2020 ENERGY REPORT CARD

TRINIDAD & TOBAGO

CCREEE
CARIBBEAN CENTRE FOR RENEWABLE ENERGY & ENERGY EFFICIENCY

AN INSTITUTION OF CARICOM

www.ccreee.org

CARICOM

TAPSEC
Technical Assistance Programme for Sustainable Energy in the Caribbean

Co-Funded by the European Union

Spanish Cooperation

Austrian Development Agency

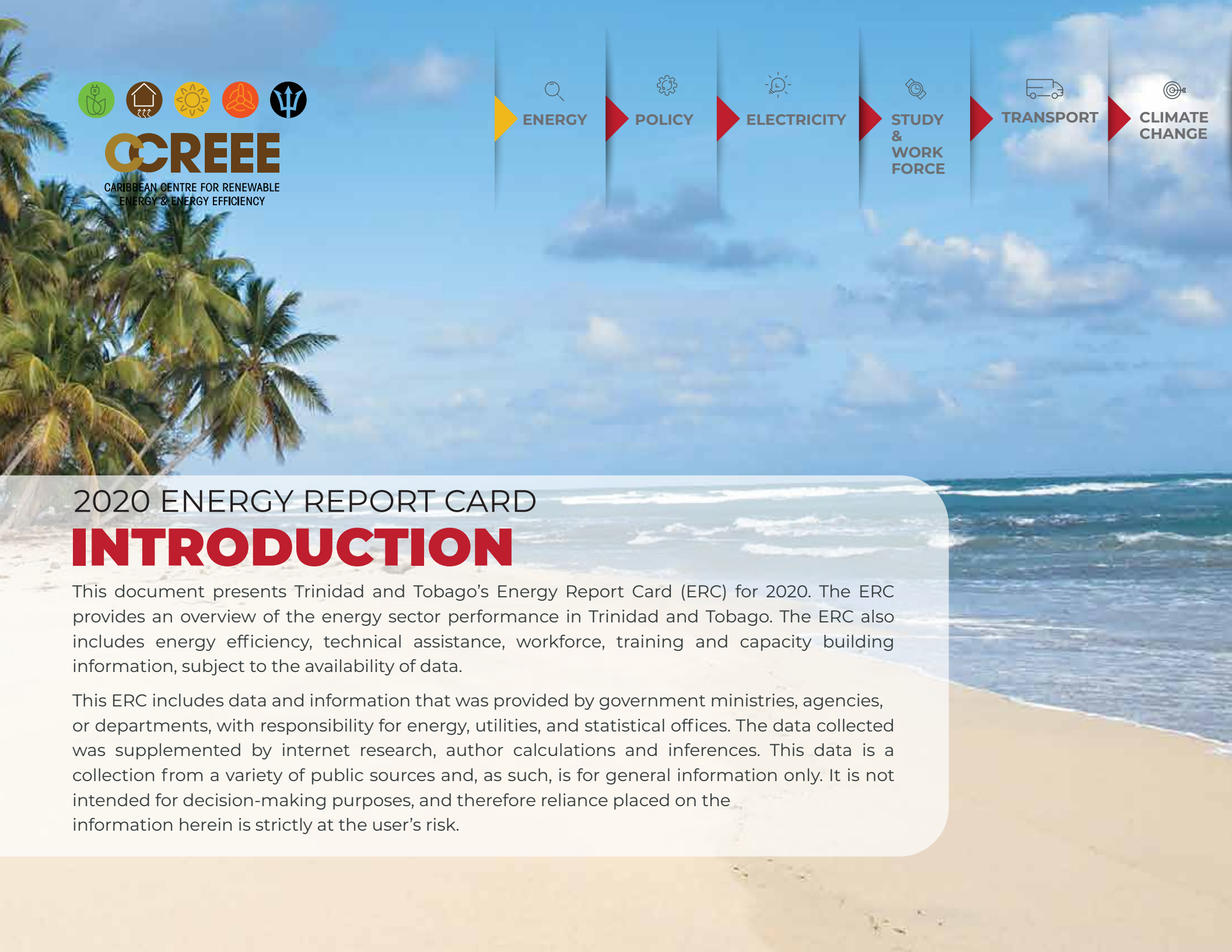
UNIDO
UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

GN SEC
Global Network Regional Sustainable Energy Centres



2020 ENERGY REPORT CARD

INTRODUCTION

This document presents Trinidad and Tobago's Energy Report Card (ERC) for 2020. The ERC provides an overview of the energy sector performance in Trinidad and Tobago. The ERC also includes energy efficiency, technical assistance, workforce, training and capacity building information, subject to the availability of data.

This ERC includes data and information that was provided by government ministries, agencies, or departments, with responsibility for energy, utilities, and statistical offices. The data collected was supplemented by internet research, author calculations and inferences. This data is a collection from a variety of public sources and, as such, is for general information only. It is not intended for decision-making purposes, and therefore reliance placed on the information herein is strictly at the user's risk.

ENERGY SECTOR SUMMARY

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

Population (Census/ Projection)
1,366,725
[1]

National Development Plan
Vision 2030: The National Development Strategy of Trinidad and Tobago
[4]

National Energy Policy
None

RE Target
10% demand by 2021
[6]

National Repository for Energy Data
Ministry of Energy and Energy Industries: Energy Research and Planning Division
[9]

GDP (USD) Per Capita
105,248.32
[1]

Human Development Index
0.80
(2019)
[3]

Climate Change Policy
The National Climate Change Policy
(2011)
[11]

National Repository for Energy Data
Ministry of Energy and Energy Industries: Energy Research and Planning Division
[9]

Debt as % of GDP
80.70%
[2]

No. of Persons Employed in Energy Sector
13,200
[8]

Total Oil Import (BOE) per day
None
[9]

National Determined Contributions (NDC)
15% emission reduction in Carbon Dioxide, Methane and Nitrous Acid by 2030

Total Installed Conventional Capacity (MW)
2118.40

Electricity System Losses (%)
6%
[10]

Energy Use (kWh) Per Capita
6,300
[10]

Total Oil Export (BOE) per day
55,659.97

Renewable Energy (RE) Policy
Framework for the Development of a Renewable Energy Policy for Trinidad and Tobago
[5]

Electric Vehicle Stock
143
[12]

Energy Intensity (BTU/$)
18,103
[10]

Total Installed RE (MW)
0.05
[6]

Energy Performance Standards/ Appliance Labelling

1. TTCS 11:2021, Energy Labelling- Compact fluorescent lamps and lights emitting diode lamps-compulsory requirements

2. PCTT/CRS 57 Energy Labelling- Refrigerators and freezers- Requirements (At the Public comment stage)

3. PCTTS/CRS 59, Energy Labelling- Air Conditioners -Requirements (At the Public comment stage)

4. TTS 76:part 13:2016, Requirements for Labelling- Part 13: labelling if Electrical Appliances (3rd Revision)
[7]

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ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

RENEWABLE ENERGY PERFORMANCE AGAINST TARGETS

0.002%

2020 performance

Installed Renewable Energy Capacity

52%

National Target (Proposed by CARICOM -CSERMS Report)

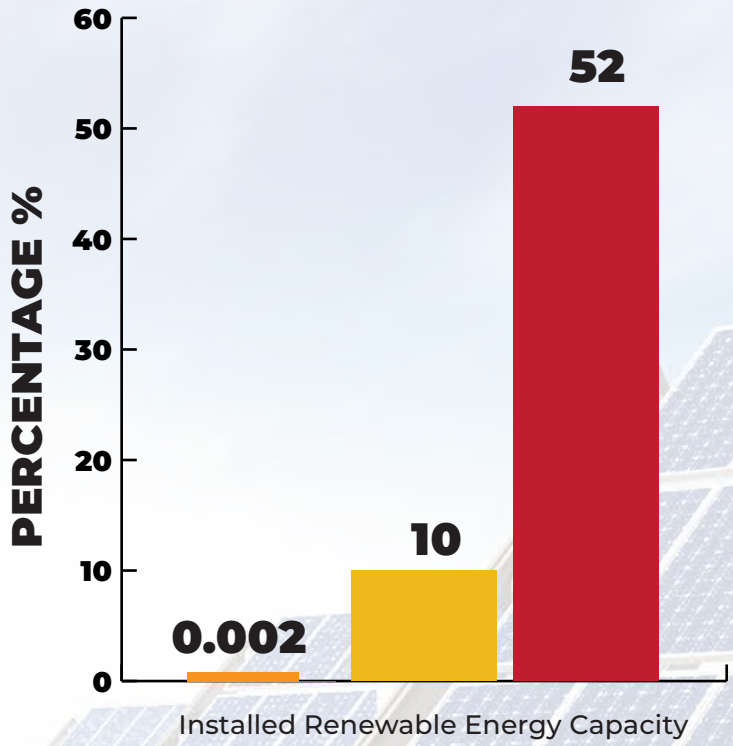
Installed Renewable Energy Capacity

10%

National Target by 2021

Installed Renewable Energy Capacity

PERFORMANCE AGAINST TARGETS



KEY ENERGY STAKEHOLDERS

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

Government Ministries, Departments and Agencies

- Ministry of Energy and Energy Industries [13]
- Ministry of Public Utilities [14]
- Ministry of Planning and Development [14]

Fuel Suppliers

- Trinidad and Tobago National Petroleum Marketing Company Limited [15]
- The National Gas Company of Trinidad and Tobago [16]

Electric Utility

- Trinidad and Tobago Electricity Commission [17]

Independent Power Producer

- PowerGen [18]
- Trinity Power [19]
- Trinidad Generation Unlimited [20]

Electricity Regulator

- Regulated Industries Commission [21]

Transportation

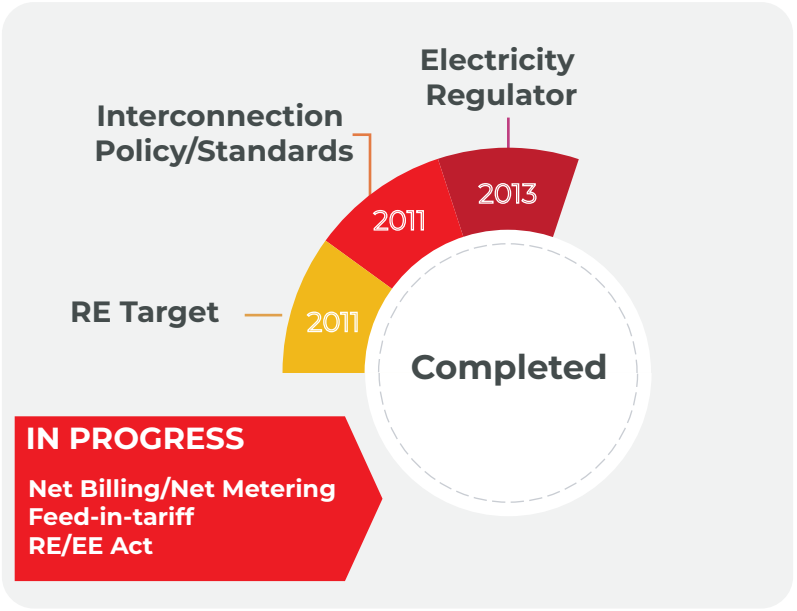
- Ministry of Works and Transport [22]

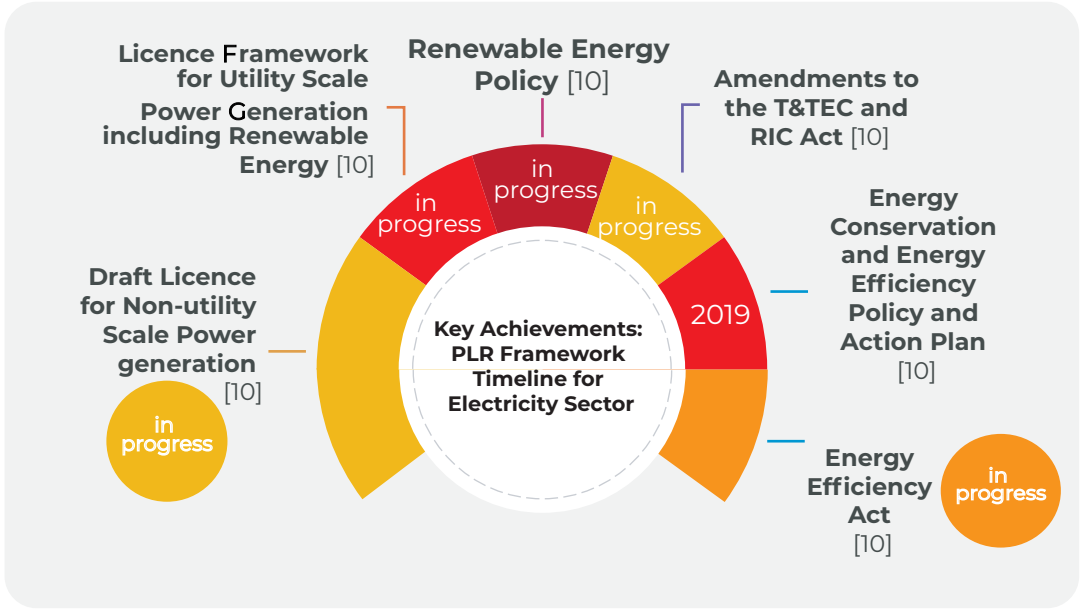
Other

- Trinidad and Tobago Energy Chamber [23]

POLICY, LEGAL AND REGULATORY (PLR) FRAMEWORK

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE





POLICIES AND LEGISLATION RELEVANT TO THE ENERGY SECTOR

Petroleum Act 46 of 1969
(last amendment 2016)
[24]

Petroleum Production Levy and Subsidy Act 14 of 1974
(last amendment 2016)
[24]

Petroleum Taxes Act 22 of 1974
[24]

LEGISLATIONS | LEGISLATIONS | LEGISLATIONS

1969 | 1974 | 1974

POLICY, LEGAL AND REGULATORY (PLR) FRAMEWORK

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

POLICIES AND LEGISLATION RELEVANT TO THE TRANSPORTATION SECTOR

POLICIES

2016 POLICY
Policy for the Amendment of the Legislative Framework Governing the Fixed Penalty Traffic Ticketing (2016) [25]

2019 POLICY
Policy for the Amendment of the Motor Vehicles Act, Chapter 48:50 to introduce Disable/ Accessible Parking System (2019) [25]

LEGISLATION & REGULATION

1934 LEGISLATION
Motor Vehicle and Road Traffic Act, Chapter 48:50 of 1934 (last amendment 2015) [25]

Legislations & Regulations
Motor Vehicles and Road Traffic (Enforcement and Administration) Act, Chapter 48:52 [25]

Legislations & Regulations
Motor Vehicles Insurance (Third-Party Risks) Act, Chapter 48:51 [25]

Legislations & Regulations
Maxi Taxi Act, Chapter 48:53 [25]

2017 LEGISLATION
Motor Vehicle and Road Traffic Act No. 9 of 2017 [25]

Legislations & Regulations
Pilotage Act, Chapter 51:02 [25]

Legislations & Regulations
Airport Authority Act, Chapter 49:03 [25]

Legislations & Regulations
Civil Aviation Act, Chapter 49:03 [25]

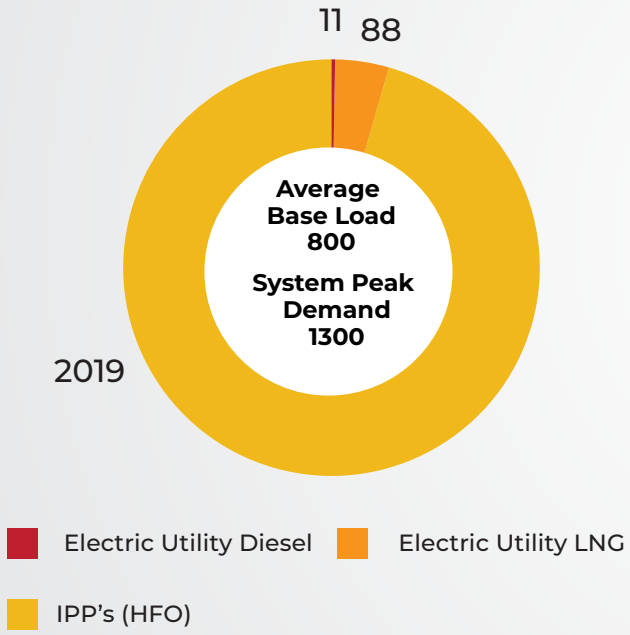
Legislations & Regulations
Shipping Act, Chapter 50:10 [25]

Legislations & Regulations
Highways Act, Chapter 48:01 [25]

Legislations & Regulations
Port Authority Act, Chapter 51:01 [25]

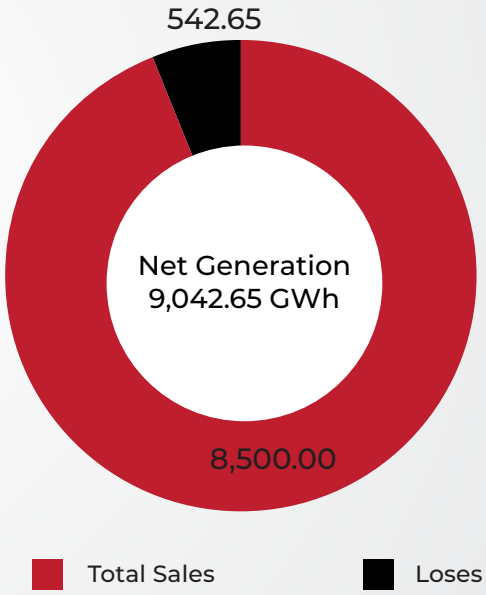
ELECTRICITY & ENERGY EFFICIENCY

INSTALLED CAPACITY (MW)



There is also 0.05MW of Distributed RE accounting for 0.002%

ENERGY CONSUMPTION (GWh)



ELECTRICITY & ENERGY EFFICIENCY

ELECTRICITY TARIFFS

RATE CLASS	MONTHLY CONSUMPTION /DEMAND (kWh)	TARIFF / (US$/kWh)	DEMAND/ (US$/kVA)
RESIDENTIAL	0 - 400	0.04	
	401 - 1,000	0.05	
	> 1,000	0.05	
COMMERCIAL		0.09	
INDUSTRIAL /LARGE POWER		0.03	
INDUSTRIAL LARGE LOAD STANDBY		0.02	
STREET LIGHTS	HIGHWAY CLASSIFICATION 1		124.98
	HIGHWAY CLASSIFICATION 2		83.32
	MAIN ROUTES CLASSIFICATION 3		60.60
	SECONDARY ROUTES CLASSIFICATION 4		54.91

PROJECTS IN THE PIPELINE

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

TECHNICAL ASSISTANCE PROJECTS

DONOR FUNDING AND TECHNICAL ASSISTANCE LANDSCAPE	DONOR ORGANIZATIONS & BANKS	TECHNICAL ASSISTANCE PROVIDERS	FUNDING AWARDS	YEAR
CONSTRUCTION OF SOLAR PV CARPORT AT THE QUEENS PARK SAVANNAH	UNITED ARAB EMIRATES(UAE) CARIBBEAN RENEWABLE ENERGY FUND (CREF)	NOT AVAILABLE	3 MILLION USD	2019
CONSTRUCTION OF A SOLAR PARK AT PIARCO INTERNATIONAL AIRPORT	EUROPEAN UNION	NOT AVAILABLE	1.5 MILLION EUROS	2019
INSTALLATION OF SMALL-SCALE ROOF-MOUNTED, OFF GRID SOLAR PV INSTALLATION	GLOBAL CLIMATE CHANGE ALLIANCE PLUS (GCCA+) UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)	NOT AVAILABLE	4 MILLION EUROS	2020

ENERGY EFFICIENCY PROJECTS

ENERGY EFFICIENCY INITIATIVE	CONSUMPTION (KW)	ENERGY EFFICIENCY LEGISLATION OR REGULATIONS	ENERGY SERVICE COMPANIES (YES/NO)	CHANGE IN OLD/EXISTING INFRASTRUCTURE EXPECTED IN UPCOMING CALENDAR YEAR (NUMBER/SIZE)
LED LIGHTBULB INITIATIVE	NOT AVAILABLE	IN PROGRESS	NO	NOT AVAILABLE
PUBLIC BUILDINGS	TO BE MEASURED	IN PROGRESS	YES	NOT AVAILABLE
SOLAR WATER HEATERS	NOT AVAILABLE	NO	NO	NOT AVAILABLE
EV CHARGERS	NOT AVAILABLE	YES	NO	NOT AVAILABLE

PROJECTS IN THE PIPELINE

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

RENEWABLE ENERGY PROJECTS

RENEWABLE ENERGY SOURCE	RESOURCE AND PROJECTS CAPACITY	DEVELOPMENT PARTNER	TOTAL ESTIMATED COST	FUNDING SOURCE
SOLAR PHOTO-VOLTAIC	INITIAL STAGES THEREFORE NO CAPACITY IS SET. DETAILS OF INITIATIVE: SOLAR PANELS IN SCHOOL AND HEALTH CENTRES	PUBLIC SECTOR INVESTMENT PROGRAMME	NOT AVAILABLE	NA
	INITIAL STAGES THEREFORE NO CAPACITY IS SET. DETAILS OF INITIATIVE: SOLAR LIGHTING IN PLAY PARKS AND BASKET BALL COURTS	MINISTRY OF ENERGY AND ENERGY INDUSTRIES	$5.9TTM	NA

TERTIARY PROGRAMMES OFFERED

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

THE UNIVERSITY OF THE WEST INDIES, ST. AUGUSTINE CAMPUS

B.Sc.

	PERSONS ENROLLED	PERSONS GRADUATED
PHYSICS (INCLUDES AN ELECTIVE RENEWABLE ENERGY COURSE)	-	-

https://sta.uwi.edu/fst/physics/

	PERSONS ENROLLED	PERSONS GRADUATED
MECHANICAL ENGINEERING (INCLUDES A RENEWABLE ENERGY ELECTIVE)	-	-

https://sta.uwi.edu/eng /mechanical/bsc-mechanical-engineering

M.Sc.

	PERSONS ENROLLED	PERSONS GRADUATED
RENEWABLE ENERGY TECHNOLOGY	28	-

https://sta.uwi.edu/fst/physics/master-science-renewable-energy-technology

	PERSONS ENROLLED	PERSONS GRADUATED
ENVIRONMENTAL ENGINEERING (INCLUDES A RENEWABLE ENERGY ELECTIVE)	-	-

https://sta.uwi.edu/eng/civil/msc-environmental-eng

MPhil/ PhD

	PERSONS ENROLLED	PERSONS GRADUATED
PHYSICS (INCLUDES A RENEWABLE ENERGY OPTION)	-	-

https://sta.uwi.edu/fst/physics/research-at-physics

THE UNIVERSITY OF TRINIDAD AND TOBAGO

CERTIFICATE

	PERSONS ENROLLED	PERSONS GRADUATED
RENEWABLE ENERGY ENGINEERING TECHNOLOGY DIPLOMA	27	FIRST ENROLLMENT SEPTEMBER 2020

https://utt.edu.tt/index.php?wk=1&programmes=1&utt_programme_key=166

SBCS (SCHOOL OF BUSINESS AND COMPUTER SCIENCE)

CERTIFICATE

	PERSONS ENROLLED	PERSONS GRADUATED
IMPLEMENTING SOLAR POWER SYSTEMS FOR POWER GENERATION: PHOTOVOLTAIC INSTALLER (LEVEL 1)	200	200

http://www.sbcs.edu.tt/programme/eta-pv-level-1/

PROFESSIONAL CERTIFICATE: SERVICING AND REPAIRING HYBRID & ELECTRIC VEHICLES – A PRACTICAL APPROACH

	PERSONS ENROLLED	PERSONS GRADUATED
IMPLEMENTING WIND POWER SYSTEMS FOR RESIDENTIAL USE	40	40

http://www.sbcs.edu.tt/employability-and-professional-development-courses/corporate-training/engineering-training/

http://www.sbcs.edu.tt/programme/hybrid/

TERTIARY PROGRAMMES OFFERED

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

CTS COLLEGE OF BUSINESS AND COMPUTER SCIENCE

CERTIFICATE

	PERSONS ENROLLED	PERSONS GRADUATED
INTRODUCTION TO SOLAR POWER SYSTEMS	100	100

https://www.ctscollege.com/certifications/do-it-yourself/introduction-solar-power-systems

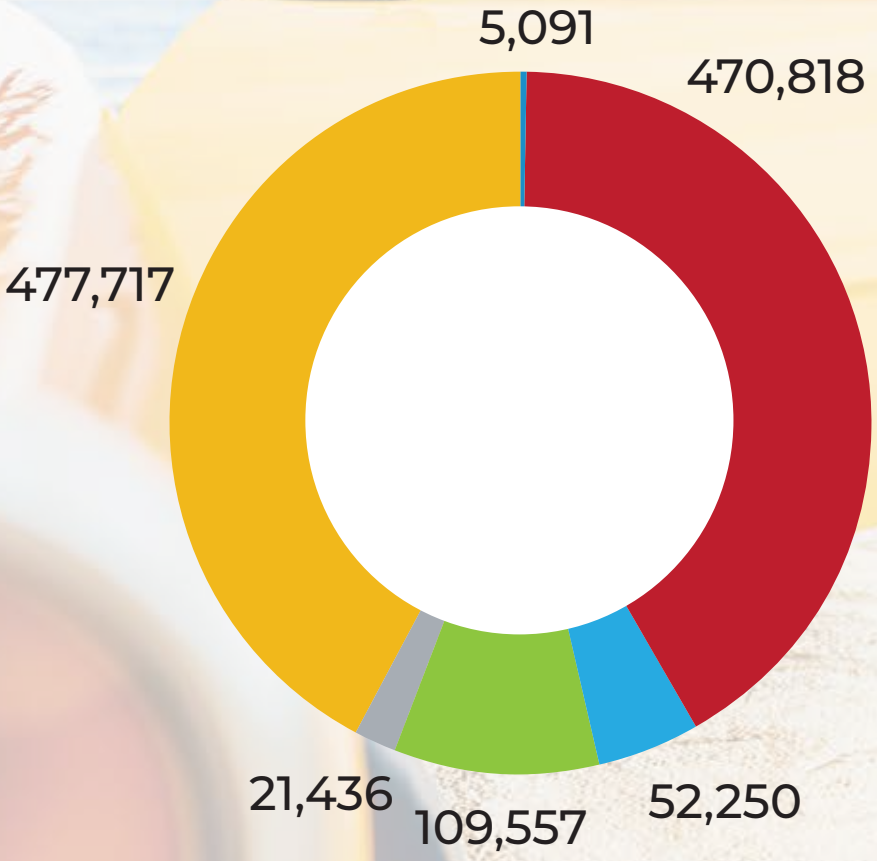
WORKFORCE

DETAILED DATA WAS NOT AVAILABLE FOR THE WORKFORCE IN THE ENERGY SECTOR IN 2020

TRANSPORTATION SECTOR

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

REGISTERED VEHICLES

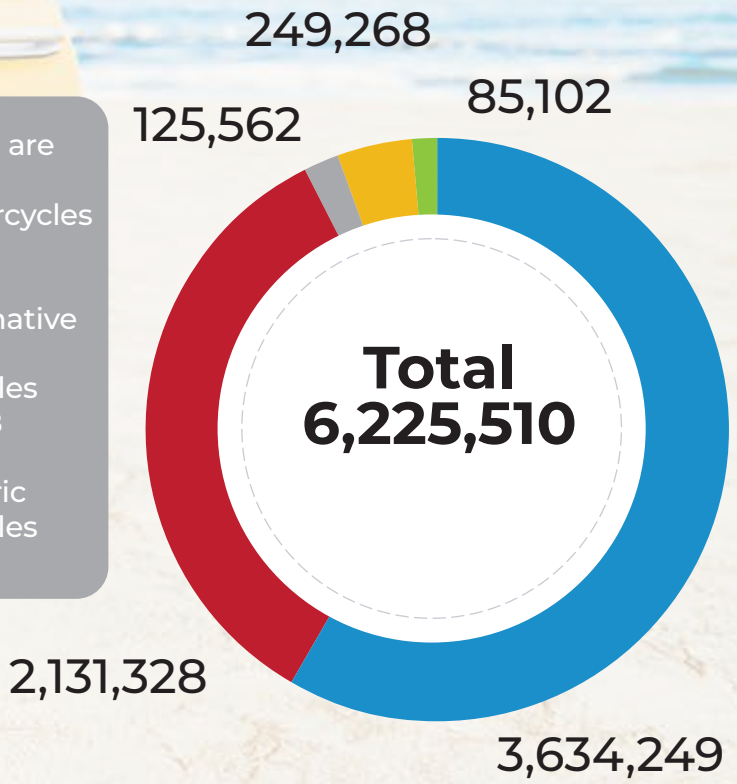


There are also:
Motorcycles **3,486**

Alternative Fuel Vehicles **2,988**

Electric Vehicles **143**

QUANITY (BOE)



Energy Related Transportation targets:
The Government of the Republic of Trinidad and Tobago's (GORTT's) approved CNG Initiative; Phase I entails the conversion /addition of 17,500 CNG vehicles and the addition of 22 CNG refuelling stations. These targets are expected to be achieved in 2022.

- Buses
- Hybrid Vehicles
- SUV's
- Cars
- Vehicles not Disaggregated
- Trucks
- Gasoline
- Turbo Fuel (Road/Aviation)
- CNG (Road)
- Diesel (Road)
- HFO Bunker and Ado Bunker

CLIMATE CHANGE FRAMEWORK

ENERGY | POLICY | ELECTRICITY | STUDY & WORK FORCE | TRANSPORT | CLIMATE CHANGE

NATIONAL CLIMATE CHANGE POLICY (2011) [11]

NATIONAL DETERMINED CONTRIBUTIONS:

Unconditional:

30% reduction in GHG emissions by December 31, 2030 in the public transportation sector compared to a business as usual (BAU) scenario (reference year 2013).

Conditional:

Additional reduction achievable under certain conditions which would bring the total GHG reduction to 15% below BAU emission levels by December 31, 2030. [26]

EMISSIONS REDUCTION TARGET:

15% below BAU by 2030

PRIORITY SECTORS FOR NDCs

Power Generation, Transportation, and Industry

NATIONAL COMMUNICATIONS (NC) TO THE UNFCCC:

Initial National Communication of the Republic of Trinidad and Tobago under the United Nations Framework Convention on Climate Change [27]
National greenhouse gas Inventory (1990-2006) [28]
Second National Communication of the Republic of Trinidad and Tobago under the United Nations Convention on Climate Change [29]
The Third National Communication is being drafted for publication in 2021

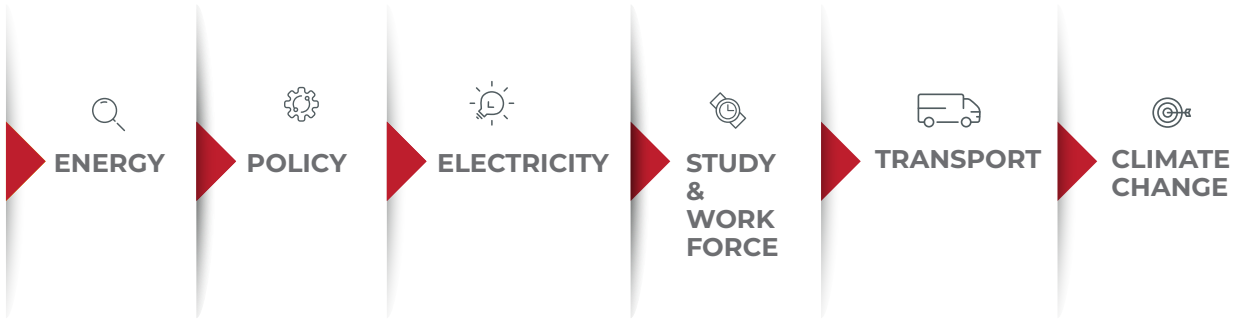
CLIMATE CHANGE FRAMEWORK

SUMMARY OF TRINIDAD AND TOBAGO GHG EMISSIONS AND REMOVALS (Gg) FOR 1990 – 2006 [29]

	EMISSIONS (Gg CO_2 EQUIVALENT)					
CATEGORIES	**NET CO_2**	**CH_4**	**N2O**	**NO_x**	**CO**	**NMVOCS**
TOTAL NATIONAL EMISSIONS AND REMOVALS	**74,402.00**	**2,858,699.53**	**0.83**	**0.31**	**85.48**	**110.00**
ENERGY	**60,000.00**	**0**	**0**	**0**	**0**	**0**
MANUFACTURING INDUSTRIES & CONSTRUCTION	**10,785.00**	**2,858,648.80**	**0**	**0**	**80.00**	**300.00**
ROAD TRANSPORTATION	**3,617.00**	**0**	**0**	**0**	**0**	**0**
AGRICULTURE / FORESTRY / FISHING	**0**	**3.57**	**0.83**	**0.31**	**5.48**	**0**
WASTE	**0**	**47.16**	**0**	**0**	**0**	**0**

Gg represents giga grams*

REFERENCES



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[10] G. Dulal, Interviewee, Electrical Enginer Specialist at Ministry of Public Utilities. [Interview]. 12 July 2021.

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