of RBC's Caribbean Environment, Social and Governance (ESG) Committee



“
Energy development should be done in an environmentally and socially responsible manner, with meaningful consultation with stakeholders and strict regulatory compliance
”

How would you evaluate the push to achieve net-zero carbon emissions?

JARDINE: We encounter many individuals and businesses that are interested in bringing clean energy solutions to the Caribbean market at both the domestic and the international level. However, in most instances, infrastructure and national agendas are not yet where they need to be. To bring many of these solutions to fruition at the industrial and commercial level, amendments are required from a macroeconomic perspective by governments with regards to interconnectivity and access to grids. In addition, there is an opportunity to explore subsidies other than duty-free classifications and machinery imports that are exempt from value-added tax. Tangible tax credits to green energy producers should be considered.

The transition to net zero must be orderly and inclusive to be successful, recognising the changes that need to occur in our daily lives and economies in terms of how energy and resources are consumed. We believe that how we get there is just as important as the destination. In reality, because sufficient energy sources are essential for life and work, we cannot simply flip the switch to clean energy. That is why partnerships and collaboration throughout the industry are essential. We need many types of energy solutions to meet growing global energy demand, and the reliance on traditional sources of energy will realistically continue for some time to satisfy those needs. This is where sustainable financing can help with the transition by supporting clients that are involved in clean energy and other innovative projects that help reduce carbon emissions or enhance resilience against severe weather events.

Where do ESG principles fit into the conversation around climate change and the attention being given to renewable energy?

JARDINE: The climate conversation is fully embedded in the ESG framework, where emphasis has been placed on the carbon impact of traditional power sources and how clean alternatives can alleviate that. For companies to achieve net-zero status, there must be alternatives in the macro framework under which they operate. In Trinidad &

Tobago there are few – if any – large-scale clean energy providers, as the electricity infrastructure is very limited and the economics of replacing grid power with clean alternatives for specific sites are financially unattractive. Corporations must create clean alternatives themselves, and if they do, commercial viability can be a stretch. Therefore, any such undertaking should be viewed as part of their sustainability efforts. The attractiveness of employing clean energy can be increased with policy changes and incentives. In this regard, energy development should be done in an environmentally and socially responsible manner, with meaningful consultation with stakeholders and strict regulatory compliance. Transitioning to net zero is not simple; it will require the largest economic transformation in generations.

In what ways can domestic businesses apply ESG principles to support the renewable energy transition in Trinidad & Tobago?

JARDINE: It is imperative for businesses to consider long-term value creation and sustainability. In the current context, this cannot happen without examining the impact of social and environmental factors on a wider group of stakeholders. There needs to be a long-term focus on customers, employees, communities, suppliers and shareholders, and a more inclusive approach to decision-making. ESG principles set a path for an organisation to do that, not least by identifying environmental guidelines that a business can incorporate into its policies, practices and products.

The consideration of push and pull factors is critical when embedding ESG policies in a company's operating ecosystem. Businesses should understand that – in most cases – consumers gravitate towards sustainable products and services when they have a choice. As there currently are not many green energy sources available in Trinidad & Tobago, local businesses must work towards developing their own and place additional emphasis on energy efficiency and conservation. ESG standards help set responsible lending practices for project funding, as well as aid in the development of product-specific initiatives such as personal and commercial solar power installations.

6 Key Takeaways

1

Although the country's fiscal situation before and during the Covid-19 pandemic was not optimal, economic growth prospects are positive and investment inflows are improving. A balanced approach to energy security and economic diversification strategies underpin the islands' economic potential.

2

Financial institutions worldwide have incorporated climate change-related risks into their core activities. The environmental agenda of Trinidad & Tobago's financial institutions will centre on optimising renewable energy production and driving energy efficiency in alignment with global sustainability targets and responsible investments.

3

Lessons from neighbouring island nations' experiences in renewable energy, particularly wind, can be integrated into the local energy mix. This would allow Trinidad & Tobago to export more of its natural gas to further fund energy transition efforts and wider environmental, social and governance (ESG) goals.

4

Vast hydrocarbons resources often hamper a nation's transition to a more sustainable and green economy. However, investments in energy transition spur innovation in other sectors of the economy and foster diversification and resilience.

5

Clearly defined ESG goals, along with setting a definitive plan of action to achieve Vision 2030, require building on existing efforts. Once clear objectives are set, financial institutions can effectively assist in the implementation of the government's plans through robust lending practices.

6

Building ESG goals into the regulatory framework, along with partnering with intergovernmental institutions, is setting the country up to reap the benefits of a more diverse and sustainable energy system. This will reduce financial burden on the government and preserve energy reserves.

