Joint Select Committee on Land and Physical Infrastructure

Summary of Proceedings
Public Hearing Summary
Virtual Public Hearing
Wednesday May 05, 2021 at 2:00 p.m.

Topic:
An Inquiry into the Management of T&TEC and related recommendations.

Objectives of the Inquiry:

1. to examine the current management strategies at the T&TEC;

2. to identify the challenges related to managing power and electricity services in Trinidad and Tobago; and

3. to make recommendations to improve the management strategies at the Commission.

Committee Members:
The following Committee Members were present:

i. Mr. Deoroop Teemal – Chairman
ii. Mr. Nigel De Freitas – Vice Chairman
iii. Mrs. Lisa Morris-Julian, MP - Member
iv. Mr. Saddam Hosein, MP – Member
v. Mr. Kennedy Richards, MP - Member
vi. Mr. Symone de Nobriga, MP - Member
vii. Mr. Anil Roberts - Member

WITNESSES WHO APPEARED:

Officials from the Trinidad and Tobago Electricity Commission

- Mr. Kelvin Ramsook, General Manager
- Mr. Neil Balgobin, Chief Financial Officer
- Mr. Chrisalston Belle, Chief Technical Officer
- Mrs. Jacqueline Cheesman, Chief Human Resources Officer
- Mr. Curvis Francois, Chief Operating Officer
Opening Remarks

- Trinidad and Tobago Electricity Commission (T&TEC) has been involved in many operational initiatives in accordance with its mandate that has benefitted customers.
- A number of adjustments were made as a result of the Covid-19 pandemic to allow T&TEC to continue providing a comparable service with international utilities.
- The evidence disclosed that T&TEC’s performance has been equally comparable to international utilities, in some cases T&TEC’s performance is better than international utilities and in other cases not as good.
- T&TEC continues to put mechanisms in place to improve its performance.

Key Issues Discussed with the Trinidad and Tobago Electricity Commission (T&TEC)

The reason why T&TEC has been operating at a loss over the last nine (9) years

i. T&TEC has been operating with an income of roughly $3.2B and an expenditure of roughly $4.3B putting the Commission at a loss of $1.1B.

ii. Tariff revenue account for 37cents per kilo watt (kw) whereas expenditure is 48cents per kw.

iii. Expenditure is broken up into generation which is $1.36B.

iv. The cost of gas is roughly $1M, the total cost of salaries and wages and employee benefits is $995M, taxes and other capital, foreign and local expenses account for $600M.

v. The majority of T&TEC’s expenditure is on electricity generation which is a combination of conversion and gas.

vi. The $1.63B added to $1B is $2.63B which represents 67-68%.

vii. Salaries and wages account for twenty-three (23) percent of operations.

viii. In order to remove the loss of $1.1M, and 11cents per kw something has to be given up. Tariff revenues will have to increase to reduce the loss.

ix. As it pertains to expenditure, T&TEC has four (4) fixed Power Purchasing Agreements (PPA’s) which accounts for $1.63B.

x. Of the four (4) agreements, two (2) are with Powergen, one (1) with Trinity and one (1) with Trinidad Generation Unlimited (TGU).

xi. TGU’s PPA ends in 2041, Powergen in 2029 and 2037 and Trinity in 2029.
xii. The cost of gas account for $1M and to purchase materials plus taxes at approximately $600M.

xiii. The Commission has 2,924 employees of which 312 are temporary.

xiv. The trend in the last ten years reveal that the Commission has been maintaining the current number of employees which is lower than ten (10) years ago.

xv. The Commission’s customer base has increased to 5,200.

xvi. T&TEC has done a Manpower Audit on the Commission. According to this Audit, the current employees are adequate to meet the Commission’s requirement.

xvii. T&TEC benchmarks its employee ratio with other utilities which disclosed that its employee ratio is acceptable.

xviii. The Commission has been engaging in a number of initiatives to bridge the $1.1B loss for instance to reduce the gas bill from where it was to where it is now.

xix. The issue with the natural gas is that there is a 3% escalation.

xx. T&TEC has been paying for all of its expenditure but has not been able to make its commitment to the Natural Gas Company (NGC) therefore resulting in the loss of $1.1B

xxi. T&TEC does make some payments to the NGC but not at the required level.

xxii. T&TEC’s annual loss with the closure of plants and customers asking for a reduction in rates of capacity is $60M annually.

xxiii. In addition to those institutions, had a number of requests for a reduction in capacity by a number of customers due to changes in business operations.

xxiv. T&TEC anticipates that the issues with M5000 and M4 will be rectify itself soon.

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**The impact of illegal connections on the Commission’s loss**

i. Losses are made up of two (2) categories, technical (heat etc.) and non-technical losses (stolen electricity) which accounts for .025% of losses. The majority of losses are technical losses and this represent approximately nine percent (9%).

ii. The Commission conducted an amnesty via newspaper to encourage the public to come forward with information on illegal connections.

iii. Based on an amnesty conducted by the Commission, illegal connections are estimated to be 3,000 throughout Trinidad and Tobago.
PPA discussions/negotiations

xxv. The Commission has approached all the PPA’s.

xxvi. Engagement with one producer did not go too well, the Commission will be going back to have discussions.

xxvii. There will be need to look at load growth and prospective customers to come on board.

xxviii. The Commission quoted values anticipating that Petrotrin would come back which uses 16mw.

xxix. The Commission had discussions concerning the ArcelorMittal Plant and a company has shown interest in the possible reactivation of part of the plant.

xxx. Ministerial approval will be required to release capacity to part of what was known as the ArcelorMittal Plant. Assuming these approvals take place then the Commission can do away with the value quoted.

xxxi. T&TEC has a section that examines generation expansion.

xxxii. Of the four (4) agreements, two (2) are with Powergen, one (1) with Trinity and one (1) with Trinidad Generation Unlimited (TGU).

xxxiii. T&TEC has a contracted capacity of 1754 mw.

xxxiv. Tobago Cove Station is operating at 84mw capacity.

xxxv. T&TEC also has a small operating generation at Scarborough at 91mw capacity.

xxxvi. T&TEC’s total capacity available is 1845mw.

xxxvii. 475 mw of capacity is available if peak demand at 1317mw is subtracted.

xxxviii. T&TEC has capacity.

xxxix. It will cost the Commission to obtain capacity anywhere else.

xl. Renewables are very important item on T&TEC’s agenda and has to embrace.

xli. There is also need to have spending reserves.

xlii. There is need to have spare or reserve capacity for contingency purposes for example where a plant is down.

xliii. The value of 200mw additional capacity is $250M per year.

xliv. It was anticipated that the now closed Alutrint Plant would consume 270mw.

xlv. The Commission has to absorb the cost of the 270mw as a result of the closure of the Alutrint Plant.
T&TEC’s gas subsidy

i. Subsidised gas is sold at 1.5882USD per mw. T&TEC’s is subsidized by the State by approximately 50%.

ii. The true price of gas hovers around $3, $2.96

iii. If the gas is unsubsidized T&TEC will sell at US90cents per kilowatt per hour.

iv. Any unsubsidised electricity in any jurisdiction will start at US12 cents per kilowatt.

v. The 1.1bn is the subsidised price.

Whether there are plans at T&TEC to separate workers

vi. There are no plans at this time to separate workers.

vii. In perspective if three hundred and twelve (312) employees are separated only $52M will be saved the Commission requires $1.1B.

viii. Given the nature of its business, T&TEC has to cater for hiring and training new staff because two hundred and sixty-seven (267) are due for retirement in the next five (5) years.

T&TEC’s Economic Tariff

iv. T&TEC has submitted its Business Plan to its line Ministry, the Ministry of Public Utilities (MPU) and is examining same.

v. T&TEC has been doing what it can to reduce cost including marketing its business to attract revenue other than from light and power.

vi. T&TEC has a Business Unit and a number of initiatives in place.

vii. The solution to T&TEC’s issue is not only the price review, the T&TEC is examining every possible avenue/solution.

viii. An economic tariff enables the Commission to cover all of its costs under efficient operation.

ix. A number of factors affect cost that are outside of the Commission’s control.

x. Seventy percent (70% ) of the Commission’s cost for example, generation capacity, natural gas, poles, transformers are priced in United States currency as a result, T&TEC is subject to exchange rate risk.
xi. The last time T&TEC made a profit was in 2011 when the exchange rate was TT$6.30 to US$1.

xii. The price of natural gas escalates by 3% per year.

xiii. The independent producers have a formula one of the inputs of which is the US price index.

xiv. T&TEC had to absorb cost increases over the years with a flat tariff.

xv. An economic tariff is one that recognises the non-controllable cost drivers that impacts on the Commission’s cost profile and will allow it to recover the true cost of operation under efficient conditions.

xvi. T&TEC will be putting the proposal for an increased economic tariff to the RIC for its consideration.

xvii. The true cost of operations has to be met by revenue or else a deficit will incur year after year and absorb the impact of non-controllable costs.

The status of the Commission’s twelve (12) point five (5) year Operational Plan and the quantum of revenue T&TEC is seeking to generate from the Plan

xviii. The five (5) year Operational Plan involves a number of initiatives across the organisation.

xix. Some initiatives in the Operational Plan entails reducing gas consumption based on the dispatch of power from the most efficient producer, TGU, building the second double circuit line from Union Estate to Ghandi to bring the dispatch of power onto the National grid.

xx. The initiatives to reduce cost or improve revenue from non-lighting power sources in terms of the charges to customers include for the movement of lines or any other contracting costs, transformer rental rates, pole rental agreements with communication providers.

xxi. The more efficient machines are running, the lower the gas consumption will be. T&TEC has been able to identify the more efficient machines and has been therefore reducing gas consumption.

xxii. Approximately $100M will be saved from the dispatch of machines.

The Preparations being made to Use Renewables to treat with the upsurge in Demand for Electricity as a Result of New Innovations eg. Electric cars

xxiii. T&TEC is preparing for use of renewables as an energy source.
xxiv. Currently, discussions are ongoing for 112.2mw renewable plant to be located largely in Point Lisas Esperanza and a section of it in Trincity.

xxv. The tender process has already been closed, the PPA discussions are taking place once completed the Commission anticipates 112.2kw on the grid in the next two (2) years plus.

xxvi. T&TEC is also looking at an ongoing project with the Ministry of Energy and Energy Industries for a 700kw vehicle charge station at the Queens Park Savanah which will also put capacity on the grid.

xxvii. T&TEC is also pursuing infrastructure that is ongoing at the Piarco International Airport.

xxviii. The value T&TEC is looking at to obtain the renewable capacity is US4 cents per kw compared to the current value of electricity generation and gas at the subsidized rate at US4.7cents per kw.

xxix. Currently, electricity generation at an unsubsidised rate is US5.9 cents.

xxx. Electricity generation using renewable resources are called non-dispatchable.

xxxii. The grid will have to be tailored with non-dispatchable electricity because this capacity will not be available 24/7 365 days per year, it is only going to be available only about thirty percent (30%) of the time.

xxxiii. Non-dispatchable will lose power if there is cloud cover or rain.

xxxiv. The non-dispatchable electricity generation rate of 4 cents cannot be guaranteed.

xxxv. There is need to maintain the level of disputable resources particularly when non-dispatchable resources are unavailable.

xxxvi. The move to dispatchable will result in a rate from 4 cents to 8 cents.

xxxvii. The country will benefit significantly from renewables because fossil fuel gas will become available and can be sold at twice the price and the figure of 8 cents will move to 5 cents for dispatchable energy which is slightly comparable to the price of 5.9 cents for an unsubsidized fossil fuelled plant.

xxxviii. T&TEC has a team headed by the Chief Technical Officer which has begun looking into marketing photovoltaic as an option and charge stations at appropriate points to be ready to meet the requirements for the electrical car industry.

xxxviii. The regulator has to be involved because of the issue of buying and selling.
Whether T&TEC has collaborations with car dealers to power electric vehicles

xxxix. One car dealership is marketing electrical cars and has approached the Commission regarding same.

xl. T&TEC is willing to partner with any car dealership in order to advance the use of electric vehicles in the country.

xli. PTSC also approached T&TEC with regards to electrical vehicles.

xlii. T&TEC is liaising with the dealerships and PTSC to ensure the level of service required is provided.

The Measure in Place to Treat with the New COVID 19 Restrictions

i. The Commission had a total of thirty-four (34) employees who tested positive for the Covid-19 virus. The Commission therefore tries to rotate employees in a way that it would not impact on its services.

ii. After discussion with the union, the Commission placed all non-supervisory staff on a 50% rotation. The Commission was unable to extend rotation to field staff because of the service they are required to deliver.

iii. The Commission implemented staggered working hours to reduce congregation for its field employees.

iv. The Service Centre closing hours were changed from 3:45pm. to 2:30pm so that employees could leave at 3:00p.m.

v. The most customer contact is at the Service Centres which is managed by the Commission’s Security

vi. The Commission has put measures in place to ensure the safety of all employees and customers.

vii. At the start of the pandemic, the Commission implemented glass partitions, dips to receive money, intercom systems to interact with customers, installed sinks and temperature testing, and hand sanitisers.

viii. The Commission produced an employee handbook with all the expected protocols and implemented sanitising and all the possible safety measures to reduce the risk of contracting the Covid-19 virus and to protect employees.

ix. The Commission had some instances of persons not following the rules and is dealing with the issue which calls for a behavioural change.
The Commission’s Measures in Place for Disaster Preparedness

x. There are two (2) main aspects of disaster preparedness, labour and material. As it pertains to labour, the Commission partners with CARILEC\(^1\) and other entities that would provide assistance to T&TEC.

xi. However, the Commission has a concern with regards to material resources which is insufficient in the event of an emergency.

xii. The mobile substation was a past initiative that has worked fairly but is not sufficient to manage the entire country. The Commission is seeking to obtain another mobile station once it receives the Board’s approval and an amphibious vehicle to access flooded areas by November, 2021.

xiii. Parallel to the mobile station and vehicle, the Commission has implemented a number of initiatives to procure emergency spares.

xiv. Through the line Minister and Chairman, the Commission has partnered with Florida Light and Power for assistance and guidance with disaster preparedness.

xv. The Commission is examining how it acquires its spares, contacts of suppliers to provide spares in a short space of time.

xvi. The Commission is also tailoring procurement for key items such as poles, transformers, conductors and insulators.

xvii. The Commission started the process to get commitments so that procurement can be obtained in the second year if not available in the first year to prepare for disasters.

xviii. The Commission is 90% successful with regards to the availability of labour in a disaster but is at 30% with regards to material resources.

xix. T&TEC has an Enterprise Risk Management System and a team headed by the Chief Operations Officer.

xx. T&TEC prepared a risk register which identifies a number of risks and is looking at the order of priority of its risk.

The reason why the Commission has not submitted its Business Plan to the RIC

xxi. T&TEC has prepared a Business Plan.

xxii. A key component in the Commission’s Strategic Plan is the price of natural gas which is still under negotiations between the government, NGC and T&TEC.

\(^1\) [https://www.carilec.org/](https://www.carilec.org/)
xxiii. The Business Plan to be submitted to the Regulated Industries Commission (RIC) has a placeholder value for the price of natural gas.

xxiv. Until the price of natural gas is agreed and the Commission receives the authority from the MPU to submit the Business Plan to the RIC, the Commission has to hold on the Business Plan.

xxv. All the other work associated with the Business Plan has been completed.

xxvi. Once the price of natural gas is determined the Business Plan will be submitted to the RIC.

xxvii. All of the other inputs into the Business Plan have been included.

xxviii. The General Manager has been having dialogue with the MPU and the MPU is working on finalising the Business Plan.

xxix. T&TEC anticipates that it would not be too long before the Business Plan is submitted to the RIC.

xxx. Raw information was included when T&TEC’s Strategic Plan was being created.

xxxi. The context in which the statement was made that T&TEC’s Business Model is flawed is related to T&TEC’s income and operating expenditure and its inability to meet its expenses.

xxxii. The gas price is not related in any way to the renegotiated gas sale agreements.

xxiii. The MPU will provide guidance as it pertains to the renegotiated gas sale agreements.

T&TEC’s debt and debt related issues

xxxiv. T&TEC’s private debt is averaging $227M.

xxxv. The majority of the debt relates to the desalination plant

xxxvi. Some payments were received from the desalination plant.

xxxvii. Part of discussions that is ongoing with the desalination plant is its $30M interest related to outstanding arrears.

xxxviii. The figure provided is made up of current bills and arrears therefore the true outstanding amount for private accounts is approximately $50M.

xxxix. T&TEC’s present outstanding balance as of March 2021 to the NGC is US$321,467 which is $2,175,861,408B which represents the accumulation for, 2019, 2020 and up to March 2021.
xl. T&TEC received assistance from the government for payments for all outstanding balances to NGC up to 2018.

xli. T&TEC continues to have discussions with the MPU regarding a similar arrangement to reduce its outstanding balance to NGC.

xlii. Discussion led to the $1.1B per year gap as a result of income and expenditure.

xliii. The last increase occurred with the Price Review in 2009.

xliv. The total debts owed to the Commission averages $1.8B.

xlv. The arrears owed are $1.4B

xlvi. T&TEC’s public debt is balanced given that the Government also provides assistance in the form of PSIP, funding for payment for NGC bills it goes the other way.

xlvii. The Government has set up an arrangement to pay NGC’s bill up to 2018.

xlviii. Further discussions are being had concerning NGC’s bill.

xlix. T&TEC has observed some positive improvements with collections from public accounts.

Whether T&TEC’s rate will be sufficient in the foreseeable future

1. T&TEC is at the border line and can impact reliability in the future if it is not careful.

li. It is very important that T&TEC gets a solution.

lii. T&TEC has kept things firm in terms of ensuring that expansion takes place and that it occurs in time and ensures it caters for future reliability in terms of infrastructure.

liii. T&TEC is at a point where it can slip and if it does reliability will be affected.

liv. If T&TEC slips it will not be able to recover overnight it will take time because of the nature of the business going forward will be difficult because of the existing issues.

lv. It is a concerning issue and requires input from the JSC.

The effectiveness of T&TEC’s customer service measures

lvi. T&TEC’s average response time through its application is approximately 2 hours.

lvii. In terms of a breakdown approximately 60% will be responded to within an hour and the remaining 40% above the hour.
lviii. The outstanding amount of streetlights was approximately 8,000 however this has been since reduced to 5,550 with the implementation of initiatives.

lix. The Commission anticipates that by August 2021, the number of outstanding streetlight issues will be further reduced to naught.

lx. T&TEC’s response time through the application is roughly the same via telephone.

lxi. T&TEC is commissioning an Outage Management System (OMS) which will automatically receive notification in its SCADA and other systems that supply is lost in advance of customer calls regarding an outage.

lxii. The OMS will assist T&TEC to respond promptly and stream its calls regarding outages and improve the service provided by its call centres.

lxiii. In March, 2020, the Commission developed a Quick Pay page for customers to make payments via credit card or visa debit card.

lxiv. The Quick Pay application allows payments to be credited almost immediately.

lxv. The Commission also offered previously an e-billing option which were emailed, customers also receive email notification of outstanding bills.

lxvi. The Commission is seeking to further develop a customer facing system where reports can be accessed online.

Whether PSIP are compromising in any way large skills maintenance and necessary expansion at the Commission which is necessary to provide the required level of service

lxvii. Under the PSIP different categories: street light expansions where the government would provide the necessary funds, recreation grounds which is an ongoing project and parks and maintenance of parks.

lxviii. The bigger issue concerns funding through the PSIP for major projects.

lxix. One of the major projects is the second line from Union to Ghandi, the contract has been signed work has commenced.

lxx. The project is important because T&TEC can get a capacity of 600mw from the TGU line, there is need to get the additional 120mw onto the grid.

lxxi. T&TEC has some funding for the project which will be applied in the next fiscal year.

lxxii. The T&TEC understands things are difficult and tries to make every effort with the MPU.

lxxiii. The MPU is very cooperative with the Commission.
The issue of acquisition of Right of Ways and acquisition of land

lxxiv. A Power Utility Corridor exists in other jurisdictions where portions of land are earmarked for construction for utility infrastructure. T&TEC therefore finds itself competing for lands for infrastructure.

lxxv. T&TEC tries to avoid installing infrastructure where it can create unsafe situations.

lxxvi. T&TEC is looking at right of way access in its revised legislation to allow the Commission the flexibility to install the infrastructure on the system.

lxxvii. T&TEC is looking at where it can install underground infrastructure, however this is very expensive.

lxxviii. T&TEC has encouraged new suppliers to go underground however, they shy away from that process because of the high cost and prefer to go overhead.

lxxix. It is difficult to convert to underground because the infrastructure already exists (building, roads etc.).

lxxx. T&TEC has been looking at other versions such as using insulated conductors.

lxxxi. T&TEC has a number of things in place, insulated conductors are being used in Tobago on the north side and a number of locations in Trinidad.

lxxxii. Section 37 of the T&TEC Act Chapter 57:40 allows T&TEC to serve notice to install infrastructure but does not allow for any right of way or ownership.

lxxxiii. T&TEC has to move its infrastructure where a customer raises an issue of nuisance.

lxxxiv. Right of way access is therefore not included in the Act.

lxxxv. T&TEC tries to get funding and received same under the PSIP for transmission upgrade infrastructures to have the right of way.

lxxxvi. T&TEC had discussions with the MPU concerning the renewables in the legislative amendments, items such as tariffs and the possibility of customers who want to bring renewables onto the grid. It may not be too far away from approval.

lxxxvii. The Commission could not give an indication as to when the other proposal will be approved but it is also well advanced at the MPU.

An update on wind renewable energy

lxxxviii. Based on the original assessment T&TEC had an original twelve (12) sites which have been narrowed down to four (4) sites.
T&TEC is seeking to get measurements over a period of at least one (1) year to obtain an adequate assessment to make a final decision to support the investment.

T&TEC is engaged in some soil analysis to determine what will be required for installing wind meter infrastructure or if a new technology called lyder can be implemented.

T&TEC is currently working with the MPU and a consultant to provide some guidance regarding the way forward.

T&TEC should, with the next eighteen months be able to determine whether to implement the wind turbines at the four sites and if so, the amount of energy T&TEC will be able to obtain.

T&TEC installed a 2.5kw wind turbine at Gasparillo a few years ago and is examining its performance and is using it to analyse the circuitry and the type of knowledge and experience that will be required to manage same.

View the Hearing:
The hearing can be viewed on our YouTube page via the following link:
https://www.youtube.com/watch?v=MEfbo-l23rI

Contact Information:
You may contact the Committee’s Secretary at jsclpi@ttparliament.org or 624-7275 Ext. 2232.

Committees Unit
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