

VII EE 2016

Seminario
Latinoamericano y
del Caribe de
Eficiencia Energética

VII Latin American and the Caribbean Energy Efficiency Seminar

ENERGY EFFICIENCY

Policy Tools, Instruments and Experiences

REPUBLIC of TRINIDAD & TOBAGO

Ms. Anita M. Hankey
Senior Planning Officer

VII ENERGY EFFICIENCY SEMINAR

Montevideo, Uruguay

April 27 - 29, 2016



OLADE was created on November the 2nd, 1973, with the signing of the Lima Agreement, the constituent instrument of the Organization, ratified by 27 countries in Latin America and the Caribbean and a Participant Country, Algeria.

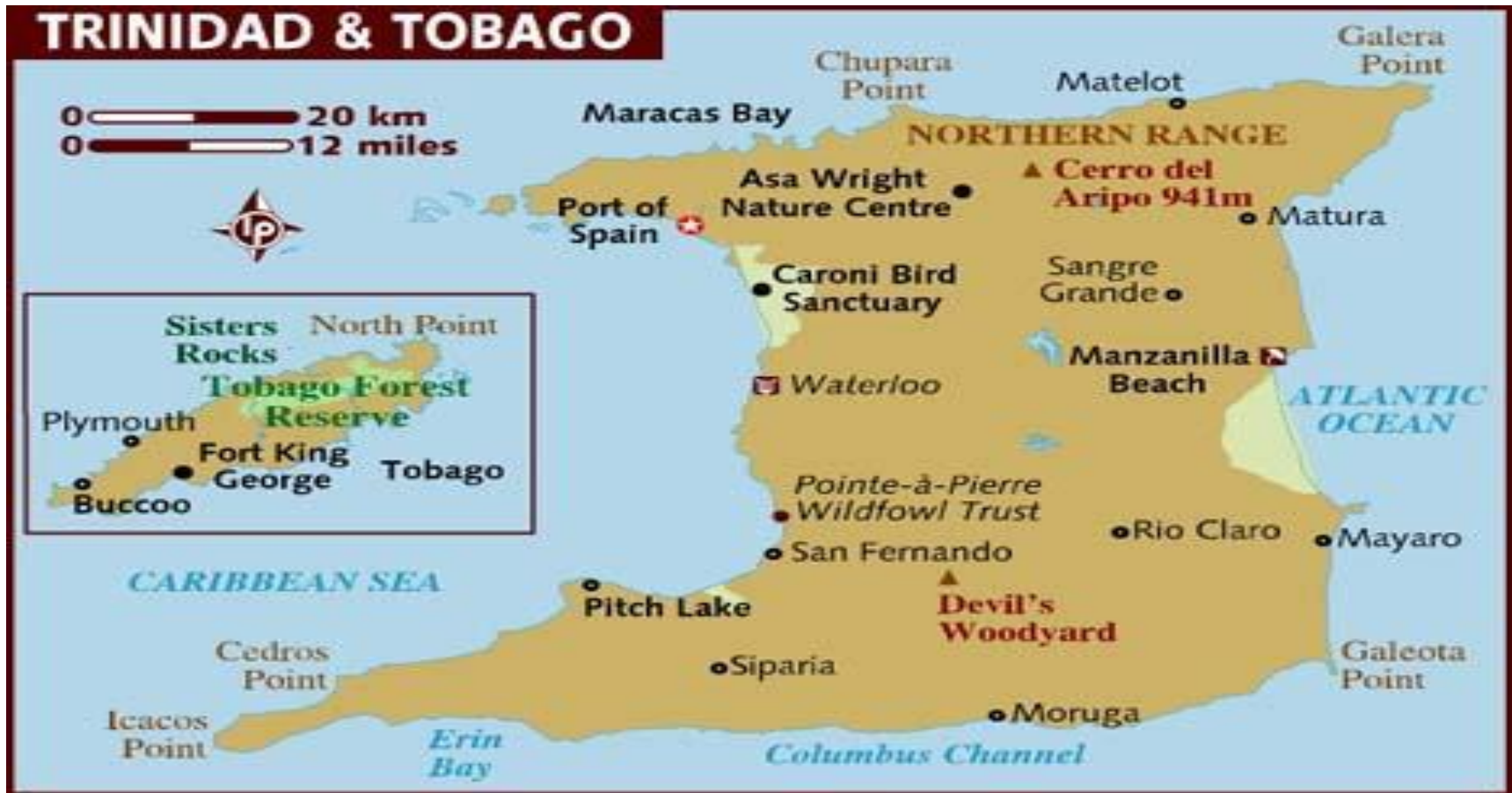
olade

Organización Latinoamericana de Energía
Latin American Energy Organization
Organisation Latino-américaine d'Énergie
Organização Latino-Americana de Energia

MISSION: To contribute to the integration, sustainable development and energy security in the region, advising and promoting cooperation and coordination among its Member Countries.

VISION: OLADE is the political and technical-support organization by means of which its Member States undertake common efforts to achieve regional and sub-regional energy integration.





ENERGY SITUATION: TRINIDAD AND TOBAGO

Trinidad and Tobago is similar....



Small Island Developing State (SIDS)



Climate Change Vulnerability



Small and Geographically isolated



.... but also Different



Hydrocarbon Production

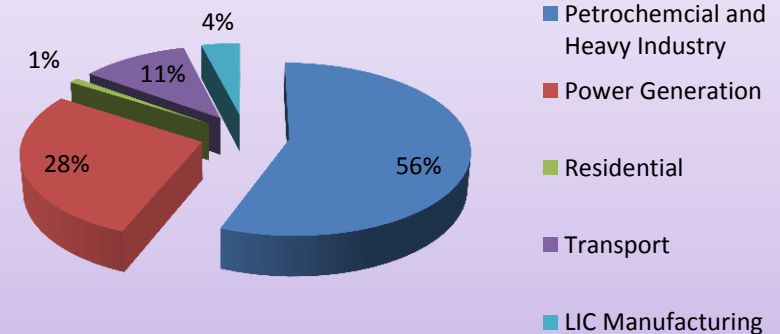


Low Energy Prices/
Fuel Subsidy



Petrochemical Industry

Emissions by Sector, 2007



Boodlal, Furlone & Williams, 2008

ENERGY EFFICIENCY (EE) POLICY IMPLEMENTATION & MAIN RESULTS

- **Most of the EE (and RE) Policies are relatively new phenomena – in the Development and Implementation Phase. Premature to Evaluate the Results. For e.g. Uptake of Incentives and Duty Waiver on CFLs.**
- **Monitoring & Evaluation of the relative Strategies are Work-in-Progress. For e.g. RE and EE Schools Education Programme.**
- **Identification of some of the Initiatives and some Results to date.**

POLICY CONTEXT: CARICOM ENERGY POLICY AND CARIBBEAN SUSTAINABLE ROADMAP AND STRATEGY (C-SERMS)

CARICOM Regional Energy Policy Objective:

“Increased energy efficiency and conservation in all sectors, including the transportation sub-sector”.

Based on observed global uptake of Energy Efficiency (EE) measures, C-SERMS recommends a 33% reduction in energy intensity - to be applied evenly across all Member States (MS) - as both an ambitious and attainable target.

Economic sectors that should be targeted for EE measures and technologies are those that:

- 1) account for a large share of the economy’s energy consumption
- 2) are highly energy-intensive or inefficient,
- 3) are central to the economy.

Across the CARICOM Region, such sectors include **electricity generation and transmission, the hotel and tourism industry, mining, and the residential sector.**

NATIONAL ENERGY POLICY (NEP) - DRAFT

In August 2011, Cabinet approved a **Framework for Energy and Minerals Policy** in Trinidad and Tobago.

- Outlines key areas for development in the energy sector along with a summary of recommendations for Oil, Gas, Refining, Power Generation, RE & EE, Energy Services and Minerals.
- Provide the basis for the *green paper* on NEP and Minerals Policy.
- NEP is currently in *draft*, pending further **Consultations** on issues *such* as local content legislation, bunkering, small retail sales etc.

POLICY CONTEXT: NATIONAL POLICY SUPPORT



National Environmental Policy, 2006



Signatory to UNFCCC's Kyoto Protocol

FRAMEWORK FOR DEVELOPMENT OF A RENEWABLE ENERGY POLICY FOR TRINIDAD AND TOBAGO



Renewable Energy Policy Framework, 2011



Implementation by the Ministry of Energy and Energy Industries

Target:

By the year 2021, at least 10.0 % of the energy generated in Trinidad and Tobago should be from the renewable sources.



National Climate Change Policy, 2011

Promotion of energy efficiency and energy conservation across all sectors will be important strategies in extending the life of our invaluable petroleum resources.

ENERGY EFFICIENCY BIG POTENTIAL! INITIATIVES

Development of ESCO Industry

- Tax Incentives to promote Energy Efficiency in Heavy and Light Industrial and Commercial Sectors.
- ESCO Certification Committee established (2012) to certify and set criteria and standards for ESCOs. An implementation Framework document has been developed by the Committee.



Conduct of Energy Audits

- Pilot Project with assistance from IDB - Conduct of Energy Audits in Selected Government Buildings.
- Next steps involve the Implementation of recommendations in selected buildings and sensitization of staff members.



Light Bulb Exchange Programme

- Exchange of Incandescent light bulbs with more energy efficient CFLs to residents in several communities.
- Part of broader National Energy Communication Campaign to increase public awareness about the energy sector, promote EE and introduce the concept of RE.



POLICY CONTEXT: CLIMATE CHANGE

- The *National Climate Change Policy (2011)* aims to provide policy guidance for the development of an appropriate administrative and legislative framework, in harmony with other sectoral policies, for the pursuance of a low-carbon development path for Trinidad and Tobago through suitable and relevant strategies and actions to address climate change, including sectoral and cross - sectoral adaptation and mitigation measures.
- T&T developed a *Carbon Reduction Strategy [CRS] (finalized 2015)* for its power **generation, transportation and industrial sectors**, these being the major emitting sectors of the economy and consistent with implementing the provisions of the National Climate Change Policy. CRS identified the most feasible mitigation options for T&T in each of the 3 Sectors. An Implementation Plan was formulated. The aim is to achieve a reduction objective in overall emissions from the 3 Sectors by 15% by 2030 from BAU, which in absolute terms is an equivalent of one hundred and three million tonnes (103,000,000) of CO₂e. Conditional on the availability of finance.
- The international policy response to global climate change has been through the adoption of two legal instruments: the **United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol. Trinidad and Tobago is a ratified signatory to both these legal instruments.**
- **April 22, 2016** – T&T became signatory to the Paris Agreement – indicating its commitment to limit the increase in the global average temperature to well below 2°C above preindustrial levels and to pursue efforts to limit the temperature increase to 1.5°C.

INTENDED NATIONALLY DETERMINED CONTRIBUTION (iNDC)

- Trinidad and Tobago's iNDC is based on the *Carbon Reduction Strategy*
- iNDC – Conditional Commitment
- Submitted to the UNFCCC in August 2015
- First Caribbean country to submit
- T&T's aim is to achieve a reduction in overall emissions from the three (3) sectors by 15% by 2030 from BAU, which in absolute terms is an equivalent of one hundred and three million tonnes (103,000,000) of CO₂e
- Conditional on availability of finance
- Implementation Plan developed and now needs to be rolled out

EE MEASURES/INITIATIVES – RESULTS

TRINIDAD & TOBAGO ELECTRICITY COMMISSION (T&TEC)

- Increased use of Combined Cycle generation – the extent that it can save gas - at T&TEC's present operations. In terms of EE, **every 100 MW shift from Simple Cycle generation to Combined Cycle (CC) generation the Company will save \$10M in gas per month.**
- T&TEC utilizes, in the order of **330 MSCF of gas p/d**; and with the combination of measures described i.e. the Combined Cycle Plant and RE initiatives – **daily gas consumption** is expected to drop to just below **300 MSCF of gas p/d by 2021** – which are in keeping with Government's Vision of **10% RE generation by 2021.**
- **Pilot Programmes** – at three (3) locations – each outfitted with **4KW Solar PV Panels** – installed 3 years now – data is collected - interconnected with the grid, so feed power back to the grid; it is working well; technically a success and therefore posing no technical challenge. This is subject to the implementation of Amendment to Legislation, and adjustment of the Regulatory Framework of the Regulator (RIC).
- **Wind Survey (Tobago)** – Result: potential for small--to medium-scale Wind Farms. The wind speeds are not sufficiently high for large scale production.

EE MEASURES/INITIATIVES - RESULTS (CONT'D)

- T&TEC has undertaken the **installation of Capacitors on its distribution and sub-Transmission System** – this has the effect of reducing the demand for reactive power from the Power Station, thus saving on fuel and making electricity delivery more efficient; this basically reduce losses in transportation.

INDUSTRIAL:

- An EE study of the power generation, methanol and ammonia sectors was conducted at the Pt. Lisas Industrial Estate (PLIE) in **2011**.

Results:

- ✓ Total energy use would decrease by 15% if energy efficient technically feasible best practices are implemented.
- ✓ Significant opportunities for EE interventions amounting to over US\$13Mn, which, if implemented could yield significant annual savings of over US\$2.8Mn with a payback of less than five years on average.

GENERATING PLANT AND EQUIPMENT AT THE NEW 720MW POWER STATION IN LA BREA, SOUTH TRINIDAD



ELECTRICAL CODE COMMITTEE – PILOT PROJECTS

PV Installations to test the reliability of the new Part III (renewable energy) of the National Electrical Wiring Code



University of Trinidad and Tobago
O'Meara Campus (2 kW)



Trinidad and Tobago Electricity Commission
Mt. Hope Compound (2 kW)

INCENTIVES

Finance Act No. 13 of 2010

SOLAR
25% Tax Credit on Solar Water Heaters (SWH)
0% VAT on SWH& Solar PV Systems
Wear & Tear Allowance on 150% of cost of acquisition of SWH; SWH Plant , Machinery and Equipment & Solar PV Systems
Conditional Duty Exemptions for SWH Manufacturers

WIND
0% VAT on Wind Turbines
Wear & Tear Allowance on 150% of cost of acquisition of Wind Turbines and supporting equipment

Energy Efficiency
150% Tax Allowance for the design and installation of energy saving systems by an Energy Service Company (ESCO)
ESCO can write off value of assets in two years: - a)75% Depreciation on plant, machinery and equipment acquisition; b)25% Wear& Tear allowance in following year.

Thank you

olade

Organización Latinoamericana de Energía
Latin American Energy Organization
Organisation Latino-américaine d'Énergie
Organização Latino-Americana de Energia



www.olade.org

