NGC Green Energy Map of Trinidad and Tobago 2024

GREEN + RENEWABLE ENERGY DEFINITION

Green energy – Sustainable energy usually derived from renewable energy technologies utilising natural resources that emit little to no greenhouse gases (GHGs). These sources include solar energy; wave energy, wind power, hydropower, green hydrogen, biofuels among others.

Renewable energy – Sustainable energy derived from natural resources that renew faster than they are consumed. While most sources emit little to no GHGs, such as those listed under green energy, there are some (e.g. trees to produce firewood and charcoal) that emit GHGs when utilised.

National Greenhouse Gas (GHG) Reduction Initiatives

The Knowledge Management System (KMS) of Trinidad and Tobago's National Climate Mitigation Monitoring, Reporting and Verification (MRV) System Design, is intended to create a centralised repository for information regarding greenhouse gas (GHG) emissions sources, mitigation efforts, and resources/support required and received to support their reduction. Visit https://www.ewsa.co.tt/our-environment/kms/ and the interactive version of this map for more details.

Carbon Capture, Utilisation and Storage (CCUS) involves the capturing of anthropogenic waste Carbon Dioxide (CO_2), transporting it to a storage site, and depositing it into sinks such as geological reservoirs or aquifers, where it cannot enter the atmosphere. CCUS is aligned with the Government of the Republic of Trinidad and Tobago's (GORTT's) policy to explore and implement low carbon solutions by reducing the emissions intensity of natural gas which is recognised as the cleanest burning fossil fuel. The Ministry of Energy and Energy Industries (MEEI) commissioned a National Carbon Dioxide Storage Atlas project in 2021 which is currently underway, led by the University of Trinidad and Tobago (UTT) and The University of the West Indies (The UWI). Visit https://www.energygov.tt/cost-business/carbon-capture-utilization-and-storage-ccs/ and the interactive version of this map for more details.

In May 2023, GORTT issued a strategy document for the implementation of wind generation, titled "Setting the path for Wind Energy Generation in Trinidad & Tobago". Visit https://www.caribbeanaccelerator.org/setting-the-path-for-wind-energy-generation-in-trinidad-and-tobago/ and the interactive version of this map for more details.

The GORTT, represented by the National Energy Corporation of Trinidad and Tobago Limited (National Energy) entered into an agreement with the Inter-American Development Bank (IDB) to develop a green hydrogen roadmap for Trinidad and Tobago. Following a competitive process, this study was awarded to **KBR**, who have worked with IDB's National Energy and key local stakeholders, to deliver the first phase of the green hydrogen study that concluded with the main findings presented in the 2022 summary report titled "The Roadmap for a Green Hydrogen Economy in Trinidad & Tobago".

Wind Energy Data

Wind Energy Generation of electricity using wind turbines. These turbines utilise wind power to convert kinetic energy into mechanical energy which a generator then turns into electricity. Minimum wind speeds of 6 m/s are required to achieve sufficient wind power for electricity generation. By 2035, the Government of Trinidad & Tobago aims to ensure that wind energy will be a significant contributor to the energy mix, with a target of at least 20% of installed generation coming from wind energy sources.

Site	Location	Site Name	Potential Power Output (MW)
1	Offshore	South-East Coast, Offshore, Galeota	1255
2	Offshore	South Coast Offshore, Los Iros	790
3	Offshore	Wind Coast Offshore, La Brea	225
4	Offshore	North Coast Offshore, Diego Martin	175
5	Offshore	Tobago South-East Coast, Crown Point	350
A	Onshore	North Coast, Blanchisseuse	100
B	Onshore	North-East Coast, Toco	155
C	Onshore	North-East Coast, Fishing Pond	280
D	Onshore	South-East Coast, Galeota	315
E	Onshore	South Coast, Los Iros	330
F	Onshore	South-West, Pale Seco	865
G	Onshore	South, San Fernando	180
H	Onshore	Central Range	240
I	Onshore	West Coast, Orange Field	120

Potential Sites
Offshore Areas
Suitability
Very High
High
Moderate
Low

Source: Setting the Path for Wind Energy Generation in Trinidad and Tobago May 2023

Solar Energy Data

Solar Energy: Generation of electricity using solar energy technologies to convert electromagnetic radiation from the sun. The main types of solar energy technologies are photovoltaic (PV) and concentrating solar thermal power (CSP).

Name	Value
Average theoretical potential (GHI) rank	5.385 kWh/m2 / 75
Average practical potential, level 1 / rank	4.349 kWh/kWp / 93
PV equivalent	0.0067
PVOUT seasonality index (country range)	1.19 (1.14 - 1.24)
LCOE average (country range)	0.10 (0.09 - 0.10)

Photovoltaic Power Output
kWh/kWp
7
0

Source: Global Solar Atlas, 2023. "Global Solar Atlas - Trinidad and Tobago." accessed 21st July 2023.

NGC Reforestation Programme

As part of its 'No Net Loss' initiative, NGC embarked on a project in 2005 to replant approximately 315 hectares of forest. From 2005 to 2021, over 100,000 seedlings were planted in forest conservancies located at Rousillac, Moruga, Mayaro and Rio Claro in southwest and southeast Trinidad. In 2018, NGC commissioned a study by The University of the West Indies (The UWI) to determine the amount of carbon sequestered above ground by the reforestation programme. The UWI was engaged in 2021 to conduct another study to ascertain the volume of carbon removed from the atmosphere as a result of the root systems of the replanted forests. Visit https://ngc.co.tt/wp-content/uploads/2023/10/NGC-Sustainability-Report-2022.pdf

SUMMARY OF NGC REFORESTATION PROGRAMME OUTCOMES (NGC SUSTAINABILITY REPORT 2022)

ESTIMATED CO_2 SEQUESTERED ABOVE AND BELOW GROUND IN 2022	ESTIMATED TOTAL CARBON SEQUESTERED ABOVE AND BELOW GROUND IN 2022	2022 AREA MAINTAINED
12,087 TONNES	44,359 TONNES	79.25 HECTARES

CNG Environmental Impact Data

Compressed Natural Gas (CNG) is Trinidad and Tobago's transition fuel for road transportation.Trinidad and Tobago has embarked on a state-funded fuel switching programme to promote the use of CNG. The number of conversions has been growing rapidly. In 2018, CNG sales grew by 48% compared to 2017. In 2019, growth more than doubled with an increase of 106%. In 2020, CNG sales grew by a further 24% and the same for 2021. Current implementation activities include the construction of 22 CNG stations to serve 18,055 vehicles. Approximately >59,000 tonnes of cumulative CO_2 emissions have been avoided from 2014 – 2022. In fulfilment of its commitment under the United Nations Framework Convention on Climate Change.
Source: https://unfccc.int/sites/default/files/resource/FIRST_%20BUR_TRINIDAD_AND_TOBAGO.pdf

CNG AT A GLANCE

SOLAR PV INSTALLATION CNG FUEL STATION AND OTHER EQUIPMENT	ADDITIONAL CNG VEHICLES ON THE ROAD IN 2022 (OEM AND CONVERTED)	CNG LITRES OF GASOLINE EQUIVALENT (LGE) SALES FOR 2022	HIGHEST GROSSING YEAR FOR SALES SINCE INCEPTION 2022
TT $ 8.9 MILLION	1,471 (SEDAN EQUIVALENTS)	21,065,339	25% HIGHER FROM 2021

ENVIRONMENTAL IMPACT

ESTIMATED CO_2 SAVINGS	CUMULATIVE CO_2 SAVINGS 2014-2022
15,633 TONNES	59,639 TONNES

Trinidad and Tobago LNG Production by Train

Even as the world transitions to renewable energy, natural gas will remain integral to the energy mix, given its market penetration, availability, and its clean burning properties relative to oil and coal.

LNG Production	Train 1	Train 2	Train 3	Train 4	
Capacity	3.0 mtpa	3.3 mtpa	3.3 mtpa	5.2 mtpa	
Shareholders	Shell 51.0% NGC 10.0%	BP 39.0%	Shell 57.5% BP 42.5%	Shell 57.5% BP 42.5%	Shell 51.11% NGC 11.11%	BP 37.78%
Gas Supply Rate	N/A		c. 560 mmscfd	c. 560 mmscfd	c. 600 mmscfd	
Date Commissioned	Mar-99		Aug-02	May-03	Dec-05	
LNG Purchase	N/A		bp 27.0% Shell 66.0% Other Partners 13.0%	bp 4.0% Shell 72.0% Other Partners 24.0%	bp 51.1% Shell 54.0% Other Partners 11.0%	

Source: The Ministry of Energy and Energy Industries, Trinidad and Tobago (2023)

Legend

- Atlantic LNG
- CNG Stations
- GCCA+ Solar Photovoltaic Installation Sites
- Industrial Ports
- National Energy Renewable Energy Sites
- Carbon Storage
- Potential Wind Generating Stages
- NGC Valve Stations
- Solar Sites Large Consumers
- Solar Sites Remote Valve Station
- NGC Pipelines
- Airport
- Trinidad and Tobago / Venezuela Delimitation Line
- NGC Reforestation Programme Areas
- Forest Reserves

GCCA+ Solar Photovoltaic Installation Sites

Twelve sites were selected within urban, remote and developing communities in Trinidad and Tobago to receive installations of small-scale roof-mounted Solar Photovoltaic (PV) solar panels. The efforts are part of the Global Climate Change Alliance Plus (GCCA+) Project, which aims to improve energy efficiency and reduce carbon emissions in Trinidad and Tobago.

The GCCA+ Project is a global initiative of the European Union (EU) (donor partner), with collaboration from the Ministry of Planning and Development, the Ministry of Energy and Energy Industries, and the United Nations Development Programme (UNDP) in Trinidad and Tobago (implementing partner) (UNDP 2021). As of April 2022, all installations have been completed and are in the handover process (UNDP Trinidad and Tobago 2022).

Source: United Nations Development Programme (undp.org)

Trinidad and Tobago Statistics

Population (Millions)	GDP (TT$ Millions)	Area (Sq Km)
1.39	150,356.6	5,128

Source: C.S.O. (2024)

12 Global Climate Change Alliance Plus (GCCA+) Solar Photovoltaic Installation Sites

Name	Location
Aquaculture Unit (AU), Fisheries Division, Ministry of Agriculture, Lands and Fisheries	Valsayn
Bonasse Seco Parks Tourism Action Committee (BSPTAC)	Bonasse Seco
Bonasse Seco Village Council Community Centre	Bonasse Seco
Bonasse Seco Government Primary School	Bonasse Verdada
Caribbean Institute of Astronomy (CARINA)	Frederick Settlement
J C MacDonald Home for the Aged	San Fernando
Nature Seekers	Maturita
Reptile Conservation Centre of Trinidad and Tobago (RCCTT)	Arangaaz
Speyside High School, Tobago	Speyside
Strong Ones Youth Club	Guayaguayare
The Division of Food Production, Forestry and Fisheries – Tobago House of Assembly	Main Ridge
Trinidad and Tobago Red Cross Society	Woodbrook

Source: United Nations Development Programme (undp.org)

Potential Carbon Storage and Wind Generation Sites

ID	Type	Description
1	Carbon	Offshore North Coast CO_2 Storage Potential under evaluation via Carbon Storage Atlas Project
2	Carbon	The industries at the Point Lisas Industrial Estate are potential sources of CO_2 for permanent storage and enhanced oil recovery
3	Carbon	Offshore CO_2 Storage Potential under evaluation under Carbon Storage Atlas, East Coast Galeota
4	Carbon	Site of historical CO_2 enhanced oil recovery trial at Trinity-Inniss field
5	Carbon	Site of historical CO_2 enhanced oil recovery trial at Barrackpore
6	Carbon	Forest Reserve (Evaluated to be the Proposed Site for the Heritage enhanced oil recovery Project)
7	Carbon	Oil fields of Point Fortin and Grand Ravine are potential future sites for CO_2 enhanced oil recovery
8	Carbon	Oil fields of Palo Seco are potential sites for CO_2 enhanced oil recovery
9	Carbon	Offshore West Coast CO_2 Storage Potential under evaluation via Carbon Storage Atlas Project
10	Carbon	The Atlantic LNG facility is a potential source for CO_2 for Forest Reserve enhanced oil recovery Project
1	Wind	Tobago Southwest, Crown Point (Potential Offshore wind Site), 350 MW
2	Wind	Los Iros (Potential Offshore Wind Site), 155 MW
3	Wind	Blanchisseuse (Potential Onshore Wind Site), 100 MW
4	Wind	North Coast Offshore, Diego Martin (Potential Offshore Wind Site), 175 MW
5	Wind	Orange Field (Potential Onshore Wind Site), 120 MW
6	Wind	Central Range (Potential Onshore Wind Site), 240 MW
7	Wind	Fishing Pond (Potential Onshore Wind Site), 280 MW
8	Wind	Southeast Coast (Potential Offshore, Galeota Wind Site), 1255 MW
9	Wind	Galeota (Potential Offshore Wind Site), 315 MW
10	Wind	San Fernando (Potential Wind Site under evaluation), 180 Megawatts (MW)
11	Wind	Palo Seco (Potential Wind Site), 865 MW
12	Wind	La Brea (Potential Offshore Wind Site), 225 MW
13	Wind	Los Iros (Potential Onshore Wind Site), 330 MW
14	Wind	South Coast Offshore, Los Iros (Potential Offshore Wind Site) 790 MW

Source: For Carbon Storage: https://www.energy.gov.tt/wp-content/uploads/2023/02/TT-Energy-Conference-Presentation-2022-Carbon-Capture-PS-Bradshaw-Sites.pdf
For Wind Generation: https://www.ewsa.co.tt/our-environment/kms/ and https://www.caribbeanaccelerator.org/setting-the-path-wind-energy-generation-trinidad-and-tobago/

Piarco Solar Farm

The Piarco Solar Park is a collaboration between the Government of Trinidad and Tobago, the European Union's Global Climate Change Alliance Plus (GCCA+) and the United Nations Development Programme (UNDP). This solar farm will gradually generate an estimated 767,034 kWh (0.09 MW). The power produced from the site is expected to contribute to the Civil Aviation Authority's current annual electrical consumption at the Piarco International Airport, with capacity for future expansion.

Climate Projections for Trinidad & Tobago

Note:These are the median values for Trinidad and Tobago for the future period of 2081 – 2100 (relative to 1995 – 2014) in the highest emissions RCP8.5 scenario from IPCC's Sixth Assessment Report.

Source: Gutiérrez et al. 2021. Atlas: Is Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Available from http://interactive-atlas.ipcc.ch/

STATISTICS

- 767,034 kWh (Kilowatts Hours) annual generation capacity
- 3.8% of total energy consumption by Piarco International Airport
- 650 tonnes of carbon dioxide emissions saved annually
- 1.54 hectares of land

Wind Energy

Offshore wind offers the largest renewable energy potential for Trinidad and Tobago. An initial estimate of offshore areas available for offshore development, indicates that on average, Trinidad and Tobago could exploit 270W of offshore wind power using current technologies, equating to 350W in average energy output (accounting for the capacity factor associated with more wind technology). Fixed offshore wind turbines can be installed in the relatively shallow waters around Trinidad with floating wind turbines installed between Trinidad and Tobago as well as north of Tobago.

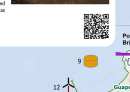
NewGen Energy Limited

NGC and NewGen Energy Limited (NewGen) have deepened their partnership to cooperate on the enabling of a sustainable hydrogen economy for the energy sector of Trinidad and Tobago. Once completed, the plant will be the world's largest clean hydrogen producing facility of its kind using approximately 200,000 tonnes/CO_2 per year. It aims to produce 2.2 tonnes/hour of hydrogen through the electrolysis of water. The plant will generate carbon-free hydrogen to meet 20% of the hydrogen requirement for the existing ammonia plants in the petrochemical hub of Point Lisas, Trinidad.

Brechin Castle Solar Limited

Brechin Castle Solar is a joint venture company comprising NGC, bp and Shell. NGC is a 30% equity investor in the project by bp and Shell each hold a 35% investment.The joint venture will manage a solar farm project to be constructed in Brechin Castle, near the Point Lisas Industrial Estate and is expected to have a site generation output of 92 PPM of energy with a 122 Megawatt peak (MWp) of renewable energy.The output is equivalent to powering 31,000 homes per year, that will result in 113,000 tonnes of CO_2 emissions saved, or equivalent of taking 26,500 cars off the nation's roads per year.The production here will support the country in meeting its climate change goals of a 30% reduction in emissions from the power generation sector by 2030 (commitment within the intended Nationally Determined Contribution (INDC), under the global climate treaty known as the Paris Agreement).

Source: https://lightsourcebp.com/project/brechin-castle-solar-farm/



STATISTICS

- 122 Megawatt peal (MWp) of renewable energy
- Equivalent to the energy needs of 31,000 households
- 123,000 tonnes of carbon dioxide emissions saved annually
- Equivalent to taking 26,500 cars off the road
- 198 hectares of land

Hydrogen Economy Road Map

A proposed hydrogen economy roadmap for Trinidad and Tobago is based on a 35-year development programme split into three horizons. The full development programme involves 57 GW of renewable energy capacity through offshore wind technology producing 23 GW of power feeding to electrolysers that produce 4 Mtpa of green hydrogen, generating net benefits in the billions and creating thousands of jobs in the construction, operation and maintenance sectors, while significantly reducing CO_2 emissions in Trinidad and Tobago. With this proposed development programme, 2053 is a key milestone for Trinidad and Tobago, which is when all the grey hydrogen that is currently produced annually (about 4 Mtpa) could potentially be displaced by green hydrogen. This can be achieved if all 23 GW of average energy output from offshore wind is directed to electrolysers and 4 Mtpa of green hydrogen are generated.

Offshore Wind Sites and Suitability Scores for the Hydrogen Economy

Source: Jugavaux, Sharmila, Qi Kun Low, Christiaan Stocker, Augusto Ocasio-Rosa Navarro, Gianfilippo Carlo Thomas, Tengyao Lassey-Kelly, Anselmo Rampaglia, and Marcia Weigand. 2023. The Roadmap for a Green Hydrogen Economy in Trinidad & Tobago. Washington, DC: IDB (Inter-American Development Bank).

NGC Sustainable Energy Projects

Project	Location	Project Start	Project End	Status	Benefit	Major Collaborators
CariGreen Website	carigreen.ngc.co.tt	2020	2021	ongoing updating	Provides information on energy efficiency and renewable energy projects and research taking place across CARICOM and non-CARICOM states	NGC, Caribbean Climate Smart Zone, Environmental Management Authority, Energy Chamber of T&T, MEEI, MTCC, IHENA, IWA, Ministry of Planning, IDB, ECLAC
NGC EnergySimTT App	App Store and Google Play Store	2019	2020	ongoing updating	Provides users with information on potential monetary savings from using more energy efficient, products and tips to streamline energy consumption practices	NGC
Climate Adaptation and Resilience Portal (CARP)	carp.ngc.co.tt	2023	2023	ongoing updating	Provides information and alerts on hazards such as flooding, sea-level rise, landslips, riverine alerts, coastal erosion, maritime alerts, bush fires, air quality, seismic, deforestation and other emerging threats related to climate change	NGC, CDL
Re-Energize TnT	Maqaro Government Secondary School, Woodbrook Secondary School, Moruga Secondary school, Sto. Maisteiona Secondary, Success Laventille Secondary, Couva West Secondary	2022	2024	in progress	The programme comprises five components, which will be delivered at ten schools each year for three years. Under Component 1, students will be exposed to 15 modules on a wide range of sustainability topics. The programme is certified by the Association of Business Executives (ABE) and students completing the modules will receive ABE certification.	NGC, Shell
Orbital Eye B.V.	NGC	2021	2023	complete	NGC signed an agreement with Orbital Eye B.V. to conduct research and monitor greenhouse gas (CH_4) and methane (CH_4) emissions, both locally and regionally, via satellite data.	Orbital Eye, NGC, B.V.
Oil and Gas Methane Partnership 2.0 (2.0) OGMP	NGC	2022	2025	ongoing, reporting	NGC's achievement of Gold Standard status of reporting under the global Oil and Gas Methane Partnership 2.0 (OGMP 2.0). This achievement is attained by companies with clearly elaborated targets to reduce methane emissions by 2025. NGC received this Gold Standard status for the first time in 2022, just one year after the company joined the OGMP community, and for a second consecutive year in 2023.	OGMP, NGC
Caribbean Community Centre for Climate Change (CCCCC)	NGC	2021	2021	complete	NGC signed a Memorandum of Understanding (MOU) with the Caribbean Community Centre for Climate Change (CCCCC) to mutually cooperate in areas and activities that can positively impact regional climate change	CCCCC, NGC
Mangrove Rehabilitation Project	Carli Bay/Point Lisas area	2023	2025	in progress	NGC signed a Memorandum of Agreement (MoA) with the Institute of Marine Affairs (IMA), to implement a Mangrove Rehabilitation Project in the Carli Bay/Point Lisas area	NGC, IMA
Energy Efficiency in Power		2023	2023	ongoing	To focus on the area of Energy Efficiency and inducing energy demand, particularly in power. Power steering committee in place and industry sensitized	NGC, MEEI and MPU
NGC, WASA sign MoU to collaborate and share learnings	NGC	2023	2023	ongoing	NGC and the Water and Sewerage Authority of Trinidad and Tobago (WASA) have signed a Memorandum of Understanding (MoU) to collaborate and share learnings around critical functional activities common across both organisations. These include: asset integrity management - maintenance of pipeline and equipment, including relevant training, automation system architecture and platform – Geospatial Information Services (GIS), Supervisory Control and Data Acquisition (SCADA) and leak detection systems, procurement – e-auctions and joint pipeline purchasing, right-of-way monitoring, real-time reporting, project management, and sustainability of operations	NGC, WASA
Carbon Capture Utilization and Storage (CCUS)	MEEI, Heritage, NGC, UWI and UTT	2017	2017	ongoing	In 2017 a Carbon Dioxide Enhanced Oil Recovery Road Map (CERM) Project was launched with a Steering Committee comprising input membership from the MEEI, Heritage, NGC, The UWI and UTT. The overarching goal of the CERM Project is the implementation of CO2 Enhanced Oil Recovery (EOR) on a large scale to increase Trinidad and Tobago's oil revenue by TT$300-600 million per year in the medium term.	MEEI, Heritage, NGC, UWI and UTT
NGC Green Company Limited	Rivulet Road, Couva	2024	2024	ongoing	NGC Green Company Limited (NGC Green) is a wholly-owned subsidiary of NGC, helping to institute a cleaner energy future through investment in low-carbon fuels, energy efficiency, sustainable transportation and associated research and development	NGC
NGC and BPTT sign collaboration agreement to explore synergies in The Energy Sector	NGC	2022	2022	ongoing	NGC and bp Trinidad and Tobago (bpTT) have signed a collaboration agreement to explore opportunities for cooperation in several focus areas of mutual interest within the energy industry	NGC, bpTT
NGC signs MOU to explore small scale LNG Projects	NGC	2022	2022	ongoing	NGC has signed a Memorandum of Understanding (MOU) with a consortium comprising Globus Energy Group Trinidad Limited (Globus Energy), Corban Energy Group (Corban Energy) and Chevalier LNG LLC (Chevalier LNG), to identify and screen technologies for micro and small-scale LNG development projects in the Caribbean	NGC, Globus Energy, Corban Energy and Chevalier LNG
Extractive Industries Transparency Initiative (EITI) Framework	NGC	2023	2023	ongoing	NGC is the first Trinidadian company to report to the EITI framework and has achieved a score of 89/100 – the highest in Latin America and the Caribbean for methane monitoring	NGC, EITI
SUSTAIN-U	https://caribbeansustainu.com/	2023	2024	ongoing	NGC and Methanex have partnered to sponsor Sustain-U, a sustainability and ESG (environment, social, governance) training platform developed by Caribbean Ideas Academy. It is a training platform that will assist organisations and their employees to build sustainability understanding, learn how to quantify impact and take tangible action	NGC, Methanex and Sustain-U
Methane Focus	NGC	2023	2024	ongoing	Methane Reduction through capture of source. Commenced Vented Gas study to validate quality and quantity of gas for completion in 2024	NGC

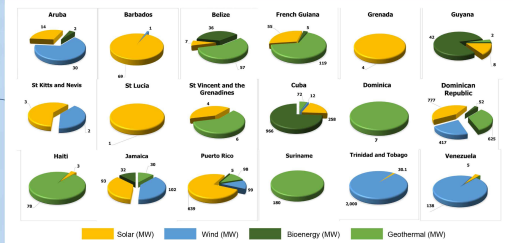
Source: The National Gas Company of Trinidad and Tobago Limited and National Energy Corporation of Trinidad and Tobago Limited (2023)

Caribbean Renewable Energy Targets

Country	Renewable Energy Target	Renewable Electricity Target
Aruba	100% by 2020	Information not available
Bahamas	30% by 2030	Information not available
Barbados	100% by 2030	Information not available
Belize	85% by 2030 70 MW Total Installed Hydropower by 2033	Supply 5 MW of electricity from municipal solid waste by 2033
Cuba	Increase share of renewable energy on electric grid to 24% by 2030	Information not available
Dominica	100% by 2030	Information not available
Dominican Republic	25% by 2025	Information not available
French Guiana	Increase share of renewables in electricity mix to 83% by 2023	Information not available
Grenada	100% by 2030	Information not available
Guyana	Near 100% by 2040	Information not available
Haiti	47% by 2030	Information not available
Jamaica	30% by 2030	20% by 2030
Puerto Rico	40% by 2025 60% by 2040 100% by 2050	Information not available
St Kitts and Nevis	50% by 2030	Information not available
St Lucia	35% by 2025 50% by 2050	35% renewable by 2020
St Vincent and the Grenadines	60% by 2030	Information not available
Suriname	Information not available	35% by 2030
Trinidad and Tobago	30% by 2030	10% by 2022 30% by 2030
Venezuela	Information not available	10% (supplied by wind) by 2025

Source: IRENA (International Renewable Energy Agency), 2020, 2022; RINFL (National Renewable Energy Laboratory), 2019, 2020

Caribbean Existing/Planned Renewable Energy Projects Publicly Disclosed as of Nov. 2023



Source: IRENA (International Renewable Energy Agency), 2023; MEEI, National Renewable Energy Laboratory) 2020. *Trinidad and Tobago's data reflects information presented in the Green Energy Map

Trinidad and Tobago Renewable Energy Projects

Project	Location	Project Start	Project End	Status	Benefit	Major Collaborators
100-kilowatt solar photovoltaic rooftop mounted system for gas service station	Preysal Service Station	Construction January 2020	Opened September 2021	completed	10 CNG stations, 10 liquid fuel stations, 1 electric vehicle charging station	NGC CNG, National Petroleum (NP), National Energy
Standalone Solar PV systems in schools and community centres	25 selected schools and community centres	2023	2025	in progress	Disaster risk reduction, adaptation, and mitigation to climate change	Ministry of Energy and Energy Industries (MEEI), Ministry of Education (MoE), Ministry of Public Utilities, Ministry of Sports and Community Development, National Energy
Model Solar House	UTT campus, Point Lisas	2014	2015	completed	100% energy sufficient and powered only by solar energy	MEEI, University of Trinidad and Tobago (UTT), National Energy
Renewable Energy and Energy Efficiency Education Project	21 secondary schools	2014	2015	completed	Increase the knowledge and competencies of citizens in the use of alternative sources of energy. Installation of off-grid solar PV systems and solar still systems	MEEI, MoE, National Energy
6 kW Solar photovoltaic (PV) installed at National Energy Head Office	National Energy Head Office	2020	2022	completed	Aid in research and gathering performance data from solar PV systems under various situations that may be used for future projects	Trinidad and Tobago Electricity Commission (T&TEC), Ministry of Public Utilities, National Energy
Solar Light Emitting Diodes (LEDs) at the New West Park Recreational Savannah	Diego Martin	Apr-20	Jul-20	completed	Green energy site, recreational savannah with open field, jogging, walking tracks, and car park with lighting provided by solar energy	First Citizens Bank (FCB), Ministry of Sport and Community Development, Urban Development Company of Trinidad & Tobago (UDeCOTT), National Energy
Renewable Minds Portal	All primary schools in T&T	2021	2024	in progress	Promote renewable energy and energy efficiency in our primary school population	Pennwood Caribbean Ltd, National Energy
Super Energy Service Company (ESCO)	Nationwide	2023	2025	in progress	Increase efficiency, reduce carbon footprint and reduce gas consumption	Local ESCOs, National Energy
Hydrogen Roadmap Study	Nationwide	2021	2022	completed	IDB-funded to establish a basis and strategy for future decarbonization industry in T&T	Inter-American Development Bank (IDB), Energy
Project to restructure the primary and secondary schools curriculum for RE and EE	Nationwide	2023	2023	completed	Promote renewable energy and energy efficiency in our school population	Ministry of Education, National Energy
Installation of Electric Vehicle Charging Stations & Solar LED Lighting at Queen's Hall	Queen's Hall	2024	2024	in progress	Public awareness and education on the use and benefits of Renewable Energy Lighting & Electric Charging Stations	National Energy, MEEI, Queen's Hall
The University of the West Indies (The UWI), St. Augustine Public Solar EV Charger	The UWI, St. Augustine Campus	2023	2023	completed	Public awareness and education on the use and benefits of Renewable Energy Stations	National Energy, NGC CNG, Massy Motors, The University of The West Indies (UWI)

The Caribbean

Source: Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri, Google, Esri, GEBCO, Garmin, MetaVista

NGC Company Profile

NGC is an integrated energy company operating across the energy value chain, focusing on sustainability and pursuing an energy transition model through its Green Agenda. NGC leads a diversified, globalising conglomerate of over 30 companies, which support its mission to create exceptional value from natural gas and related energy businesses through its people and strategic partnerships.

While NGC's core business was the aggregation, purchase, sale, transportation, and distribution of natural gas in Trinidad and Tobago, other developing and focus areas of business include natural gas processing and marketing of natural gas liquids; (non-operated) joint venture oil production; marketing and trading of energy commodities; portfolio investments; technical services; engineering and activities in the sustainable energy space, including renewable energy and energy efficiency projects and investments; development and management of industrial site, port and marine infrastructure; and marketing and sale of compressed natural gas (CNG).

NGC's main subsidiaries are:
- National Energy Corporation of Trinidad and Tobago Limited (National Energy)
- Phoenix Park Gas Processors Limited (PPGPL)
- NGC Green Company Limited
- La Brea Industrial Development Company Limited (LABIDCO)
- Trinidad and Tobago NGL Limited (TTNGL)

A valued player in our nation's natural gas-based energy sector, NGC, and by extension, The NGC Group of Companies, has a proven business model for maximising resources: a model with applicability far beyond the shores of Trinidad and Tobago.

The interactive version of this map can be accessed online. Please scan this QR code.

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TRINIDAD AND TOBAGO
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