

**SECOND REPORT OF**  
The Joint Select Committee on Land and  
Physical Infrastructure on an Inquiry into  
**THE MANAGEMENT OF THE TRINIDAD AND TOBAGO  
ELECTRICITY COMMISSION (T&TEC) AND  
RELATED RECOMMENDATIONS**

Second Session (2020/2021),  
Twelfth Parliament

An electronic copy of this report can be found on the Parliament's website:

[www.ttparliament.org](http://www.ttparliament.org)

**The Joint Select Committee on Land and Physical Infrastructure**

**Contact the Committees Unit**

**Telephone:** 624-7275 Extensions 2232/2425/2258, **Fax:** 625-4672

**Email:** [jsclpi@ttparliament.org](mailto:jsclpi@ttparliament.org)



# Joint Select Committee on Land and Physical Infrastructure

(including Land, Agriculture, Marine Resources, Public Utilities, Transport and Works)

---

## An inquiry into the management of the Trinidad and Tobago Electricity Commission (T&TEC) and related Recommendations

---

### Second Report of the Second Session (2021/2022), Twelfth Parliament

Report, together with Minutes

Ordered to be printed

Date Laid

H.o.R:

Date Laid

Senate:

Published on \_\_\_\_\_ 20\_\_

# THE JOINT SELECT COMMITTEE ON LAND AND PHYSICAL INFRASTRUCTURE

## *Establishment*

1. The Joint Select Committee on Land and Physical Infrastructure was appointed pursuant to section 66A of the Constitution of the Republic of Trinidad and Tobago. The House of Representatives and the Senate on Monday November 09, 2020 and Tuesday November 17, 2020, respectively agreed to a motion which, *inter alia*, established this Committee.

## *Current Membership*

2. The following Members were appointed to serve on the Committee:
  - Mr. Deeroop Teemal - Chairman<sup>1</sup>
  - Mr. Nigel de Freitas - Vice Chairman<sup>2</sup>
  - Mr. Kennedy Richards, MP
  - Mr. Barry Paradath, MP<sup>3</sup>
  - Mrs. Lisa Morris-Julien, MP
  - Mr. Symon de Nobriga, MP
  - Mr. Anil Roberts
  - Dr. Muhammad Yunus Ibrahim<sup>4</sup>

## *Functions and Powers*

3. The Committee is one of the standing Departmental Select Committees of Parliament, the functions and powers of which are set out principally in Standing Orders 91 and 101 of the

---

<sup>1</sup> Mr. Deeroop Teemal was elected as Chairman of the Committee at its first meeting held on 18.11.2020

<sup>2</sup> Mr. Nigel de Freitas was elected as Vice-Chairman of the Committee at its first meeting held on 18.11.2020

<sup>3</sup> Mr. Barry Paradath, MP was appointed to the Committee w.e.f. 12.11.2021 in lieu of Mr. Saddam Hosein, MP

<sup>4</sup> Dr. Muhammad Yunus Ibrahim was appointed to the Committee on 14.09.2021 in lieu of the late Mr. Franklin Khan

Senate and 101 and 111 of the House of Representatives. The Standing Orders are available on the Parliament's website via [www.ttparliament.org](http://www.ttparliament.org).

4. The Committee is mandated to inquire into areas related to Land, Agriculture, Marine Resources, Housing, Public Utilities, Transport and Works as listed in Appendix IV and V of the Standing Orders of the House of Representatives and Senate respectively.

### ***Secretarial Support***

5. The following officers were assigned to assist the Committee:
  1. Mr. Johnson Greenidge - Secretary
  2. Ms. Renee Batson - Assistant Secretary
  3. Ms. Sherlana Ramdeen - Procedural Officer
  4. Ms. Katharina Gokool - Researcher

### ***Contacts***

6. All correspondence should be addressed to the following:

The Secretary  
Joint Select Committee on Land and Physical Infrastructure  
Parliamentary Complex  
Cabildo Building  
St. Vincent Street  
Port-of-Spain  
Tel: (868) 624-7275 Ext 2258 / 2425 / 2232 Fax: (868) 625-4672  
Email: [jsclpi@ttparliament.org](mailto:jsclpi@ttparliament.org)

## ACRONYMS AND ABBREVIATIONS

BD&A	Business Development and Administration
BP	Beyond Petroleum
CARILEC	Caribbean Electric Utility Services Corporation
COSL	Commissioner of State Lands
COVID-19	Coronavirus 2019
CPS	Cove Power Station
CSO	Central Statistical Office
CWA	Customer Web Access
DESALCOTT	Desalination Company of Trinidad and Tobago
EHOP	Employee Home Ownership Plan
EPA	Estate Police Association
GES	Guaranteed Electricity Standards
GORTT	Government of the Republic of Trinidad and Tobago
GPS	Global Positioning System
HPS	High-Pressure Sodium
HV	High Voltage
IPP	Independent Power Producer
IT	Information Technology
IVR	Interactive Voice Response
JSC	Joint Select Committee
KPI	Key Performance Indicator
KW	Kilowatt
kWh	Kilowatt hour
LED	Light Emitting Diode
LIBOR	London Interbank Offered Rate
LPI	Land and Physical Infrastructure
MEEI	Ministry of Energy and Energy Industries
MMBTU	Metric Million British Thermal Unit
MOF	Ministry of Finance
MOPD	Ministry of Planning and Development
MP	Member of Parliament
MPU	Ministry of Public Utilities
MW	Megawatt

MWh	Megawatt hour
NewGen	NewGen Energy Limited
NGC	National Gas Company
O&M	Operating and Maintenance
OES	Overall Electricity Standard
OMS	Outage Management System
OWTU	Oilfields Workers' Trade Union
PAAC	Public Accounts Appropriation Committee
PLD	Public Lighting Department
PowerGen	Power Generation Company of Trinidad and Tobago
PPA	Power Purchasing Agreement
PSIP	Public Sector Investment Programme
PV	Photovoltaic
QSS	Quality Service Standards
RHA	Regional Health Authority
RIC	Regulated Industries Commission
SCADA	Supervisory Control and Data Acquisition
SWOT	Strengths, Weaknesses, Opportunities, Threats
T&TEC	Trinidad and Tobago Electricity Commission
TGU	Trinidad Generation Unlimited
TPL	Trinity Power Limited
TT	Trinidad and Tobago
TTD	Trinidad and Tobago Dollar
TTPOST	Trinidad and Tobago Postal Corporation
TTPS	Trinidad and Tobago Police Service
US	United States of America
USD	United States Dollar
WASA	Water and Sewerage Authority

## LIST OF TABLES

TABLE NO.	DETAILS	PAGE NO.
1.	Written Submissions received from Stakeholders	20
2.	List of Attendees – Virtual Public Hearing held on May 05, 2021	21
3.	List of Attendees – Public Hearing held on June 24, 2021	21
4.	Total Light and Power Revenue vs Number of New Connections	58
5.	Cess payments to the RIC for the years 2015 to 2020	59
6.	Natural Gas consumed on a Daily and Annual basis for the years 2016 to 2020	60
7.	The Cost of Natural Gas Consumed per day and per annum	61
8.	Energy Purchased from Approved Generators	83
9.	Rates paid by T&TEC for generated power for the years 2016 to 2020	84
10.	Statistics on load demand for the past five (5) years	91
11.	Connections and Disconnections for the years 2016 to 2020	95
12.	No. of Disconnections for Non-Payment for the months December 2020 to April 2021	96
13.	Status of PSIP Releases for Projects for Fiscal year 2021	103
14.	Categories of outages for the period 2016 to 2020	113
15.	Outages reported by T&TEC for the years 2016 to 2020	114
16.	The number of planned outages by year for the past five (5) years	115
17.	Unplanned Outages for the years 2016 to 2020	116
18.	T&TEC’s performance of Guaranteed Standards for the years 2015 to 2019	122
19.	T&TEC’s Compensatory Payments 2016 -2020	123
20.	Outstanding and Resolved Reports -Street Lights	125



21.	Breakdown of Street Lighting Jobs Received and Completed by T&TEC for the years 2017 to 2021	126
22.	No. of Complaints received by the RIC regarding T&TEC for the years 20216 to 2020	127
23.	Categories of Complaints received during the period 2016 to 2020	127
24.	Rebates paid by T&TEC for the years 2016 to 2020	128
25.	Various Categories of Employees at T&TEC	130
26.	T&TEC's contributions to Savings Plan for the years 2016 to 2020	131
27.	No. of Employee Deaths in Service for the years 2016 to 2020	132
28.	Breakdown of Cost of LED Light Bulb Distribution Programme	148
29.	Number of Street Lights by Type	149
30.	No. of Solar Installations funded by the MPU's Solar Panel Assistance Programme for the years 2015 to 2019	150

## LIST OF FIGURES

<b>FIGURE NO.</b>	<b>DETAILS</b>	<b>PAGE NO.</b>
1.	Breakdown of T&TEC's total expenditure of 4.3B	54
2.	Connections and Disconnections for the years 2016 to 2018	95
3.	Number of Unplanned Outages	116

## Table of Contents

<b>THE JOINT SELECT COMMITTEE ON LAND AND PHYSICAL INFRASTRUCTURE .....</b>	<b>4</b>
<i>Establishment.....</i>	<i>4</i>
<i>Current Membership.....</i>	<i>4</i>
<i>Functions and Powers.....</i>	<i>4</i>
<i>Secretarial Support.....</i>	<i>5</i>
<i>Contacts.....</i>	<i>5</i>
<b>ACRONYMS AND ABBREVIATIONS .....</b>	<b>6</b>
<b>REPORT SUMMARY .....</b>	<b>20</b>
<b>INTRODUCTION.....</b>	<b>23</b>
<b>Background to Inquiry.....</b>	<b>23</b>
General Findings .....	26
<b>1. T&amp;TEC'S CURRENT MANAGEMENT STRATEGIES .....</b>	<b>26</b>
<b>2. THE CHALLENGES RELATED TO MANAGING POWER AND ELECTRICITY SERVICES IN TRINIDAD AND TOBAGO .....</b>	<b>36</b>
<b>3. RECOMMENDATIONS TO IMPROVE THE MANAGEMENT STRATEGIES AT THE COMMISSION .....</b>	<b>38</b>
Summary of Recommendations .....	41
<b>1. T&amp;TEC'S CURRENT MANAGEMENT STRATEGIES .....</b>	<b>41</b>
<b>2. THE CHALLENGES RELATED TO MANAGING POWER AND ELECTRICITY SERVICES IN TRINIDAD AND TOBAGO .....</b>	<b>44</b>
<b>3. RECOMMENDATIONS TO IMPROVE THE MANAGEMENT STRATEGIES AT THE COMMISSION .....</b>	<b>44</b>
<b>OBJECTIVE 1.....</b>	<b>46</b>
<b>CURRENT MANAGEMENT STRATEGIES AT T&amp;TEC.....</b>	<b>46</b>
Plans and Policies.....	46
Policy Directions .....	46
Current Plans Guiding the Management and Operations of T&TEC.....	46
<b>FINDINGS .....</b>	<b>47</b>
<b>RECOMMENDATIONS .....</b>	<b>47</b>
Roles and Reporting Relationship amongst Entities with Responsibility for Electricity .....	47
The Role of the MPU in relation to T&TEC .....	47
The Role of the RIC in relation to T&TEC .....	47

The Reporting Relationship between the Board and Senior Executive of T&TEC .....	48
T&TEC's Reporting Relationship with its line Ministry .....	49
The MPU's Relationship with T&TEC .....	49
T&TEC's Reporting Relationship with the RIC.....	50
The RIC's Constraints with Obtaining Information from T&TEC.....	50
T&TEC's Department with Responsibility for Providing Timely Information to the RIC.....	51
The MPU's Role in the Reporting Relationship between T&TEC and RIC.....	51
FINDINGS .....	52
RECOMMENDATIONS .....	52
T&TEC's Finances.....	52
T&TEC's Incurred Debt Situation .....	52
The Reasons for T&TEC's Losses over the Last Nine (9) Years.....	53
Electricity Generation and Purchase of Generated Electricity .....	53
Whether T&TEC is requesting State Funding to cover its Expenditure .....	55
T&TEC's position if the Government is unable to make the shortfall .....	55
The Impact of Illegal Connections on the Commission's Loss .....	55
T&TEC's Loss in Revenue due to the Closure of some Plants on the Point Lisas Industrial Estate.....	56
The Measures Being Taken to Improve the Financial Position of T&TEC.....	56
The Impact of New Connections on T&TEC's Revenues.....	57
T&TEC's Projections of the Revenues Required for Generation Capacity and Grid and Network Development for the Next Five (5) Years .....	58
The Impact of Dispatch of Power on T&TEC's Financial Position .....	58
Cess payments to the RIC .....	58
The Reason Why T&TEC's Existing Business Model is considered to be flawed.....	59
FINDINGS .....	59
RECOMMENDATIONS .....	59
Natural Gas .....	60
The Volume and Cost of Natural Gas Required to Generate Electrical Power for Trinidad and Tobago .....	60
T&TEC's Gas Contract with NGC.....	61
The Relation of Renegotiated Gas Sale Agreements to the Gas Price to T&TEC.....	61
The Subsidy for Natural Gas .....	62
The Impact of the Reduced Subsidy on T&TEC's Finances .....	62
T&TEC's Debt Owed to the NGC.....	62

T&TEC's Efforts to reduce its Debt Owed to the NGC .....	64
The Status of the Economic Tariff proposed to MPU .....	65
FINDINGS .....	65
RECOMMENDATIONS .....	66
T&TEC's Receivables .....	66
Debts Owed to T&TEC .....	66
T&TEC's Private Debt .....	67
T&TEC's Debt Collection Initiatives.....	67
Risk Management Policy.....	68
FINDINGS .....	68
RECOMMENDATIONS .....	68
Review of T&TEC's Rates .....	69
T&TEC's Rates .....	69
The Sufficiency of T&TEC's Current Rate for the Foreseeable Future .....	69
The Entity Responsible for Initiating the Review of T&TEC's Rates.....	69
T&TEC's Last Rate Review and Increase in Rates.....	70
The Reason for the Delay of a Rate Review by the RIC.....	70
The Economic Model .....	71
The Length of Time the RIC takes to report its Recommendations for Electricity Rates.....	72
The Time Taken for a Recommended Increase in Rates to be effected .....	72
The Independence of the RIC in Determining Rates.....	73
FINDINGS .....	73
RECOMMENDATIONS .....	74
Factors Considered When Conducting Price Review .....	75
Affordability of Rates .....	75
The Supply of Power .....	75
The Cost to Produce Electricity.....	75
Government's Subsidy.....	76
The Measures in Place to Ensure Adequate Stakeholder Consultation before Determining Revised Rates for T&TEC .....	77
The RIC's Public Outreach and Communications Plan .....	78
Assessment to Determine the Impact of a Rate Increase on the Population.....	79
The Guiding Determinants Used in the RIC's Impact Assessment to arrive at a Conclusion.....	80

The Benchmarks used by the RIC .....	80
The Need for the RIC to Compare Trinidad and Tobago to Other Countries Apart from those Listed in its Report .....	81
FINDINGS .....	81
RECOMMENDATIONS .....	82
Supply of Electricity .....	83
The Number of Approved Generators of Electricity .....	83
Details on Power Purchase Agreements.....	83
Projected impact of new Power Purchasing Agreements (PPAs) on existing PPAs .....	84
Companies or Firms which T&TEC Holds Shares or Is Partner to for Electricity Generation .....	84
The Rates Paid by T&TEC for Generated Power from Designated Suppliers.....	84
T&TEC's Additional Capacity.....	85
Impact of Closure of Alutrint Plant on T&TEC's Supply .....	86
Underutilised Capacity.....	86
Status of PPA Renegotiations to Reduce Cost for Unutilised Capacity .....	86
Loss of Revenue for Underutilised Capacity .....	87
The Impact of the Sale of Trinity Power Limited on the Supply of Electricity .....	87
Investment Policy .....	87
Loans Granted to Approved Generators of Electricity by Year .....	87
Power System Study conducted for Trinidad and Tobago.....	88
Generation Adequacy Assessment .....	88
The Impact of Infrastructure Work on Supply .....	89
FINDINGS .....	89
RECOMMENDATIONS .....	90
Demand .....	91
Load Demand for Electricity .....	91
The Adequacy of Electricity Generation to Meet Demands .....	91
Requests for an Increase in Generation .....	92
The Impact of New Developments on Demand for Electricity and The Commission's Revenues .....	92
The Impact of the Pandemic on Consumption and Revenues .....	92
FINDINGS .....	93
RECOMMENDATIONS .....	94
Connections and Disconnections.....	94

The Process and Timeframe for New Connections.....	96
Disconnections.....	96
The MPU’s Utilities Assistance Programme.....	97
Opportunities for Bill Reductions for Customers.....	98
The Number of Service Centres Not Distributing LED Bulbs.....	98
FINDINGS .....	99
RECOMMENDATIONS .....	100
Electricity Infrastructure .....	100
Measures to Ensure Transmission and Distribution Infrastructure is Developed and Maintained.....	100
Adequacy of Measures for the Maintenance of the Transmission and Distribution System .....	100
T&TEC’s Development Plan .....	101
The Areas, Most in Need of Electricity Generation Infrastructure Upgrades.....	101
Contracts of Guarantee, Surety or Indemnity Entered into for T&TEC’s Property and Assets.....	101
The Property, Assets, Rights, Powers and Obligations Transferred to Approved Generators of Electricity .....	102
FINDINGS .....	102
RECOMMENDATIONS .....	102
PSIP Projects .....	103
The Status of T&TEC’s PSIP projects .....	103
The Reason for certain PSIP Projects not being approved by the MPU .....	103
The Impact of PSIP Programmes on Large Skills Maintenance and Necessary Expansions for The Required Level of Service to Customers.....	104
Renewable Energy Initiative .....	104
The Preparations Being Made for the Upsurge in the Use of Renewables .....	105
The Value T&TEC is seeking to Obtain from Renewable Capacity.....	106
T&TEC’s Collaborations with Car Dealers to Power Electric Vehicles.....	107
FINDINGS .....	107
RECOMMENDATIONS .....	108
Security .....	109
Breaches at the Commission’s Sub-stations .....	109
Sub-station Monitoring.....	109
The Measures in Place to Ensure the Safety and Security of Light Poles and Other Electrical Equipment .....	109
Measures in place to Prevent Theft of Electricity.....	110
T&TEC’s Relationship with the Trinidad and Tobago Police Service (TTPS) to Address Security Issues .....	111

The Number of Illegal Connections .....	111
T&TEC's Efforts to Treat with Illegal Connections .....	111
Measures to prevent loss of life owing to electrocution by T&TEC lines .....	112
FINDINGS .....	112
RECOMMENDATIONS .....	113
Outages.....	113
Types of Outages .....	113
The Number of Outages Reported by the Commission for the Past Five (5) Years by Year .....	114
Planned Outages.....	115
Measures to Reduce Future Planned Outages .....	115
Unplanned Outages .....	116
Areas Prone to Unplanned Outages .....	117
T&TEC's Ability to Identify Individual Customers That Are Affected by Unplanned Outages on the Distribution System .....	117
The Effectiveness of T&TEC's application and the Response Time for Treating Requests .....	118
Measures to Improve Management of Power Outages .....	118
Fleet Management and Outage Response .....	119
Measures in Place to Restore Power in a Crisis .....	119
Plans for Upgrades in Tobago to Prevent Outages.....	119
FINDINGS .....	119
RECOMMENDATIONS .....	120
Benchmarks and Standards .....	121
T&TEC's Performance to International Utilities.....	121
T&TEC's performance under Guaranteed Standards .....	121
Compensation to Customers .....	122
T&TEC's Overall Standards .....	123
T&TEC's Challenges with Meeting Overall and Guaranteed Standards as it Pertains to Street Lighting .....	124
The Number of Street Lights in Need of Repair.....	124
Light Poles in Need of Repair.....	125
Requests for Street Lighting, Parks and Grounds Illumination and The Number Installed .....	126
Payments Made by the Respective Municipal Corporations for Street Lights .....	126
The Number of Complaints Received by the RIC about T&TEC .....	127
The Value of Rebates to Customers Paid by The Commission for the past five (5) Years by Year .....	127

FINDINGS .....	128
RECOMMENDATIONS .....	129
Human Resources at T&TEC .....	130
The Various Categories of Employees at the Commission .....	130
Adequacy of trained and skilled workers to deliver an efficient service .....	130
Succession Planning .....	131
Benefits to Employees at the Commission .....	131
The Value of the Employee Savings Plan paid by the Commission.....	131
The Number of Employee Deaths in Service over the Past Five (5) Years .....	131
The Measures to Treat with the New COVID 19 Pandemic .....	132
The Measures to Reduce Wait Times That May Lead to Longer Lines Particularly for the Elderly .....	134
FINDINGS .....	134
RECOMMENDATIONS .....	135
Contracted Works.....	135
Timeframe for Payment for Contracted Works .....	135
Measures to Ensure Value for Money of Contractual Works .....	135
FINDINGS .....	135
<b>OBJECTIVE 2. ....</b>	<b>136</b>
<b>THE CHALLENGES RELATED TO MANAGING POWER AND ELECTRICITY SERVICES IN TRINIDAD AND TOBAGO .....</b>	<b>136</b>
The Main Challenges faced by T&TEC in relation to Administration and the Management of Power and Electricity Services across Trinidad and Tobago .....	136
The MPU’s role in assisting to Address T&TEC’s Challenges .....	136
The Issue of Acquisition of Right of Ways.....	136
Clarity on the Land Acquisition Matter at Union Ghandi Village .....	137
RIC’s Main Challenges with T&TEC .....	138
T&TEC’s Challenges with Meeting the Standards Established with the RIC .....	139
Measures Being Taken by the RIC to Address the Challenges Identified .....	139
FINDINGS .....	140
RECOMMENDATIONS .....	141
<b>OBJECTIVE 3. ....</b>	<b>141</b>
<b>THE RECOMMENDATIONS TO IMPROVE THE MANAGEMENT STRATEGIES AT THE COMMISSION .....</b>	<b>141</b>



Institutional Arrangements, Management and Performance .....	141
The Impact of T&TEC's Current Institutional Arrangement on Productivity and Efficiency in its Processes and Operations .....	142
Management Models to Improve T&TEC's Management and Operations .....	142
The Measures Required to Improve the Management of Power and Electricity Services by T&TEC .....	142
Ways T&TEC Can Improve Its Overall Performance .....	143
FINDINGS .....	143
RECOMMENDATIONS .....	144
Policy and Legislation.....	144
The Changes required to Power Purchase Agreements and to Legislation .....	144
The Changes required to T&TEC's Act to improve the Management and Operations of the Utility .....	144
The Status of the Proposed Legislative Amendments to T&TEC's Act.....	145
The Order of Priority of the Necessary Amendments in T&TEC's Act .....	145
Measures to Improve the Pool of Technical Skills at The Commission.....	145
FINDINGS .....	145
RECOMMENDATIONS .....	146
Conservation.....	146
Measures to Encourage Conservation of Electricity .....	146
The Status of LED Light Bulb Distribution Programme .....	147
Measures in place to Conserve Electricity from Street Lights .....	148
FINDINGS .....	149
RECOMMENDATIONS .....	149
Renewables.....	149
The Areas where T&TEC has Utilised Alternate Solar LED Luminaires .....	149
Number of Homes with Solar Installations .....	149
Plans to Integrate Power Generated from Renewable Energy Sources into T&TEC's Local Electrical Grids.....	150
An Update On the Four (4) Major Sites Proposed for Wind Renewable Energy .....	150
The Status of the Use of Wind Energy in Tobago .....	151
The Impact of the Use of Solar Energy On the Demand for Electricity.....	151
FINDINGS .....	152
RECOMMENDATIONS .....	152
Infrastructure.....	152
Implications to Replacing Overhead Lines with Underground Lines .....	153

FINDINGS .....	154
RECOMMENDATIONS .....	154
Climate Change and Disaster Preparedness .....	154
Measures Being Taken by T&TEC to Prepare for The Impact of Climate Change.....	154
T&TEC’s Disaster Preparedness Plan .....	154
FINDINGS .....	156
RECOMMENDATION .....	156
APPENDICES.....	158
APPENDIX I .....	159
MINUTES OF PROCEEDINGS DATED MAY 05, 2021 .....	159
APPENDIX II.....	172
MINUTES OF PROCEEDINGS DATED JUNE 24, 2021 .....	172
APPENDIX III .....	183
UNREVISED VERBATIM NOTES OF PROCEEDINGS DATED MAY 05, 2021.....	183
APPENDIX IV .....	207
UNREVISED VERBATIM NOTES OF PROCEEDINGS DATED JUNE 24, 2021 .....	207
APPENDIX V .....	233
T&TEC’S RESPONSIBILITIES .....	233
APPENDIX VI .....	236
T&TEC’S INCURRED DEBT SITUATION .....	236
APPENDIX VII.....	238
PROJECTED SAVINGS/REVENUE FROM T&TEC’S THE TWELVE (12) POINT OPERATIONAL PLAN .....	238
APPENDIX VIII.....	242
T&TEC’S DEBT COLLECTION POLICY.....	242
APPENDIX IX .....	244
T&TEC’S AGED RECEIVABLES .....	244
APPENDIX X .....	246
T&TEC’S RISK MANAGEMENT POLICY.....	246
APPENDIX XI .....	256
THE MEASURES USED BY THE RIC TO INFORM, EDUCATE AND CONSULT WITH THE PUBLIC, ON THE PRICE REVIEW PROCESS FOR T&TEC .....	256
APPENDIX XII.....	261
LIST OF ALL AREAS/INTERFACES/RINGS AND STUDIES .....	261

APPENDIX XIII.....	263
PROPERTY TRANSFERRED TO THE POWER GENERATION COMPANY OF TRINIDAD AND TOBAGO (POWERGEN) ....	263
APPENDIX XIV .....	266
AREAS PRONE TO UNPLANNED OUTAGES.....	266
APPENDIX XV.....	268
PLANS FOR UPGRADES TO PREVENT OUTAGES IN TOBAGO .....	268
APPENDIX XVI .....	271
T&TEC’S OVERALL STANDARDS .....	271
APPENDIX XVII .....	273
SUMMARY OF T&TEC’S CHALLENGES AND ACTIONS .....	273
APPENDIX XVIII.....	275
LEGISLATIVE REVIEW POLICY JUSTIFICATION DOCUMENTS .....	275
APPENDIX XIX .....	281
THE ORDER OF PRIORITY OF AMENDMENTS TO T&TEC’S ACT.....	281
APPENDIX XX.....	283
MEASURES TO PREPARE FOR THE IMPACT OF CLIMATE CHANGE .....	283

## REPORT SUMMARY

1. At its Second Meeting held on December 02, 2020, your Committee agreed to conduct *an inquiry into the Management of the Trinidad and Tobago Electricity Commission (T&TEC) and related recommendations.*
2. The following are the objectives of the inquiry:
  - (i) To examine the current management strategies at T&TEC;
  - (ii) To identify the challenges related to managing power and electricity services in Trinidad and Tobago; and
  - (iii) To make recommendations to improve the management strategies at the Commission.
3. The Committee thereafter requested and received information on the subject matter via written submissions from the stakeholders listed in **Table 1** below.

**Table 1**  
**Written Submissions received from Stakeholders**

<b>Ministry/Entity</b>	<b>Date of Submission</b>
<b>Trinidad and Tobago Electricity Commission (T&amp;TEC)</b>	<b>March 29, 2021</b>
<b>Regulated Industries Commission (RIC)</b>	<b>March 29, 2021</b>
<b>Ministry of Planning and Development (MoPD)</b>	<b>April 07, 2021</b>

4. Subsequently, on May 05, 2021, the Committee held a virtual public hearing pursuant to its inquiry with officials of the T&TEC, facilitated via Zoom Video Conference as listed in **Table 2** below.

**Table 2**

**List of Attendees – Virtual Public Hearing held on May 05, 2021**

<b>Trinidad and Tobago Electricity Commission (T&amp;TEC)</b>	
<b>Name</b>	<b>Position</b>
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

5. Following the public hearing, the Committee requested additional information from the Trinidad and Tobago Electricity Commission. The responses were received on May 26, 2021.
6. On June 24, 2021, your Committee held its second virtual public hearing with officials from the T&TEC, Ministry of Public Utilities (MPU), and the Regulated Industries Commission (RIC), facilitated via Zoom Video Conference as listed in **Table 3** below.

**Table 3**

**List of Attendees – Public Hearing held on June 24, 2021**

<b>Ministry of Public Utilities (MPU)</b>	
<b>Name</b>	<b>Position</b>
Ms. Nicolette Duke	Permanent Secretary
Ms. Beverly Khan	Deputy Permanent Secretary
Ms. Arlene Collis	Director of Economic Research
Ms. Gale Dulal	Electrification Sector Specialist
<b>Trinidad and Tobago Electricity Commission (T&amp;TEC)</b>	
<b>Name</b>	<b>Position</b>
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
<b>Regulated Industries Commission (RIC)</b>	
<b>Name</b>	<b>Position</b>
Mr. Glenn Khan	Executive Director
Mrs. Dawn Callender	Chairman
Ms. Nadia John	Legal/Corporate Secretary
Ms. Carol Balkaran	Deputy Executive Director
Mr. Derrick Phillips	Assistant Executive Director, Technical Operations

7. Thereafter, the Committee requested additional information from the RIC and received a response on September 09, 2021.
8. The Minutes of the Meeting held on May 05, 2021 and June 24, 2021 are attached at ***Appendix I and II*** and the Verbatim Notes at ***Appendix III and IV***.

# INTRODUCTION

## Background to Inquiry

1. The Trinidad and Tobago Electricity Commission (T&TEC) is a Statutory Authority established pursuant to the Trinidad and Tobago Electricity Commission Act, Chapter 54:70.<sup>56</sup> The Commission is responsible for the supply of power and electricity services to residential, commercial and industrial customers. The Commission also maintains street lights throughout Trinidad and Tobago.<sup>7</sup>
2. The electricity sector in Trinidad and Tobago comprises a mix of private and state-owned generation facilities and state-owned transmission and distribution operations.<sup>8</sup> The present electricity generation landscape comprises three (3) Independent Power Producers (IPPs) in Trinidad providing bulk power with varying obligations and contracted capacities to T&TEC<sup>9</sup> for the purchase of generated power whereas T&TEC directly generates power for Tobago through its Scarborough and Cove Power Plants.
3. Apart from the Power Stations at Cove and Scarborough, T&TEC is solely responsible for the Transmission, Distribution, and sale of electricity to industrial, commercial and residential end users in Trinidad and Tobago.<sup>10</sup>

---

<sup>5</sup> [https://rgd.legalaffairs.gov.tt/laws2/alphabetical\\_list/lawspdfs/54.70.pdf](https://rgd.legalaffairs.gov.tt/laws2/alphabetical_list/lawspdfs/54.70.pdf)

<sup>6</sup> State Enterprises Investments Programme, 2021 page 34

<sup>7</sup> <https://www.ttconnect.gov.tt/gortt/portal/ttconnect!/ut/p/a1/jdDBDolwDAbgp-FKC8tUvHFARUwMGBV2MWjmwCAjY4KPL3ozKNpbm->

9P\_hQYxMDKtMIFqnNZpsVzZ6NDENplfYfgOkQH7ci3PKQBmY9JB5I3EM1nHfCotQh2BBH\_y-OXcX\_mN7yEPbBBtqQ90K\_5AgM9IsBEIY-

vnyRueSQTAUzxM1dcmTfVnTOtq3pqoIfT25pCSIFw8ySvBn6KZLLWEL9LqK7b-

O5faNGs3AdjOzzp/dl5/d5/L2dBISevZ0FBIS9nQSEh/?WCM\_GLOBAL\_CONTEXT=/gortt/wcm/connect/GorTT+Web+Content/TTConnect/Citizen/Topic/CommunityandEnvironment/Essential+Services/ElectricityServicesTTEC

<sup>8</sup> Regulated Industries Commission Annual Report, 2014 page 12

<sup>9</sup> <https://www.energy.gov.tt/resources/electric-power/>

<sup>10</sup> <https://www.energy.gov.tt/resources/electric-power/>

4. The Ministry of Public Utilities (MPU) is responsible for, *inter alia*, the delivery of a modern, technologically enabled electricity sector that supports the nation's expanding digital economy, built environment and industrial infrastructure. Electricity and related services are delivered to the national community through T&TEC and the Electrical Inspectorate Division, an internal branch of the MPU.<sup>11</sup>
5. The role of the Regulated Industries Commission (RIC) is also integral as it ensures the promotion of the highest quality of utility services at fair and reasonable rates while building a credible regulatory regime that responds adequately to stakeholders concerns and also to ensure fairness, transparency and equity in the provision of utility services throughout the country. The RIC is an independent, statutory body established to regulate the delivery of services by T&TEC.<sup>12</sup>
6. At the time of the inquiry the issues facing T&TEC surrounded, *inter alia*, the following:
  - (a) **T&TEC's debt to the National Gas Company of Trinidad and Tobago (NGC)**

In Trinidad and Tobago, electricity generation primarily uses natural gas as the fuel source. The power generation technology used are simple cycle gas turbines and combine cycled gas turbines with heat recovery steam generators.<sup>13</sup> T&TEC's main source of natural gas is from the NGC. The NGC was owed \$1.5 billion a year as a result of the non-payment for natural gas by T&TEC.<sup>1</sup>
  - (b) **T&TEC rate review**

T&TEC's rates had not been reviewed since 2009 contributing to a negative impact on the Commissions finances. The price of electricity in Trinidad and Tobago is USD0.052 per kilowatt hour (kWh) for households and USD0.053 for businesses which includes all components of the electricity bill such as the cost of power, distribution and taxes. Similarly, the average price of electricity in the world for that period is USD0.137 per kWh for

---

<sup>11</sup> <http://www.mpu.gov.tt/home/node/44>

<sup>12</sup> <https://www.mpu.gov.tt/home/node/69>

<sup>13</sup> <https://www.energy.gov.tt/resources/electric-power/>



households and USD0.122 for businesses.<sup>14</sup> The RIC publicly advised in December 2020 that it began a price review process for T&TEC (Electricity Transmission and Distribution Sector).<sup>15</sup>

7. Based on the foregoing and considering the need to ensure that electricity is managed in an effective and efficient manner by T&TEC, this inquiry is deemed imperative at this time.

---

<sup>14</sup> [https://www.globalpetrolprices.com/Trinidad-and-Tobago/electricity\\_prices/](https://www.globalpetrolprices.com/Trinidad-and-Tobago/electricity_prices/)

<sup>15</sup> RIC Press Release dated December 8, 2020 <http://www.ric.org.tt/wp-content/uploads/2020/12/RIC-COMMENCES-THE-PRICE-REVIEW-PROCESS-FOR-TTEC.pdf>

# GENERAL FINDINGS

## 1. T&TEC'S CURRENT MANAGEMENT STRATEGIES

- 1) T&TEC's Strategic Plan has been approved which will provide direction for the Commission during the period 2021-2025.
- 2) T&TEC was unable to submit its Business Plan to the Committee because same was being finalised.
- 3) T&TEC is often tardy with reporting information to the RIC, however, the reports submitted to the RIC are current.
- 4) The MPU has some interaction in terms of whether or not T&TEC is meeting quality service standards and whether or not reports from the RIC coincide with the MPU's assessments.
- 5) T&TEC's expenditure is dominated by electricity generation and purchase of generated power as well as salaries and wages which together account for approximately 62% of T&TEC's operations. The Commission has however sought and continues to seek alternative means to increase its revenue.
- 6) Technical losses account for approximately 9% of T&TEC's loss of revenue.
- 7) T&TEC continues to pay its expenses but has not been able to meet its total commitment to the NGC. However, T&TEC is currently requesting increased funding from the State to cover its expenditure.
- 8) There is no formal contractual agreement between the NGC and T&TEC for the supply of natural gas since January 1, 1995.
- 9) The debt owed to NGC does not impact the re-establishment of a gas contract. However, the main issue is the final settlement of the gas price for payment by the Commission.
- 10) T&TEC's debt owed to NGC is attributed to its inability to settle all its debts as they become due to consistent losses over the last nine (9) years.
- 11) The natural gas subsidy positively impacts the Commission's financial situation and should this subsidy become nonexistent, the deficit would be greater.

- 12) T&TEC is seeking to obtain an economic tariff via a proposal to the MPU. The aim of this tariff is to enable the Commission to meet all its obligations as they become due and manage its dispatch regime to minimise its gas usage.
- 13) T&TEC continues to engage in discussions with the MPU to find alternative means to reduce its debt to NGC.
- 14) The majority of the Commission's private debt is from DESALCOTT and public authorities however, T&TEC's debt collection policy is dated.
- 15) The negotiations for the price of natural gas have delayed the rate review by the RIC. The final natural gas price is an important item which will determine the end value of the rates.
- 16) As of early 2021, the MPU started employing an economic model in the conduct of its analysis to determine various possibilities of rates similar to the RIC which uses an economic model in the conduct of the analysis to determine rates possibilities.
- 17) Both the RIC and the MPU have placed significant emphasis on the consumer's ability to pay especially residential customers.
- 18) The RIC tries not to pre-empt the results of the analysis on rates.
- 19) The rate review may take approximately twelve (12) months to complete once the RIC receives all of the initial information from T&TEC.
- 20) T&TEC's submission was delayed by approximately six (6) months from the date of the Committee's last public hearing on June 24, 2021 given that it was supposed to submit its Business Plan to the RIC by January 21, 2021.
- 21) The RIC seeks to ensure that T&TEC's service continues to be acceptable and that it provides T&TEC with a reasonable return.
- 22) The RIC has an obligation in accordance with the RIC Act to ensure that rates, *inter alia*, are affordable.
- 23) The rate review considers all factors.
- 24) When conducting the analysis for a rate review there is need to be conscious of the cost to produce the electricity service and that the price of electricity to consumers must be based on the cost to provide the service.
- 25) The cost of producing natural gas is the number one factor impacting the cost of electricity.
- 26) The RIC examines T&TEC's operational cost, not the price of natural gas.
- 27) The cost of power is fixed and cannot be manipulated.

- 28) The RIC engages in adequate public consultations in accordance with its parent legislation to obtain the views of all stakeholders and examines the impact of a rate increase on various sectors, each business and on individuals before it arrives at a final rate.
- 29) The RIC's overall position as it concerns subsidies is justified.
- 30) A subsidy is the responsibility of government, therefore, the RIC has no input in determining same.
- 31) The tariff structure will seek to ensure that vulnerable customers are taken into consideration and adequately supported to receive a continuous supply of electricity by:
  - expenditure on electricity within the internationally accepted affordability threshold of ten percent (10%);
  - the incorporation of a life-line tariff;
  - the Utilities Assistance Programme's discount; and
  - education on conservation.
- 32) T&TEC is unable to pay at the unsubsidised rate or to pay the NGC at the subsidised rate.
- 33) The RIC has been proactive in utilising a number of communication channels to reach, educate and inform the public.
- 34) The RIC has not been able to engage in outreach meetings due to the pandemic but will so do as soon as time and circumstances allow.
- 35) The RIC's impact assessment can only be conducted after it determines the rates.
- 36) The RIC uses a number of benchmarks and considers information from both regional and international jurisdictions. However, as noted in its reports, the RIC reported on only a few jurisdictions with economies that differ to that of Trinidad and Tobago.
- 37) T&TEC has capacity given that 475MW of capacity available and unused during peak demand.
- 38) If Petrotrin's Refinery does not return to the grid, T&TEC will have a further 16MW in additional capacity.
- 39) T&TEC requires spare or 'spinning reserve' capacity for contingency purposes therefore additional capacity is necessary.
- 40) It will cost T&TEC to obtain capacity anywhere else if additional capacity is needed.
- 41) The Commission has to absorb the cost of 217MW due to the closure of the Alutrint Plant at a cost of \$250 million per year for 200MW of capacity.
- 42) There is need to optimise standby capacity on T&TEC's system.

- 43) T&TEC needs to embrace renewable generation because it requires a cost efficient energy alternative.
- 44) The Commission is pursuing renewable energy via PPA with a consortium of three (3) entities (Light Source BP, Shell and BP) which will result in significant gas savings and pay for itself.
- 45) T&TEC will take all generation from the producer once the negotiations for new PPA is completed and capacity becomes available.
- 46) The rates paid by T&TEC for the purchase of generated power are not economically feasible for the utility particularly if the tariffs remain artificially low and T&TEC has 'take or pay' contracts.
- 47) Because of the 'take or pay' arrangement in the PPAs, the Commission will have no other option but to execute such negotiations when the contracts are being renewed or discontinued.
- 48) The Commission has been proactive in approaching one particular power producer to address the issue of 'take and pay' to reduce cost for unutilised capacity but was unsuccessful. However, the Commission will be returning to have that discussion.
- 49) There will be need to look at load growth and prospective customers to come on board when engaging in renegotiations for the two (2) PPAs (PowerGen for 624MW capacity and TPL) which will be expiring in the year 2029.
- 50) No administrative, operational or contractual changes are foreseen from the change in ownership for TPL.
- 51) T&TEC has been operating without an Investment Policy however same is currently being drafted for presidential approval.
- 52) The last Generation Adequacy Assessment was conducted in May 2019 therefore, the annual assessment for 2020 was outstanding.
- 53) Where an increase in generation is required the Commission will notify the MEEI through the MPU well in advance to allow for tender and award for the increase required.
- 54) Additional generation may be required by the year 2025 if a large heavy industrial customer is commissioned.
- 55) If additional generation is needed, it should be positioned in North Trinidad.
- 56) Energy consumed in MWh has been fairly constant in the three-year period 2018 to 2020.
- 57) Present generation capacity well exceeds the present demand of the country by approximately 450 MW.

- 58) Energy is produced instantaneously, as required, therefore, there is no excess production of energy and energy is not stored.
- 59) Capacity is the maximum rating of the generator and can only be fully utilised when there is a load demand to match same.
- 60) There have been no requests from T&TEC to the MEEI via the MPU for increases in generation capacity because there is excess generating capacity with the full commissioning of TGU.
- 61) Based on the natural load growth, all forecast study (residential, commercial and small industrial customers) indicate that additional generation will not be needed until approximately 2030.
- 62) A lead time of approximately five (5) years is required for the commissioning of a new power station plant.
- 63) Additional generation would be required if a prospective large heavy industrial customer is to be commissioned depending on the timeframe in which they are required to be energised.
- 64) There has been observed growth in the residential, commercial and small industrial developments despite the fact that large industrial customers were reducing consumption during the period 2018-2019.
- 65) A number of customers applied for a reduction in capacity which is affecting T&TEC's cost of doing business.
- 66) Many customers are migrating from industrial to commercial users at lower rates.
- 67) There were no significant increases in T&TEC's revenues from the growth in residential, commercial and small industrial developments.
- 68) T&TEC observed a significant reduction in kWh consumption over the last period.
- 69) T&TEC has observed an increase in domestic usage because people are mostly at home due to the restrictions.
- 70) Connections have been fairly constant over the period 2016 to 2020.
- 71) Disconnections were increasing steadily up to 2019 and plateaued in the year 2020 due to no disconnections carried out during the months of April to November, 2020 as a result of the COVID-19 pandemic.
- 72) T&TEC resumed disconnection for non-payment of electricity bills in December 2020.

- 73) A total of 13,501 disconnections were carried out from December 2020 to April 2021 even though the pandemic continues.
- 74) The process and timeframe for new connections depends on whether the existing infrastructure is close to the structure for new connections.
- 75) T&TEC has many options to encourage customers to pay their bills.
- 76) Given the nature of the business it is absolutely necessary that T&TEC collects its monies.
- 77) T&TEC received guidelines from the MPU and has been encouraging customers to pay their bills.
- 78) T&TEC does not engage in disconnection for the non-payment of a first bill.
- 79) T&TEC has had no complaints regarding disconnections.
- 80) Any consideration of expanding the Utilities Assistance Programme will require variation in the policy.
- 81) The MPU undertook to examine the recommendation to expand the utility assistance policy by extending the criteria to include customers who are unemployed, without savings relying on pay check to pay check and renting during the pandemic.
- 82) There is need for the MPU to liaise with Members of Parliament's Constituency Offices which can assist the MPU in the area of outreach.
- 83) Approximately forty-seven percent (47%) of T&TEC's customers have bills which are \$300 or less and receive a discount of 25%. Similar customers will now benefit from a 35% rebate.
- 84) The LED bulbs have a significant impact on cost savings to customers and T&TEC has been encouraging customers to collect LED bulbs at its Service Centres.
- 85) T&TEC's Service Centres located Broadway, Port of Spain and Rio Claro were converted to payment only centres and are not distributing LED bulbs.
- 86) T&TEC tries to ensure that the electricity generation system grows and is reliable.
- 87) T&TEC uses an "N-1" contingency planning philosophy which ensures that there is no loss of supply to customers when an apparatus is out of service on the transmission and sub-transmission system.
- 88) T&TEC indicated that the measures for the maintenance of the transmission and distribution system are inadequate.
- 89) To upgrade current electricity infrastructure, a five (5) year Development Plan was established and is revised annually.

- 90) Generation would be needed in North and East Trinidad to address the significant development occurring in these areas.
- 91) PSIP projects are closely reviewed by the MPU to ascertain whether they meet the requirements.
- 92) T&TEC is still in discussion with the MPU regarding the transfer of the majority of these PSIP funds from slow moving projects to more frequently used programmes.
- 93) T&TEC faces issues with funding through the PSIP for some major projects but has been receiving assistance in this area.
- 94) The Commissioner of State Lands (COSL) has not responded to T&TEC regarding approval to utilise the land area at Matura, Manzanilla and North Matura for the PSIP Renewable Energy Initiative.
- 95) The top five (5) sites for the PSIP Renewable Energy Initiative are Cedros, Fishing Pond, Coromandel Settlement, Matura and North Manzanilla.
- 96) T&TEC is preparing for use of renewables as an energy source.
- 97) Discussions are ongoing for a 112.2MW renewable plant to be located mainly in Point Lisas and a section of it in Trincity in the next two (2) years plus.
- 98) T&TEC is looking at an ongoing project with the MEEI for a 700kW vehicle charge station at the Queen's Park Savannah which will also add capacity to the grid.
- 99) The value of renewable capacity T&TEC is seeking to obtain is US.04cents per kW, however this rate cannot be guaranteed.
- 100) T&TEC's grid will have to be tailored because non-dispatchable capacity will only be available for approximately an average of thirty percent (30%) of the time.
- 101) The country will benefit significantly from renewables which will free up natural gas for sale at twice the price on the open market.
- 102) Some plants are also now more efficient, use less gas and compete with renewables.
- 103) There is need to examine the position of the Commission as it pertains to renewables.
- 104) T&TEC is considering marketing 'photovoltaics' as an option for customers and charge stations at appropriate points in preparation for meeting the requirements for the electrical car industry.
- 105) The regulator will have a role in the process of renewables because of the issue of buying and selling.



- 106) T&TEC is willing to partner with any car dealership to advance the use of electric vehicles.
- 107) All substations are currently monitored using Supervisory Control and Data Acquisition (SCADA) system and by Q4, 2021 it is anticipated that all substations will be monitored using the Substation Demand Monitoring System and Video Surveillance Systems.
- 108) The strategies identified for effective sub-station monitoring have not proven effective because of challenges with obtaining the necessary revenue to execute same. However, this is ongoing.
- 109) The measures in place to prevent theft of electricity are very effective because of the financial charges associated with stealing electricity for first time offenders.
- 110) T&TEC has very few third time offenders.
- 111) T&TEC has an excellent working relationship with the TTPS to address security issues. However, assistance from the TTPS is not always available due to their limited resources.
- 112) T&TEC has been utilising its in-house resources where possible and strategically structuring its crews to assist with security issues.
- 113) The response to the Commission's amnesty has not been as expected but has had some traction given that approximately forty-seven (47) customers responded to the amnesty.
- 114) T&TEC engages in continuous advertisements via the radio and print media to inform citizens of the dangers associated with T&TEC's infrastructure.
- 115) The number of outages in each category has been increasing for the years 2016 to 2020.
- 116) The increase in the number of outages were attributed to line clearing issues and a delay in establishing line clearing contracts in 2019 and 2020. T&TEC has noted the increase in outages, conducted the analysis and is implementing measures to reduce outages.
- 117) T&TEC is engaging in initiatives to reduce the number of outages such as targeting general areas that experience frequent outages, examining the causes of outages, using technology to assist in the modernisation of the grid, and the increased use of hotline methods to carry out maintenance works.
- 118) An improvement with regard to outages is anticipated by 2022.

- 119) A significantly high percentage (approximately 75%) of the unplanned outages are short in duration.
- 120) Although the work is planned, short duration outages are not advertised and are therefore classified as unplanned.
- 121) It is difficult to advertise specific start times of outages because several factors can cause delays in the execution of the said jobs.
- 122) T&TEC received many complaints regarding the difficulty faced by some customers in contacting the Commission via its call centres.
- 123) The OMS is critical for restoring power in a crisis and will assist T&TEC to identify individual customers affected by an outage, to respond to outages in a timelier manner and streamline its incoming calls regarding outages thereby improving the service provided by its call centres.
- 124) Implementation of the OMS would be completed by the fourth quarter 2022.
- 125) T&TEC's average response time to a customer suffering an outage or anything affecting supply is approximately two (2) hours, whether the request is made via application or phone.
- 126) The outfitting of T&TEC's vehicles with GPS to better respond to outages will be completed by the third quarter of 2022.
- 127) T&TEC's performance has been equally comparable to international utilities, in some cases better than international utilities and in other cases not as good.
- 128) The Commission has performed quite well under both the Guaranteed Standards and the Overall Standards, consistently achieving an average compliance rate of over 96% and 92% respectively for the past seven (7) years, resulting in high levels of customer service performance.
- 129) T&TEC's performance under the Overall Standards has been generally high for most standards, except for OES 5 (Streetlight Maintenance) and OES 6 (Response to Written Customer Queries) for which the utility's performance has been mixed to poor.
- 130) T&TEC indicated that it needs to examine OES 5 and 6 closely.
- 131) T&TEC is challenged with meeting its overall and guaranteed standards in the area of street lights because it doubled the number of street lights in the country.

- 132) Given its financial situation, T&TEC is making every effort in terms of its resources to meet its commitments for repairs on street lights.
- 133) 0.014% (or 0.00014) of electricity sales revenue is paid in compensation arising from the Guaranteed Electricity Standards and damage appliance claims.
- 134) The largest amount of street light issues emanates from the municipalities.
- 135) The initiatives T&TEC has been employing were successful in reducing 2,409 outstanding streetlight issues from 7,959 to 5,550 within three (3) months March 18, 2021 to June, 2021.
- 136) The Commission anticipates that by August 2021, the number of outstanding streetlight issues will all be resolved and it will be able to deal with street lighting reports within approximately a week.
- 137) In less than half of a month, March 18, 2021 to April 30, 2021, two thousand four hundred and seventy-five (2,475) reports regarding street lights were received.
- 138) In the last five (5) years, T&TEC has replaced three thousand, five hundred and thirty (3,530) wooden poles on the system with concrete and steel poles.
- 139) For the last five (5) years, seven hundred and fifteen (715) Priority 1 poles were attended to.
- 140) Similar to T&TEC's performance under OES 5 and 6, the highest number of complaints received were in the category of Streetlight – repair and installation and Requests for Service.
- 141) The number of complaints received by the RIC about T&TEC have been consistently decreasing over the years 2016 to 2020.
- 142) The majority of the complaints for the years 2016 to 2020 were resolved in favour of customers as opposed to T&TEC.
- 143) The Resolution Rate increase in the year 2020.
- 144) T&TEC paid approximately sixty-one percent (61%) of total rebates for the years 2016 to 2020 to customers in the year 2020.
- 145) The staff at T&TEC are dedicated, hardworking and go beyond the call.
- 146) The technical capabilities of T&TEC's employees are extremely high.
- 147) T&TEC has the required training and skills needed to deliver an efficient service and if gaps exist the Commission will proactively seek training to address same e.g. renewables.

- 148) 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.
- 149) A total of thirty-four (34) employees of T&TEC tested positive for the Covid-19 virus.
- 150) T&TEC implemented measures to reduce the risk of contracting the Covid-19 virus and to protect its employees and customers.
- 151) Although T&TEC is an essential service, it implemented measures to protect employees such as rotation, work from home, and staggered hours where possible in a way that would not impact on its services to customers but later had to revert to all office employees returning to work because the measures were negatively impacting on the reliability of its service.
- 152) The Commission is seeking to further develop customer facing systems where reports can be made and accessed online.
- 153) T&TEC has adequate measures in place for ensuring value for money of contractual works.

## **2. THE CHALLENGES RELATED TO MANAGING POWER AND ELECTRICITY SERVICES IN TRINIDAD AND TOBAGO**

- 154) According to the MPU to address T&TEC's financial constraints, the rate review should result in a tariff increase.
- 155) Financial constraints have prevented T&TEC in settling outstanding salary negotiations for the various bargaining units.
- 156) T&TEC has been increasing employee awareness on the changing business environment and the Commission's expectations through ongoing communication.
- 157) T&TEC is using a job rotation initiative to enhance skill sets towards employee development and increased productivity.
- 158) There is an additional cost associated with Security Services to perform works in hotspots.
- 159) The Transmission Department is in need of a new building for the employees and the large transmission equipment.
- 160) The MPU is working with the COSL to locate a suitable site for the Transmission Department.

- 161) T&TEC uses an all-encompassing approach to tackling the challenges faced by the Electricity Sector.
- 162) T&TEC prioritises its operation by not compromising on the reliability of service provided to customers.
- 163) T&TEC lacks a Power Utility Corridor where portions of land are earmarked for construction for utility infrastructure.
- 164) T&TEC tries to acquire lands where possible.
- 165) T&TEC tries to avoid installing infrastructure where it can create unsafe situations.
- 166) T&TEC's Act allows it to serve notice to install infrastructure but does not allow for any right of way or ownership.
- 167) T&TEC is seeking to include right of way access in its revised legislation to allow the Commission the flexibility to install the infrastructure on the system.
- 168) Where a customer raises an issue of nuisance, T&TEC has to move its infrastructure.
- 169) The Union Ghandi 220KV line has to be completed urgently.
- 170) The matter of land acquisitions regarding the Union Ghandi 220KV line has since been resolved.
- 171) T&TEC is offering payments for lands for the Union Ghandi 220KV line.
- 172) Work on the Union Ghandi 220KV project is ongoing.
- 173) The RIC has experienced setbacks with the timely submission of the Business Plan and the quality of the submission from T&TEC and has been proactive in preparing an Information Requirements: Business Plan document, detailing guidelines to assist T&TEC in preparing its submission.
- 174) T&TEC is now required to prepare a Compliance Manual to standardise the regulatory data collection and reporting activities across all distribution areas.
- 175) An improvement is anticipated with the modification of GES 7 to address this issues of providing new electricity connections within a reasonable time, and replacing defective street-lights.
- 176) The inability to meet the OES requirement for streetlights is directly related to tariffs that have not been increased since 2009 and do not take into account the current number of streetlights.
- 177) The RIC will examine Street Light maintenance as part of its pricing determination.

178) The island wide OMS which is yet to be implemented for all distribution areas will assist with automatic payments being made for breaches to GES1.

### **3. RECOMMENDATIONS TO IMPROVE THE MANAGEMENT STRATEGIES AT THE COMMISSION**

179) T&TEC's current institutional arrangement has improved productivity and efficiency in the internal processes and operations.

180) Several management models are under consideration in T&TEC's draft Business Plan 2021 to 2025, to improve its overall efficiency.

181) The measures required by T&TEC to improve the management of power and electricity services as submitted by the MPU are achievable as the majority of the measures are already being implemented by T&TEC.

182) T&TEC can improve its overall performance by implementing procedures across distribution areas to standardise its data collection and reporting functions.

183) Changes to the PPAs and to the Laws of Trinidad and Tobago are required to address T&TEC's main challenges.

184) The Commission completed a thorough review of its Act and made recommendations for the MPU's consideration.

185) The MPU works with a number of key stakeholders, is at the end process with regards to the revision of the feed-in<sup>16</sup> tariff policy and is working out an implementation plan for same.

186) T&TEC is currently at the end process of finalising other amendments to take to the Cabinet and onwards to the Parliament.

187) The RIC continues to mandate that T&TEC to educate its customers in conservation, and continues its conservation initiatives.

188) T&TEC's Energy Management Application will aid customers with energy conservation.

---

<sup>16</sup> A feed-in tariff, is a policy tool designed to promote investment in renewable energy sources.  
<https://www.investopedia.com/terms/f/feed-in-tariff.asp>

- 189) T&TEC's customers are being advised to switch to energy efficient LED bulbs and practice energy management and simple energy conservation habits in an effort to reduce customer's electricity consumption and the charges on their electricity bill.
- 190) The introduction of "smart" technology over the next five (5) years will further benefit energy saving through controlling the operation of street lights.
- 191) T&TEC has utilised solar powered LED Luminaires where no electrical infrastructure exists.
- 192) Only two (2) percent of street lights currently carry LED Luminaires.
- 193) T&TEC is taking a good approach towards renewable energy by embracing the opportunity instead of viewing it as a threat to the Commission's operations.
- 194) Seventeen (17) homes receive electricity by way of solar installations as funded by the MPUs' Solar Panel Assistance Programme.
- 195) The study on purchasing power generated from off-grid solar power systems has advanced and will be completed by the end of July 2021.
- 196) T&TEC is in the process of obtaining a reliable assessment to make a final decision to support the investment in wind energy.
- 197) The initial study on the use of wind energy in Tobago which was conducted in 2013 by T&TEC at a cost of TT\$140,005.90 proved inconclusive.
- 198) If grid-scale solar PV generation, the demand of electricity is the same but if rooftop Solar generation is used the demand of electricity from the grid can reduce.
- 199) The Commission is giving consideration to the use of Rooftop Solar.
- 200) The Commission encourages customers to use the underground option as the reliability is greater.
- 201) It is difficult to convert to underground infrastructure because the overhead infrastructure already exists.
- 202) It is difficult to quantify the number of households currently with underground infrastructure.
- 203) While the reliability of supply to customers will be improved, the cost of converting to underground infrastructure is not commensurate with the potential benefits.
- 204) T&TEC will give consideration to conversion to underground lines in the city of Port of Spain.

- 205) Apart from underground lines, overhead insulated conductors will be utilised that will allow the Commission to avoid tree cutting.
- 206) Of concern to the Committee is that disaster preparedness is identified as a weakness in the SWOT analysis in T&TEC's Strategic Plan 2021-2025.
- 207) T&TEC is 90% prepared with regards to the availability of labour in a disaster but is at 30% with regards to material resources.
- 208) In the context of the impact of climate change particularly on Small Island Developing nations it is extremely important that T&TEC is adequately prepared for any disaster.



## SUMMARY OF RECOMMENDATIONS

### 1. T&TEC'S CURRENT MANAGEMENT STRATEGIES

- A. T&TEC to provide a copy of its Business Plan to the Parliament upon its finalisation.
- B. MPU to provide, as part of its ministerial response, a progress report by T&TEC of the achievements made in relation to its Strategic Plan, 2021-2025.
- C. MPU to play a more pivotal role in ensuring that timely information is submitted to the RIC for the conduct of rate reviews, evaluation of standards of service and performance monitoring.
- D. Consideration be given by T&TEC to allocate a designated coordinator to focus and ensure the timely delivery of information to the RIC. This designated coordinator should be provided with the necessary resources and authority to ensure that targets are met.
- E. T&TEC to examine and implement strategies to reduce its technical losses which are contributing to approximately nine (9) percent of its revenue.
- F. MPU to expedite T&TEC's request for increased funding to cover its expenditure.
- G. The subsidy for natural gas to be maintained.
- H. T&TEC, in addition to its Five Year Operational Plan, examine other potential revenue streams in collaboration with the MPU. For example:
  - a. provide specialised services to customers and/or third parties in exchange for a fee, revenue sharing mechanism, or other financial benefits (i.e. utility marketplaces providing energy efficient home goods; home automation/smart homes); and
  - b. explore new lines of business such as solar installations, appliance servicing and repair, home warranty services, and outdoor/security lighting.
- I. A formal contractual agreement between T&TEC and NGC to be finalised as soon as possible. This agreement will be based on a continuation of the price subsidy to be met by GORTT and a review of the current annual escalation of 3% that T&TEC is required to pay. The negotiation of this agreement should consider the impact on the financial status of the utility and its customers.
- J. T&TEC to update its debt collection policy.

- K. T&TEC seek to recover outstanding public debt from government agencies and pursue aggressive measures regarding recovering private debts.
- L. In future, the MPU authorises T&TEC to submit its Business Plan with an economic tariff using a proposed price to prevent delays in the rate review process.
- M. The process for the review of rates to be initiated in a timely manner to cater for delays in the submission of critical information necessary for conducting a rate review, so that T&TEC can benefit from much needed revenue in a timely manner.
- N. The adoption of the RIC's overall position as it concerns the purpose of the subsidy.
- O. Included in the proposed tariff structure should be the formalisation of payment plan option for vulnerable customers particularly during periods of unprecedented situations such as the Covid-19 pandemic where many household's incomes are compromised.
- P. The RIC to utilise Video Conferencing to continue its outreach meetings.
- Q. The RIC to engage in comparisons with jurisdictions with similar oil and natural gas producing economies and include same in its subsequent reports. These comparisons should also include comparisons for public consumption, the price of natural gas and the impact on electricity rates.
- R. T&TEC to examine and implement measures to optimise standby capacity and cater for spinning reserves.
- S. All three (3) power producers to be approached regarding the 'take or pay issue' to reduce cost for unutilised capacity where applicable.
- T. T&TEC to negotiate for the omission of the 'take or pay' provisions in all PPA contracts being renewed or newly established.
- U. T&TEC to submit a copy of its Investment Policy when completed to the Parliament.
- V. T&TEC to keep up-to-date with its annual Generation Adequacy Assessment.
- W. Infrastructure to facilitate any additional generation in future be located in North Trinidad as per T&TEC's advice.
- X. T&TEC to begin exploring the cost factors and other factors associated with the commissioning of a new power station plant to be located in North Trinidad.
- Y. T&TEC to develop strategies to:
  - a. attract and maintain large industrial customers, which is more profitable for the Commission; and

- b. create incentives to discourage industrial customers from downsizing in capacity to commercial usage.

Furthermore, considering the effect that the pandemic has had on industries, consideration should be given to offering payment plans and deferred payment options large industrial customers.

- Z. The expansion of T&TEC's utilities assistance policy to include customers who are unemployed due to the COVID-19 pandemic.
- AA. The MPU and T&TEC to liaise with Members of Parliament's Constituency Offices to identify persons who require assistance with paying utilities during the pandemic.
- BB. T&TEC to consider expanding its LED bulb initiative, especially amongst its lower income customers, due to the cost benefits that accrue from the use of LED bulbs.
- CC. T&TEC to examine through its five (5) year Development Plan suitable measures for the upgrade and maintenance of its transmission and distribution system and forward same to MPU for funding and implementation.
- DD. As a part of its Ministerial Response, that T&TEC provide:
  - a copy of its five (5) year Development Plan for electricity infrastructure; and
  - an outline of its plan to provide electricity for the infrastructural developments occurring in North and East, Trinidad.
- EE. MPU, T&TEC, RIC and MEEI to meet to discuss and thoroughly examine the position of the Commission, as it pertains to renewables and submit a policy document on same to the Cabinet for consideration.
- FF. Subsequent to internal discussions, MPU to spearhead stakeholder discussions, including with the COSL on the PSIP Renewable Energy Initiative which will involve stakeholders in the process of preparation for the initiative.
- GG. COSL to respond to T&TEC regarding approval to utilise the land area at Matura, Manzanilla and North Matura for the PSIP Renewable Energy Initiative.
- HH. T&TEC to encourage the public to report illegal connections by developing an anonymous hotline.
- II. T&TEC to augment its use of Social Media to inform citizens of the dangers of illegally accessing and tampering with T&TEC's infrastructure.

- JJ. T&TEC to utilise social media to advertise short duration outages. Although it may be difficult to determine specific start times of these outages, an advisory informing customers that they may experience short duration outages will assist affected customers in preparing for same.
- KK. T&TEC to provide an outline of its line clearing and maintenance plan/policy and its measures to prevent the recurrence of a delay in establishing line clearing contracts.
- LL. T&TEC to provide a status report on its initiatives to prevent frequent outages.
- MM. T&TEC continue to implement initiatives to reduce the number of street light issues.
- NN. T&TEC to resolve all outstanding streetlight issues by August 2022, and submit a progress report regarding same in its Ministerial Response.
- OO. T&TEC to prepare a succession plan for the MPU's consideration to ensure the adequacy of staff, given that two hundred and sixty-seven (267) persons are due for retirement in the next five (5) years.

## **2. THE CHALLENGES RELATED TO MANAGING POWER AND ELECTRICITY SERVICES IN TRINIDAD AND TOBAGO**

- PP. That T&TEC be granted right of way access via revised legislation to allow the Commission the flexibility to install and maintain required infrastructure on the system.
- QQ. RIC to take into consideration the increased number of streetlights when reviewing the proposed tariff increase.

## **3. RECOMMENDATIONS TO IMPROVE THE MANAGEMENT STRATEGIES AT THE COMMISSION**

- RR. T&TEC, MPU and RIC meet to discuss and implement procedures across distribution areas as indicated by the RIC to improve T&TEC's overall performance which should also prove useful in standardising T&TEC's data collection and reporting functions.
- SS. The legislative review of T&TEC's Act Chapter 54:70 by the MPU based on T&TEC's review of the Act and its recommendations.
- TT. T&TEC to prepare a programme for the change out of HPS to LED luminaries over a specified period of time and present same to MPU for consideration and funding where possible.

- UU. The Commission to take the lead role in renewable energy sources for power generation in Trinidad and Tobago including the promotion of solar rooftop generation for individual homes.
- VV. The Commission to examine models in various jurisdictions that include renewable energy for example Germany and Sweden.
- WW. The Commission to diligently pursue a policy for the purchase of surplus off-grid solar power from individuals.
- XX. T&TEC in collaboration with the MPU explore incentives to encourage new customers to utilise underground infrastructure.
- YY. T&TEC to review and improve its disaster plan as it is a matter of urgency.
- ZZ. T&TEC to conduct a detailed study to determine the adaptation and mitigation measures needed to minimise the adverse impact of climate change on its operations and infrastructure.

# OBJECTIVE 1. CURRENT MANAGEMENT STRATEGIES AT T&TEC

## Plans and Policies

### *Policy Directions*

- 1.1. The Trinidad and Tobago Electricity Commission (T&TEC/Commission) was established by the Trinidad and Tobago Electricity Commission Act Chap 54:70, (the Act) and is a statutory body governed by a Board of Commissioners (the Board), headed by a Chairman.
- 1.2. Section 5 (1) of T&TEC Act states: *"The President may give the Commission directions of a general character on the policy to be followed in the exercise of the powers conferred and the duties imposed on the Commission by or under this Act in relation to matters that appear to the President to affect the public interests of Trinidad and Tobago."*

### *Current Plans Guiding the Management and Operations of T&TEC*

- 1.3. As it pertains to the current plans guiding the management and operations of T&TEC, the Commission referenced the following two (2) plans:
  - i. a Strategic Plan 2021-2025; and
  - ii. a Business Plan<sup>17</sup>.
- 1.4. Supplemental information received from T&TEC on May 25, 2021, indicated that the Strategic Plan, 2021-2025 was approved by the Members of the Commission on March 29, 2021 and that the contents of the Plan will be rolled out in the weeks thereafter.
- 1.5. The Committee requested copies of T&TEC's Strategic Plan and Business Plan guiding its management and operations respectively. The Committee was provided with a copy of T&TEC's Strategic Plan 2021-2025, however, the Committee was informed that T&TEC's

---

<sup>17</sup> T&TEC Submission dated March 29, 2021

Business Plan was still in the finalisation stage and as such, the Commission was unable to accede to the request.

## FINDINGS

- 1) T&TEC's Strategic Plan has been approved which will provide direction for the Commission during the period 2021-2025.
- 2) T&TEC was unable to submit its Business Plan to the Committee because same was being finalised.

## RECOMMENDATIONS

- A. We recommend that T&TEC provide a copy of its Business Plan to the Parliament upon its finalisation.
- B. We recommend that MPU provide, as part of its ministerial response, a progress report by T&TEC of the achievements made in relation to its Strategic Plan, 2021-2025.

## Roles and Reporting Relationship amongst Entities with Responsibility for Electricity

### *The Role of the MPU in relation to T&TEC*

- 1.6. The role of the MPU is to provide strategic direction, governance and oversight to enable the utility to positively contribute to enhancing the quality of the lives of the citizens as well as the country's overall socio-economic development through the provision of reliable electricity services.

### *The Role of the RIC in relation to T&TEC*

- 1.7. The Regulated Industries Commission (RIC) Act No. 26 of 1998 established the RIC as the economic regulator of the electricity transmission and distribution sector in Trinidad and Tobago. The RIC Act provides the primary framework for the economic regulation of

electricity, including the regulation of prices, customer service standards and performance monitoring. Among other things, the RIC is responsible for:

- advising the Minister on all matters relating to the operation of the RIC Act including the granting of licences;
- establishing the principles and methodologies for determining rates;
- setting and enforcing standards of service,
- carrying out studies of efficiency and economy of operation and of performance of service providers and publishing the results thereof; and
- investigating complaints by consumers regarding their failure to obtain redress from service providers and facilitating relief, where necessary.

1.8. In carrying out its mandate as economic regulator for T&TEC as the system operator for the electricity transmission and distribution sectors, the RIC is guided by its primary legislation and the powers and functions contained therein. In this regard, the RIC is responsible for *inter alia*, price setting, establishing and reporting on standards of service, and conducting investigations on complaints by customers who have been unable to obtain redress from the service providers. In this regard, the RIC works closely with T&TEC in its role as regulator.

#### ***The Reporting Relationship between the Board and Senior Executive of T&TEC***

- 1.9. The Members of the Board meet monthly and on an *ad hoc* basis. At each meeting, Management produces papers for Members' noting, consideration and/or approval.
- 1.10. Additionally, the General Manager is required in keeping with Section 7(2) of the Act to attend every meeting of the Board. At these meetings the General Manager reports to Members via a Corporate Performance Report and responds to queries raised by Members.
- 1.11. Other members of the Senior Executive team including the Chief Financial Officer, the Chief Technical Officer, the Chief Operating Officer and the Chief Human Resources Officer are also invited to attend meetings of the Board on behalf of their respective divisions.



### ***T&TEC's Reporting Relationship with its line Ministry***

- 1.12. T&TEC reports to the MPU on critical aspects of the Commission's operations through the Chairman of the Board via the line Minister. Approval and/or guidance on PSIPs also form part of the reporting relationship. These include, *inter alia*, approvals arising out of requests for street lighting, parks and grounds illumination. The MPU also interacts with the Commission when there is need to provide responses for the Joint Select Committee on Public Accounts and Appropriation Committee (PAAC) during and Budget preparation. The Commission's responsibilities are outlined at Appendix V.
- 1.13. The Commission has also been submitting copies of its confirmed Minutes to the Minister in accordance with its mandate.

### ***The MPU's Relationship with T&TEC***

- 1.14. In its role as line Ministry with responsibility for T&TEC, the MPU:
- provides strategic direction for implementation of government policy;
  - administers and controls the provision of government's budgetary allocations towards T&TEC's recurrent and capital expenditure;
  - has monitoring and oversight responsibilities in respect of performance and in accordance with established reporting requirements of the Ministry of Finance (MOF) and Ministry of Planning and Development (MOPD), along with agreed-upon indicators set by the MPU.
- 1.15. The MPU receives monthly and quarterly reports from T&TEC concerning project implementation, utilisation of funding and overall analyses of engineering, operations and maintenance. The MPU also screens T&TEC's Public Sector Investment Programme (PSIP) projects annually to ensure that they are in alignment with the government's vision for the electricity sector, for consideration in the national budget. Further, the MPU ensures that T&TEC fulfils the Government's mandate to deliver a safe, reliable and efficient electricity supply to all sectors of the economy in accordance with international performance indicators. These are monitored through the monthly Corporate Performance Reports submitted to MPU.

- 1.16. Additionally, the Ministry supports T&TEC's in regard to its financial operations by assisting with creating an enabling environment for T&TEC to achieve financial self-sufficiency and ensuring that the Commission continues to implement measures to minimise opportunities for financial impropriety and wastage.
- 1.17. In terms of whether the MPU's relationship with T&TEC needs to be improved, the Committee was informed that there is an excellent working relationship between both parties and this is also evident in T&TEC's excellent reporting to the Ministry periodically (monthly) on every facet of the Commission's operations and finances. Additionally, the communication channels are open, flexible and informative, making collaboration and partnerships with the Ministry very effective.

#### ***T&TEC's Reporting Relationship with the RIC***

- 1.18. T&TEC is required to submit data to the RIC on a quarterly and annual basis on its performance under both the Quality of Service Scheme and the Performance Monitoring and Reporting Framework for the Electricity Transmission and Distribution Sector.
- 1.19. However, while initial data submissions are usually completed within the required period, there are frequent delays in confirming the veracity and adequacy of the data submitted, as further details and/or resolution of apparent inconsistencies are often necessary.
- 1.20. The RIC is currently working with T&TEC to standardise and document the regulatory data collection and reporting practices across all of T&TEC's distribution areas. This is expected to significantly decrease the number of queries needed, and hence reduce the delays in obtaining the required data.

#### ***The RIC's Constraints with Obtaining Information from T&TEC***

- 1.21. The RIC indicated that it often experiences delays in receiving information from T&TEC and having the full body of variables to conduct a successful rate review.

- 1.22. Under the RIC Act Chapter 54:73, the RIC is allowed certain powers and discretions to obtain information from T&TEC. However, the RIC indicated that it does not have the power to mandate or direct T&TEC to provide the required information.
- 1.23. Although the RIC can make assumptions, the results may be uncertain. The RIC indicated that there should be a limit to how assumptions are used. The RIC also advised that the results of the rate review can impact the lives of citizens and businesses.
- 1.24. Further, the RIC indicated that where information exists, it follows that less assumptions would also be made. However, where the information is not available to the RIC, it will make all assumptions on all inputs, which is unsatisfactory.
- 1.25. RIC indicated that it has been managing by working with T&TEC to obtain actual and complete information for its analysis.

***T&TEC's Department with Responsibility for Providing Timely Information to the RIC***

- 1.26. At T&TEC the Chief Financial Officer interacts exclusively with the RIC.
- 1.27. Reporting to the RIC is mostly up-to-date.

***The MPU's Role in the Reporting Relationship between T&TEC and RIC***

- 1.28. The Committee enquired into whether the MPU has a monitoring and intervening role in terms of ensuring that T&TEC submits timely information to the RIC. The MPU indicated that there is some interaction in terms of whether or not T&TEC is meeting quality service standards and whether or not reports from the RIC coincide with the MPU's assessments.
- 1.29. In many instances, reports from the RIC coincide with the MPU's assessments.
- 1.30. The MPU's Customer Service Unit also receives complaints and contributions from members of the public and brings them to the attention of T&TEC. T&TEC is asked to respond and to accommodate action within a specific period.

- 1.31. In addition to the reports from T&TEC, the MPU also makes its own assessment on whether T&TEC is meeting the quality service standards established by the RIC.

## FINDINGS

- 3) T&TEC is often tardy with reporting information to the RIC, however, the reports submitted to the RIC are current.
- 4) The MPU has some interaction in terms of whether or not T&TEC is meeting quality service standards and whether or not reports from the RIC coincide with the MPU's assessments.

## RECOMMENDATIONS

- C. **We recommend that the MPU play a more pivotal role in ensuring that timely information is submitted to the RIC for the conduct of rate reviews, evaluation of standards of service and performance monitoring.**
- D. **We recommend that consideration be given by T&TEC to allocate a designated coordinator to focus and ensure the timely delivery of information to the RIC. This designated coordinator should be provided with the necessary resources and authority to ensure that targets are met.**

## T&TEC's Finances

### *T&TEC's Incurred Debt Situation*

- 1.32. Appendix VI outlines T&TEC's incurred debt situation inclusive of:
- amounts owed to suppliers;
  - amounts owed to contractors;
  - loan debt servicing;
  - all debts owed by the Government on behalf of T&TEC; and
  - all debts incurred by T&TEC.

### ***The Reasons for T&TEC's Losses over the Last Nine (9) Years***

- 1.33. T&TEC has been operating with an income of roughly \$3.2B and an expenditure of roughly \$4.3B placing the Commission at a loss of \$1.1B. Tariff revenue since 2009 is 37cents per kilowatt (kW) compared to expenditure which is 48cents per kW.
- 1.34. Consequently, T&TEC operates at a loss of 11cents per kWh.
- 1.35. In order to remove the loss of \$1.1M, at 11cents per kWh, some items have to be relinquished. T&TEC has to then determine which of the items of expenditure it can shift or cut down on, for example, either tariff revenues has to increase or expenditure has to decrease in order to reduce the loss or a combination of both.
- 1.36. The breakdown of T&TEC's total expenditure of \$4.3B was provided as follows:
  - generation and purchase of generated power - \$1.63B;
  - natural gas from NGC - approximately \$1B;
  - total cost of salaries, wages and employee benefits -\$995M; and
  - local and foreign capital, as well as taxes - \$600M. (Figure 1 at item 1.29 refers)

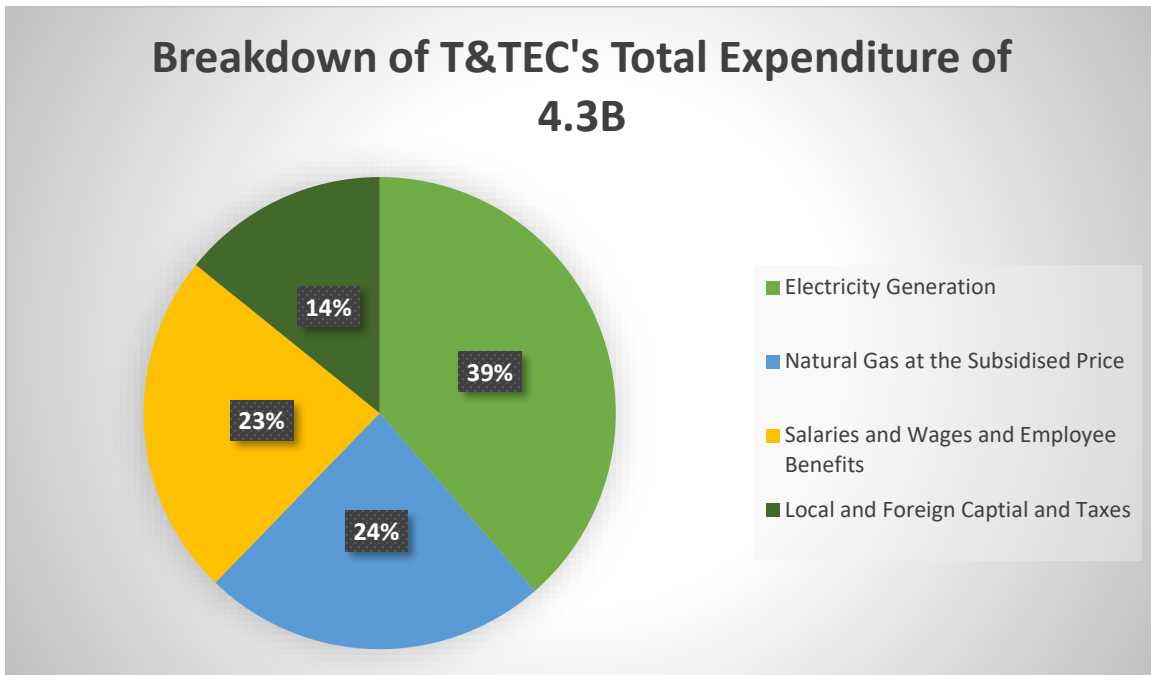
### ***Electricity Generation and Purchase of Generated Electricity***

- 1.37. It was noted that the \$1B gas price is the subsidised gas price. The purchase of materials plus taxes is approximately \$600M and salaries and wages account for twenty-three percent (23%) of operations.
- 1.38. The majority of T&TEC's expenditure is on electricity generation and purchase of generated electricity from independent suppliers, which is based on conversion of natural gas that is \$2.63B (\$1.63B added to \$1B) which represents sixty-seven to sixty-eight percent (67-68%) of total expenditure.
- 1.39. As it pertains to whether salaries and wages can be reduced, the Committee was informed that the Commission has two thousand, nine hundred and twenty-four (2,924) employees of which three hundred and twelve (312) are temporary. Based on trend in the last ten (10) years, it was

observed that the Commission has been maintaining the current number of employees which is lower than ten (10) years ago. Furthermore, the Commission's customer base has increased to five hundred and two thousand (502,000).

- 1.40. T&TEC conducted a manpower audit on the Commission and is satisfied that its current employees are adequate to meet the Commission's requirements. T&TEC also advised that there are no plans at this time to separate workers to reduce expenditure. In addition, T&TEC indicated that it has compared its expenditure on salaries and wages to other utilities internationally. Also, the Human Resources Officer is examining the salaries and wages figure. T&TEC explained that if three hundred and twelve (312) employees are separated, only \$52M will be saved. However, the Commission requires \$1.1B to meet its operating deficit.
- 1.41. T&TEC benchmarks its customer to employee ratio with other utilities. The Commission deemed its rank to other utilities in terms of its employees as acceptable.
- 1.42. The Commission has been engaging in a number of initiatives to bridge the \$1.1B loss for instance the Commission has engaged in initiatives to reduce the cost of purchasing natural gas from where it was to where it is now. However, the issue with natural gas from NGC is that there is a 3% yearly escalation in the purchase agreement with NGC.
- 1.43. T&TEC has been paying for all of its expenditure but has not been able to meet its commitment to the NGC therefore resulting in the loss of \$1.1B. T&TEC makes some payments to the NGC but not at the required level of payment.
- 1.44. Figure 1 below presents the information by percentage:

Figure 1



***Whether T&TEC is requesting State Funding to cover its Expenditure***

1.45. The Committee enquired whether T&TEC will request increased funding from the State to cover its expenditure. T&TEC indicated that it is currently requesting same and the Commission continues to identify all the different issues. However, the decision for funding remains with the State.

***T&TEC's position if the Government is unable to make the shortfall***

1.46. T&TEC indicated that it does not have an answer to a case where the Government cannot make the shortfall and expressed concern if such a situation occurs because of the impact its service has on people and their livelihood.

1.47. It was also indicated that T&TEC's staff and management are trying to keep the rate as low as possible and to maintain reliability with customers.

***The Impact of Illegal Connections on the Commission's Loss***

1.48. Losses are made up of two (2) categories, technical and non-technical losses. Losses represent approximately nine percent (9%).

- 1.49. The majority of T&TEC's losses are due to technical losses such as heat and other issues.
- 1.50. Based on its analysis non-technical losses, which is anything related to the stealing of electricity, is approximately .025% of losses.

***T&TEC's Loss in Revenue due to the Closure of some Plants on the Point Lisas Industrial Estate***

- 1.51. T&TEC has observed an annual loss not only as a result of the closure of plants on the Point Lisas Industrial Estate but also due to customers asking for a reduction in rates and capacity because of changes in business operations. As a result, the Commission is losing an average of \$60M annually.
- 1.52. T&TEC anticipates that the oversupply and loss of revenue issues owing to the closure of, *inter alia*, the Petrotrin and AcleorMittal plants, will be rectified with the introduction of the M5000 and M4 plants.

***The Measures Being Taken to Improve the Financial Position of T&TEC***

- 1.53. T&TEC through its Business Development & Administration (BD&A) Department and other departments established a Five (5) Year Operational Plan with a view to sourcing supplemental revenue streams other than that associated with the sale of electricity in order to improve its financial position. The Five (5) Year Operational Plan involves a number of initiatives across the organisation and considers the following projects:
- Major control over the dispatch of each generation machine which has resulted in significant gas savings;
  - Signing of the contract to construct the second 220 kV double circuit line from Union Estate to Gandhi Village to bring the full dispatch of power from Trinidad Generation Unlimited (TGU) onto the national grid which can result in significant gas savings;
  - Adjustments made to major contracting costs (2018);
  - Increase in transformer rental rates for commercial and industrial usage (2017);



- The Commission now receives an administrative charge for the processing of Generator License Applications (2018);
- Renegotiation of two (2) expired pole rental agreements;
- Ensure compliance with the statutory requirements for all industrial customers to get their annual inspection completed and the relevant payments to T&TEC is made;
- Lease of Commission's dark fibre to interested users;
- Rental of space on the Commission's poles for advertising pennants;
- Rental of space on the Commission's poles for Licensees' communication antennae;
- Introducing solar installations in customers' homes; and
- Introduction of e-billing to reduce administrative costs from using less paper and mail services.

1.54. The Five-Year Operational Plan commences in 2021. Some initiatives in the Operational Plan entails, *inter alia*, reducing gas consumption based on the dispatch of power from the most efficient producer, TGU and building the second double circuit line from Union Estate to Gandhi to bring the dispatch of power onto the national grid. There are also initiatives to reduce cost or improve revenue from non-lighting power sources in terms of the price charged to customers for services rendered to them for example:

- the movement of lines or any other works referred to as major contracting costs;
- transformer rental rates; and
- pole rental agreements with communication providers.

1.55. The projected savings/revenue to be generated in the next five (5) years from implementing the twelve (12) point Operational Plan were outlined in Appendix VII.

#### ***The Impact of New Connections on T&TEC's Revenues***

1.56. In response to whether the Commission's revenue has been increasing or decreasing as a result of new connections, the following information was submitted by T&TEC:

Table 4

Total Light and Power Revenue vs. No. of New Connections

<b>Total Light and Power Revenue vs Number of New Connections</b>					
<b>Year</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Light and Power</b>	2,982,032,459	2,973,485,271	2,989,614,660	3,084,329,453	3,098,179,554
<b>Number of New Connections</b>	12,389	13,439	11,259	10,783	11,160

NB: The above figures represent the Light and Power billing values, VAT exclusive.

*T&TEC's Projections of the Revenues Required for Generation Capacity and Grid and Network Development for the Next Five (5) Years*

1.57. The Commission has long term forecasts of demand for which adequate generating capacity has been contracted on a long term basis. Although revenues are impacted negatively by the COVID-19 pandemic, the Commission indicated that it is not in a position to alter the amount of generating capacity contracted for. The projected revenue over the next five (5) years is TT\$2.5 billion.

*The Impact of Dispatch of Power on T&TEC's Financial Position*

1.58. The way T&TEC dispatches its machines at the various IPPs is very critical. Gas consumption is lower when the more efficient machines are operated. The Committee noted that in recent years, T&TEC has been conversing with the IPPs and seeking information to identify the more efficient machines.

1.59. T&TEC has been dispatching machines based on efficiency and that has helped to reduce gas consumption. If this trend continues, gas will be further reduced. Approximately \$100M will be saved annually from the dispatch of machines and this is therefore T&TEC's main focus.

*Cess payments to the RIC*

1.60. The amount of Cess paid by T&TEC to the RIC for the past five (5) years by year is outlined in Table 5 below:

Table 5

Cess payments to the RIC for the years 2015 to 2020

Year	2015	2016	2017	2018	2019	2020
Cess Paid (\$)	10,143,772	9,097,959	10,385,966	11,177,792	9,639,145	Awaiting Budget Approval

***The Reason Why T&TEC’s Existing Business Model is considered to be flawed***

1.61. Page 16 of T&TEC’s Strategic Plan 2021-2025 stated that *T&TEC’s existing business model is considered to be flawed and results in the Commission’s inability to cover operating expenses.* T&TEC indicated that raw information was included when T&TEC’s Strategic Plan was being created. T&TEC further explained that the way its income and operating expenditure are structured, does not allow the Commission to meet its expenses.

**FINDINGS**

- 5) T&TEC’s expenditure is dominated by electricity generation and purchase of generated power as well as salaries and wages which together account for approximately 62% of T&TEC’s operations. The Commission has however sought and continues to seek alternative means to increase its revenue.
- 6) Technical losses account for approximately 9% of T&TEC’s loss of revenue.
- 7) T&TEC continues to pay its expenses but has not been able to meet its total commitment to the NGC. However, T&TEC is currently requesting increased funding from the State to cover its expenditure.

**RECOMMENDATIONS**

**E. Considering T&TEC’s financial position, we recommend that T&TEC examine and implement strategies to reduce its technical losses which are contributing to approximately nine (9) percent of its revenue.**

F. We recommend that the MPU expedite T&TEC's request for increased funding to cover its expenditure.

## Natural Gas

### *The Volume and Cost of Natural Gas Required to Generate Electrical Power for Trinidad and Tobago*

1.62. T&TEC provided the following information as it relates to the amount of natural gas required to generate power for Trinidad and Tobago on a daily and annual basis for the period 2016-2020:

Table 6

Natural Gas consumed on a Daily and Annual basis for the years 2016 to 2020

<b>Year</b>	<b>Ave. Natural Gas Consumed per Day (Million scf/day)</b>	<b>Annual Natural Gas Consumed (Million scf)</b>
<b>2016 Leap Year</b>	271	99,364
<b>2017</b>	252	92,152
<b>2018</b>	242	88,345
<b>2019</b>	254	92,727
<b>2020 Leap Year</b>	237	86,770
<b><i>Average</i></b>	<b><i>251</i></b>	<b><i>91,872</i></b>

1.63. The cost paid for natural gas required to power Trinidad and Tobago on a daily and annual basis for the period 2016-2020 is provided in Table 7 below as submitted by T&TEC:

**Table 7**  
**The Cost of Natural Gas Consumed per day and per annum**

<b>Year</b>	<b>Cost for Natural Gas Consumed per Day (USD)</b>	<b>Cost for Natural Gas Consumed per annum (USD)</b>
<b>2016 Leap Year</b>	<b>\$ 389,722</b>	<b>\$ 142,638,169</b>
<b>2017</b>	<b>\$ 374,839</b>	<b>\$ 136,816,257</b>
<b>2018</b>	<b>\$ 370,754</b>	<b>\$ 135,325,153</b>
<b>2019</b>	<b>\$ 400,020</b>	<b>\$ 146,007,172</b>
<b>2020 Leap Year</b>	<b>\$ 384,805</b>	<b>\$ 140,838,702</b>
<b><i>Average</i></b>	<b><i>\$ 384,028</i></b>	<b><i>\$ 140,325,091</i></b>

***T&TEC's Gas Contract with NGC***

- 1.64. The Commission's Strategic Plan 2021-2025 indicated that, "*T&TEC's supply contract with the National Gas Company of Trinidad and Tobago (NGC) has long expired, but an understanding persists between the parties*". The Committee sought clarification on the expiry date of the contract and was informed that, the previous gas contract expired on January 1, 1995.
- 1.65. The debts owed to the NGC does not impact the re-establishment of a gas contract as the negotiations for the new gas contract proceeded separately. The main issue is the final settlement of the gas price for payment by the Commission.

***The Relation of Renegotiated Gas Sale Agreements to the Gas Price to T&TEC***

- 1.66. T&TEC advised that the gas price is not related in any way to the renegotiated gas sale agreements. T&TEC assured that the MPU will provide guidance as it pertains to the renegotiated gas sale agreements.
- 1.67. T&TEC also indicated that the MPU will consider a number of factors when determining the gas price and assured that one of the key factors to be considered is the impact on the country.

### ***The Subsidy for Natural Gas***

- 1.68. Natural gas is provided by NGC at a price that is fixed at annual intervals based on a 3% escalator. The current price is US\$1.5882 per Metric Million British Thermal Unit (MMBtu). The market price for natural gas hovers around US\$3.00 per MMBtu. This therefore suggests that T&TEC receives a subsidy of approximately US\$1.4118 per MMBtu or approximately fifty percent (50%) of the market price for natural gas.
- 1.69. Based on an average annual consumption of eighty-nine million (89M) MMBtu and an exchange rate of TT\$6.80: US\$1, this translates to an annual subsidy of \$854 million. All categories of customers benefit from this subsidy, with specific reference to residential customers.

### ***The Impact of the Reduced Subsidy on T&TEC's Finances***

- 1.70. The price charged by NGC, currently at US\$1.5882 (escalated by 3% from a base of US\$1.05 in 2006) is less than what NGC can obtain from sale to other customers. T&TEC financial reports are prepared on the actual subsidised price. In the absence of the subsidy, the deficit reported would be greater since there are other operational costs that are necessary for the Commission's core functions, such as, transmission and distribution maintenance.
- 1.71. When questioned whether a consistent annual subsidy of \$854M will improve the Commission's financial situation, T&TEC indicated that the amount of the subsidy would vary from year to year as it is the difference between:
- (a) the market price for natural gas, which is variable; and
  - (b) the escalated price charged to T&TEC which increases each year by 3%.
- 1.72. T&TEC also indicated that the subsidy has had a positive impact on the Commission's financial situation and will continue to do so.

### ***T&TEC's Debt Owed to the NGC***

- 1.73. As at February 28, 2021, the Commission's debt to NGC was TT\$2,093,985,981 (US\$309,976,756) for natural gas supplied since January 2019.

- 1.74. In addition, the Commission owes NGC TT\$3,731,052,073 under a loan arrangement that was used to convert the indebtedness up to December 2018 into a 10-year loan. Funding for repaying this loan is provided by Government of the Republic of Trinidad and Tobago (GORTT).
- 1.75. The Committee requested details on the loan owed to the NGC and was provided with same:
- On December 31, 2018, NGC and T&TEC signed an agreement to convert the Commission's debt as at December 31, 2018 into a medium term loan of USD524M, with a term of ten (10) years at an interest rate of 6% per annum.
  - The loan is in two (2) tranches of USD262M each:
    - Tranche A has a one (1) year moratorium on principal and interest with semi-annual payments commencing June 2020; and
    - Tranche B has a five (5) year moratorium on principal and interest with semi-annual payments commencing June 2024. This loan is secured by a Letter of Support from the GORTT.
  - On March 9, 2012, NGC and T&TEC signed an agreement to convert the Commission's debt as at September 2009 in the sum of USD319M into a medium term loan, with a term of seven (7) years, an interest rate of 3% per annum, no moratorium and semi-annual payments commencing December 1, 2011. Funding for repayment of this loan was provided by the GORTT. This loan was repaid in 2018.
- 1.76. As of March 2021, T&TEC's outstanding balance to the NGC was US\$321,647 or TT\$2,175,861,408<sup>18</sup> which represents the accumulation for, 2019, 2020 and up to March 2021.
- 1.77. T&TEC has received assistance from the GORTT via the MPU for payments of all outstanding balances to NGC up to 2018. T&TEC continues to have discussions with the MPU regarding a similar arrangement to reduce its outstanding balance to NGC.

---

<sup>18</sup> Verbatim Notes of Public Hearing held on May 05, 2021

1.78. T&TEC attributed the debt owed to the NGC to the Commission's inability to settle all its debts as they become due, and to consistent losses over the last nine (9) years. The NGC remains the Commission's main creditor.

***T&TEC's Efforts to reduce its Debt Owed to the NGC***

1.79. T&TEC is seeking to obtain an economic tariff<sup>19</sup> that will enable it to meet all its financial obligations as they become due, and manage the dispatch regime to minimise its gas usage.

1.80. A number of factors affect cost that are beyond the Commission's control. Seventy percent (70%) of the Commission's costs (for example; generation capacity, natural gas, poles and transformers) are priced in United States currency. As a result, T&TEC is subject to exchange rate risks associated with these costs.

1.81. The Committee was also informed that the last time T&TEC made a profit was in 2011 when the exchange rate was T\$6.30. to US\$1.00 and the price of natural gas was \$118.18.

1.82. The IPPs have a formula, one of the inputs of which is the US consumer price index. T&TEC has to absorb these cost increases over the years with a flat tariff. The true cost of operations therefore has to be met by revenue to absorb the impact of uncontrollable costs or a deficit will incur year after year.

1.83. T&TEC intends to propose an economic tariff to the RIC for its consideration because it is the only way that the Commission believes it can cover or cater for its operating costs.

1.84. T&TEC indicated that it examined all possible options and has implemented a number of initiatives to reduce the annual bill of \$1.1B. However, these initiatives will not assist in reducing such a large bill. T&TEC indicated that the standing bill is owing to the rates at US5.5 cents; unsubsidised at US0.09 cents and business operations, which starts at a minimum of US0.12 cents in a similar type business anywhere, in any jurisdiction.

---

<sup>19</sup> An economic tariff is a tariff that will enable the Commission to cover all its costs under efficient operation.



### *The Status of the Economic Tariff proposed to MPU*

- 1.85. As it pertains to the value of the economic tariff being sought, T&TEC indicated that it has submitted its Business Plan to the MPU and the MPU is examining the economic tariff.
- 1.86. At its second public hearing, the Committee sought to obtain the status of the economic tariff proposed to the MPU. The MPU indicated that in considering various scenarios, the economic tariff is taken into consideration. MPU also indicated that it examined the economic tariff separately from the whole process before placing its recommendations before the committee with responsibility for finalising the gas price.
- 1.87. T&TEC informed the Committee that it needs to charge a tariff that would keep the utility whole, considering all of its costs, including the cost of natural gas, power generation, transmission and distribution.

## **FINDINGS**

- 8) There is no formal contractual agreement between the NGC and T&TEC for the supply of natural gas since January 1, 1995.
- 9) The debt owed to NGC does not impact the re-establishment of a gas contract. However, the main issue is the final settlement of the gas price for payment by the Commission.
- 10) T&TEC's debt owed to NGC is attributed to its inability to settle all its debts as they become due to consistent losses over the last nine (9) years.
- 11) The natural gas subsidy positively impacts the Commission's financial situation and should this subsidy become nonexistent, the deficit would be greater.
- 12) T&TEC is seeking to obtain an economic tariff via a proposal to the MPU. The aim of this tariff is to enable the Commission to meet all its obligations as they become due and manage its dispatch regime to minimise its gas usage.
- 13) T&TEC continues to engage in discussions with the MPU to find alternative means to reduce its debt to NGC.

## RECOMMENDATIONS

- G. We recommend that the subsidy for natural gas be maintained.**
- H. We recommend that T&TEC, in addition to its Five Year Operational Plan, examine other potential revenue streams in collaboration with the MPU. For example:**
- a. providing specialised services to customers and/or third parties in exchange for a fee, revenue sharing mechanism, or other financial benefits (i.e. utility marketplaces providing energy efficient home goods; home automation/smart homes); and**
  - b. exploring new lines of business such as solar installations, appliance servicing and repair, home warranty services, and outdoor/security lighting.**
- I. We recommend that a formal contractual agreement between T&TEC and NGC be finalised as soon as possible. This agreement will be based on a continuation of the price subsidy to be met by GORTT and a review of the current annual escalation of 3% that T&TEC is required to pay. The negotiation of this agreement should consider the impact on the financial status of the utility and its customers.**

## T&TEC's Receivables

### *Debts Owed to T&TEC*

- 1.88. T&TEC indicated that the average total debt owed to the Commission in 2020 was \$1.8B.
- 1.89. The highest debt is owed by public authorities for lighting and power for the public at a value of \$1.1 billion. The Committee therefore sought to inquire into the steps being taken to recover this debt.
- 1.90. The Committee was advised that arrears were averaging \$1.4B and the debt which is a public debt has to be examined in a holistic manner. T&TEC further explained that there is a sort of balancing arrangement where although it is dealing with Government accounts, it receives significant assistance in the form of the PSIP and payments of NGC bills. For example, discussions are ongoing and the Government has set up an arrangement to pay NGC's bill in full up to 2018.

- 1.91. Notwithstanding, T&TEC continues to interact with a number of agencies via virtual meetings and has received commitments from a number of agencies to settle some payments.

### ***T&TEC's Private Debt***

- 1.92. T&TEC's private debt averaged \$500M up to the year 2020. The Committee therefore questioned the extent of T&TEC's aggressive debt collection policy since the policy seemed outdated, see Appendix VIII. In response, T&TEC updated the Committee indicating that the majority of outstanding private debts were received and were now averaging \$227M.
- 1.93. It was indicated that some payments related to the desalination plant were received. Notwithstanding, ongoing discussions related to outstanding arrears in the amount \$30M.
- 1.94. T&TEC also advised that the figure for private debts provided to the Committee comprises current bills and arrears. Therefore, the true outstanding amount for private accounts is approximately \$50M. The Committee requested an aged receivables report from T&TEC and was provided with the information at Appendix IX.

### ***T&TEC's Debt Collection Initiatives***

- 1.95. T&TEC's debt collection initiatives are as follows:
1. Disconnections for non-payment of Light and Power with arrears of more than 60 days and in excess \$200.00, from the highest to lowest debtor;
  2. Remote disconnection meters are used on installations where the account frequently appears on the disconnection listing;
  3. A listing of the accounts with more than \$5,000.00 in arrears is closely monitored to ensure that appropriate action is taken on these accounts to recover the debt;
  4. The largest debtors are communicated with via phone calls, emails and meetings to secure payment or develop appropriate payment plans;
  5. A special team was established within the Commercial Department dedicated to the recovery of the debt from Government Agencies and the Industrial electricity accounts;
  6. Payment arrangements are offered to customers who have difficulty in settling their arrears;

7. Billings are prioritised for largest customers (the revenue from Industrial customers contributes to roughly fifty-one percent (51%) of the total Light and Power revenue);
8. The Commercial Department's Interactive Voice Response system is used to automatically 'call out' customers to notify them when they are due for disconnection;
9. The Commercial Department's e-billing service is utilised to automatically send disconnection notices via email to relevant customers;
10. Investigations are done to identify accounts in the names of deceased customers so that these accounts and their outstanding balances can be transferred to persons who will now be held accountable; and
11. The services of debt collection agencies are procured to undertake collections from inactive accounts. (Cost: 18% of recovered debt).

### ***Risk Management Policy***

- 1.96. T&TEC's provided its Risk Management Policy to the Committee at Appendix X.
- 1.97. T&TEC also has an Enterprise Risk Management System and a team headed by the Chief Operations Officer assigned to the Enterprise Risk Management System. Additionally, a Risk Register which identifies a number of risks was prepared by T&TEC.

## **FINDINGS**

- 14) The majority of the Commissions private debt is from DESALCOTT and public authorities however, T&TEC's debt collection policy is dated.

## **RECOMMENDATIONS**

- J. We recommend that T&TEC update its debt collection policy.**
- K. Given T&TEC's financial situation, we recommend that T&TEC seek to recover outstanding public debt from government agencies and pursue aggressive measures regarding recovering private debts.**

## Review of T&TEC's Rates

### *T&TEC's Rates*

- 1.98. T&TEC sells electricity at approximately US5.5 cents per kWh. If T&TEC is unsubsidised it will pay the full market price for the gas, and will then sell at US.09 cents per kWh.
- 1.99. Any unsubsidised electricity in any jurisdiction will start at US.12 cents per kWh.
- 1.100. T&TEC informed the Committee that it has experienced an average annual deficit of over \$1.5B in the past nine (9) years and therefore requires an increase in rates.

### *The Sufficiency of T&TEC's Current Rate for the Foreseeable Future*

- 1.101. T&TEC indicated that its current rates are at borderline sufficiency to support its services for the foreseeable future, excluding GORTT financial interventions and the natural gas subsidy. The Commission noted that the reliability of its service to customers may be affected in the future if it is not careful. In this regard, it was indicated that it is imperative that T&TEC gets a solution.
- 1.102. T&TEC has ensured that expansion takes place, that it occurs on time, and that all infrastructure is developed (such as transformer upgrades, overhead line maintenance and upgrades) to ensure future reliability.

### *The Entity Responsible for Initiating the Review of T&TEC's Rates*

- 1.103. The RIC is responsible for initiating the review of T&TEC's rates, pursuant to Sections 6(1)(h), 6(1)(j) and 48 of the RIC Act.
- 1.104. In its submission, the RIC also indicated that:
  - any information that is submitted by T&TEC will be subjected to a rigorous review to provide a reasonable return on its efficient operations;
  - its work will not be done in a vacuum; and

- a substantial amount of comparative data will be used and modified to suit the needs of Trinidad and Tobago to reach its end goal of affordable rates and high-quality service to the various sectors of the country.

### ***T&TEC's Last Rate Review and Increase in Rates***

- 1.105. The RIC is required in accordance with Section 6(1)(j) of the RIC Act to carry out periodic reviews of rating regimes of service providers. Section 48 provides for the review of principles for determining rates and charges to be done every five (5) years. However, the last price review covered the period 1st June, 2006 to 31st May, 2011.
- 1.106. T&TEC confirmed that the last increase in rates occurred in 2009 with the Price Review.

### ***The Reason for the Delay of a Rate Review by the RIC***

- 1.107. The RIC may carry out periodic reviews every five (5) years. At the end of the last review, efforts were made to conduct another rate review. However, information is required to be submitted in order to conduct a rate review. The Committee was informed that the RIC often experiences delays in receiving information from T&TEC and having the full body of variables to conduct a successful rate review which resulted in the gap between reviews.
- 1.108. T&TEC indicated that it has not submitted its Business Plan to the RIC because a key component in the Business Plan is the price of natural gas which is still under negotiations between the Government, NGC and T&TEC. Furthermore, the Commission is awaiting one item which is necessary to fully complete the process and that item requires internal stakeholder consultations. The issue of rates is also a sensitive one and once the details are received, the Plan will be forwarded to the RIC. All the other components of the Business Plan have been completed.
- 1.109. There is dialogue between T&TEC and the MPU and the latter continues negotiations for the price of natural gas. T&TEC anticipates that it would submit the Business Plan to the RIC in the near future.

- 1.110. At its second public hearing, the Committee probed into why discussions in relation to finalising the natural gas price were still ongoing. T&TEC indicated that it anticipates a response on same shortly.
- 1.111. The MPU informed the Committee that the process for confirming the natural gas price does not only involve the MPU, but also a larger committee known as the Energy Sub-Committee of the Cabinet.
- 1.112. Similar to the response of T&TEC, the MPU indicated that:
- the price of NGC natural gas that T&TEC purchases at, is a key factor in the determination of the Business Plan and in any rate review process; and
  - it anticipates a decision will be made shortly as it concerns the matter of the preferred price at which NGC is willing to sell to T&TEC.

### *The Economic Model*

- 1.113. The MPU indicated that in early 2021, it engaged in an extensive analysis and developed an economic model. The MPU examined both the economic impact in terms of T&TEC and the social impact on the country.
- 1.114. In conducting its analysis, the MPU considered the implications of how dwindling resources are effectively utilised on the natural gas market.
- 1.115. The MPU developed several scenarios of what the gas price could be, taking into consideration the impact of the various gas prices on different segments of consumers, their ability to pay, while balancing these factors with the utility and its ability to meet its operational expenditure, as well as, undertake capital investments to ensure the supply of electricity continues to be reliable and the service provided by the utility is of a high quality.
- 1.116. The MPU has placed significant emphasis on the consumer's ability to pay especially residential customers of T&TEC. The MPU also indicated that it considered a subsidy given the current economic situation and that the subsidy was very prominent in most of the scenarios examined by the MPU.

1.117. All the scenarios, its impact and implications on the various objectives and elements on the matter are currently before the Energy Sub-Committee of the Cabinet.

### ***The Length of Time the RIC takes to report its Recommendations for Electricity Rates***

1.118. The RIC indicated that a rate review is an iterative process where information received is interrogated. The RIC endeavours not to pre-empt the results of the analysis on rates, hence the reason for using the terminology, rate review. Often, additional information is required and as such, the length of time the RIC takes to report its recommendations is based on how soon the information can be obtained from T&TEC and the quality of information.

1.119. Once the RIC receives all of the initial information from T&TEC, the review may take approximately twelve (12) months to complete. The twelve (12) month timeframe for a rate review includes public consultations and the impact assessment. The review begins when the RIC receives the initial submission from T&TEC.

1.120. The RIC indicated that the twelve (12) month period has not yet commenced because it is currently not in receipt of the initial submission from T&TEC. The initial deadline set for T&TEC to submit its Business Plan was January 21, 2021 and the Price Review was scheduled to be completed by December 2021. However, this completion date was set, contingent on the RIC receiving the required data from T&TEC within the stipulated timeframes.

1.121. Notwithstanding, when the Business Plan is received, the RIC will ensure that the Price Review is completed. Once complete, the RIC will commence the process of consultation and analysis which should take approximately six (6) months.

### ***The Time Taken for a Recommended Increase in Rates to be effected***

1.122. After the process of analysing the impact of a recommended rate increase has ended, within one (1) to three (3) months the RIC will be able to determine the effect of a rate increase.

1.123. Further, the RIC indicated that it tests the information it receives through an economic model and does not simply accept the output of this analysis as a need for an increase in rates. A



series of analysis is conducted by the RIC and the impact of a recommended rate increase on various sectors, the need for a subsidy and who should provide the subsidy is also examined.

### *The Independence of the RIC in Determining Rates*

- 1.124. The RIC indicated that it is an independent organisation that formulates its own concepts from its independent consultations.
- 1.125. In arriving at its own position, the RIC uses an economic model, as indicated above, as the basis for commencing its analysis. The RIC engages in benchmarking and examines various international and regional jurisdictions from two (2) perspectives:
- i. the quality of service standards, and the rates and performance associated with them; and
  - ii. how rate reviews are conducted for implementation by the RIC.
- 1.126. Further, the RIC seeks to ensure that T&TEC's service continues to be acceptable and that it provides T&TEC with a reasonable return.
- 1.127. The RIC reiterated that it is unable to influence the price at which gas is provided to T&TEC.
- 1.128. In terms of whether the RIC has the power to defer a rate increase due to negative economic circumstances (caused by for example the Coronavirus). The RIC indicated that the benefits of using an economic model is that at times the same return can be obtained by engaging in different types of adjustments. However, the RIC also takes into account that there are still persons and business who have not been affected like others by the current economic circumstances.

## **FINDINGS**

- 15) The negotiations for the price of natural gas have delayed the rate review by the RIC. The final natural gas price is an important item which will determine the end value of the rates.

- 16) As of early 2021, the MPU started employing an economic model in the conduct of its analysis to determine various possibilities of rates similar to the RIC which uses an economic model in the conduct of the analysis to determine rates possibilities.
- 17) Both the RIC and the MPU have placed significant emphasis on the consumer's ability to pay especially residential customers.
- 18) The RIC tries not to pre-empt the results of the analysis on rates.
- 19) The rate review may take approximately twelve (12) months to complete once the RIC receives all of the initial information from T&TEC.
- 20) T&TEC's submission was delayed by approximately six (6) months from the date of the Committee's last public hearing on June 24, 2021 given that it was supposed to submit its Business Plan to the RIC by January 21, 2021.
- 21) The RIC seeks to ensure that T&TEC's service continues to be acceptable and that it provides T&TEC with a reasonable return.

## RECOMMENDATIONS

- L. Notwithstanding the importance of the finalised price of natural gas on T&TEC's operational costs, and considering that an economic tariff is being implemented in the rate review, we recommend that in future, the MPU authorises T&TEC to submit its Business Plan with an economic tariff using a proposed price to prevent delays in the rate review process.**
- M. Given that the RIC Act provides for the review of rates periodically and specifically every (5) five years, we recommend that the process be initiated in a timely manner to cater for delays in the submission of critical information necessary for conducting a rate review, so that T&TEC can benefit from much needed revenue in a timely manner.**

## Factors Considered When Conducting Price Review

### *Affordability of Rates*

1.129. In setting price limits, the RIC has an obligation to ensure that rates, *inter alia*, are affordable, as provided for in Section 6(3) and 67(3) of the RIC Act.

### *The Supply of Power*

1.130. The Committee questioned whether the RIC takes into account, when conducting its price review, the supply of power in terms of the development of T&TEC's infrastructure grid, considering:

- that T&TEC has a balanced supply with spare reserve capacity;
- that renewable energy is anticipated, by way of two (2) major solar installments; and
- that upcoming infrastructure may be financed external to what T&TEC is required to do.

1.131. The RIC advised the Committee that the supply of power arrangements made with T&TEC through its Power Purchasing Agreements (PPAs) are factored in the price review as it pertains to the cost of power to T&TEC.

1.132. The cost of power is considered a past truth because it is fixed and cannot be manipulated.

1.133. The other aspect involves T&TEC's operating costs related to the transmission and distribution.

### *The Cost to Produce Electricity*

1.134. The RIC emphasised that the cost to produce the electricity service and that the price of electricity must be based on the cost to provide the service.

1.135. Generally, T&TEC is requested by the RIC to provide a cost of service study which gives an idea of how much it costs to provide its service to customers. The RIC therefore determines the efficient cost of providing T&TEC's service when conducting its analysis.

1.136. The RIC also confirmed that the cost of producing natural gas is the number one factor impacting the cost of electricity. Notwithstanding, the RIC examines T&TEC's operational

cost only and not the price of natural gas. The RIC is not unconcerned about the price of natural gas but when engaging in the analysis, the operational cost of T&TEC is examined and not that of the NGC. The RIC accepts the cost of natural gas because T&TEC cannot do anything about the price of natural gas.

- 1.137. According to the RIC, T&TEC submits its Business Plan which outlines its investment and overall operating costs over a five (5) year period which is interrogated by the RIC to obtain the efficient cost levels. When RIC's model is employed and the efficient cost levels are determined, then the RIC will examine the other factors which it is bounded by law to do, such as consumer's ability to afford an increase in rates.
- 1.138. In this regard, the RIC engages in public consultations to obtain the views of all stakeholders and examines the impact of a rate increase on various sectors.
- 1.139. Additionally, the RIC uses information from the Central Statistical Office (CSO) on the number of businesses in Trinidad and Tobago and examines the impact of a price increase on each business and on individuals before it arrives at a final rate.
- 1.140. The rate is based on science and judgment and not necessarily what is in the economic model alone.

### *Government's Subsidy*

- 1.141. With respect to subsidies, the RIC's overall position is that:
- subsidies should target poorer consumers as is the case with the Government's Utility Assistance Programme, rather than through across-the-board subsidies;
  - a subsidy should support a minimum level of consumption and not encourage excessive consumption;
  - the subsidy scheme should not distort incentives; and
  - a subsidy source needs to be predetermined and disclosed and paid to the service provider preferably out of general tax revenues.
- 1.142. According to the RIC, a subsidy is the responsibility of government and as a result the RIC has no input in determining same.

1.143. While the Government's final decision on its provision of subsidies will be a public policy decision, the RIC's approach to social tariffs and affordability issues are as follows:

- The tariff structure will seek to ensure that vulnerable customers' expenditure on electricity will be within the internationally accepted affordability threshold of ten percent (10%).
- The RIC will utilise an inclining block tariff structure that incorporates a life-line tariff which will allow households to pay a lower rate for subsistence level electricity consumption.
- The RIC will also support the use of the Utilities Assistance Programme by the Government whereby poor groups receive a discount on their total bill.
- The RIC will continue to educate the public on benchmarks for consumption and conservation levels in the usage of electricity.

1.144. T&TEC indicated that if it has no subsidy on the price of natural gas, the rates would have to be reset at US.09 cents per kWh. This provides an idea of T&TEC's business operation and operational cost.

1.145. The Committee was informed that the following factors that should be considered are:

- that an unsubsidised rate begins at US.12 cents per kWh in any jurisdiction;
- that T&TEC is unable to pay at the unsubsidised rate;
- that T&TEC is currently suffering a \$1.1B annual loss and is unable to pay the NGC even at the subsidised rate; and
- that the subsidised rate at US1.5882 per MMBtu is one half of the value of gas on the open market which T&TEC is still unable to pay.

### ***The Measures in Place to Ensure Adequate Stakeholder Consultation before Determining Revised Rates for T&TEC***

1.146. The RIC is obligated under its parent legislation, Section 6 (2) to consult with stakeholders.

*"6. (2) In the performance of its functions under subsections 1 9e), (g), (h) and (j), the Commission shall consult with service providers and representatives of consumer interest groups and any other parties it considers as having an interest in the matters before it".*

- 1.147. In this regard, the RIC has developed a policy document “*Guidelines for the Public Consultation Process of the Regulated Industries Commission*”.<sup>20</sup>
- 1.148. Details outlining the process for the Price Review are included in the document, “*Framework and Approach for the Price Review for the Electricity Transmission & Distribution Sector 2021-2026 Regulatory Control Period*”.<sup>21</sup> Therein, the initiatives being undertaken by the RIC to ensure that all stakeholders are adequately informed, educated and consulted during the entire Price Review Process are highlighted.
- 1.149. Throughout the Price Review Process thus far, the RIC has published a number of consultative documents and invited comments from its stakeholders through various platforms, including newspaper advertisements, social media and direct emails via the RIC’s stakeholder mailing list. The RIC will continue provide numerous opportunities to encourage wide participation in the regulatory decision-making process and intends to keep stakeholders and the public informed on the progress of the Price Review through various mediums.
- 1.150. The measures either currently being used or will be used by the RIC to inform, educate and consult with the public, over the Price Review Process for T&TEC are at Appendix XI.

### ***The RIC’s Public Outreach and Communications Plan***

- 1.151. The RIC’s uses a number of communication channels to reach, educate and inform the public via press advertisements, radio advertisements, information brochures, community outreach meetings across the country, and presentations.
- 1.152. The RIC has not been able to engage in outreach meetings due to the pandemic. It would recommence outreach meetings as soon as time and circumstances allow.

---

<sup>20</sup> [http://www.ric.org.tt/wp-content/uploads/2017/10/Guidelines-for-the-Public-Consultation-Process-of-the-Regulated-Industries-Commission\\_FINAL-DECISION.pdf](http://www.ric.org.tt/wp-content/uploads/2017/10/Guidelines-for-the-Public-Consultation-Process-of-the-Regulated-Industries-Commission_FINAL-DECISION.pdf)

<sup>21</sup> <http://www.ric.org.tt/wp-content/uploads/2020/12/TTEC-Framework-and-Approach-Price-Review-2021-2026.pdf>

- 1.153. The RIC plans were to hold more consultations than done in the past across Trinidad and Tobago including two in Tobago, Arima and Central.
- 1.154. Immediately, the RIC will be: engaging in electronic communication via Facebook to interface with the public and hosting a seminar on energy efficiency.

### ***Assessment to Determine the Impact of a Rate Increase on the Population***

- 1.155. As part of the second rate review for T&TEC, the RIC as it has done previously will conduct an impact assessment. It is important to note that, this impact assessment can only be conducted after the RIC determines the rates required to enable T&TEC to fund the RIC-determined level of efficient costs.
- 1.156. The RIC utilises models to derive appropriate tariffs. The model for tariff design includes a bill impact tool which quantifies the impact of proposed electricity rates on customers' bills. The impact for all customer classes is evaluated, including the percentage change, so that issues such as cost reflectivity, affordability and fairness are taken into account by the RIC, in the final determination of electricity tariffs.
- 1.157. More specifically, using data sourced from the CSO, the RIC considers the impact of its pricing decisions on:
- customers, especially those in low-income and disadvantaged groups;
  - inflation; and
  - the country's competitiveness.
- 1.158. The RIC utilises regional and international benchmarks when considering its pricing decisions for residential customers. In this regard, the impact analysis considers the percentage of household expenditure attributable to electricity at the proposed rates. The RIC will also consider the likely impact of increased electricity rates on different sectors of the economy and, consequently, on these sectors' competitiveness. This information will be published in the RIC's draft determination document for public scrutiny and feedback.

### *The Guiding Determinants Used in the RIC's Impact Assessment to arrive at a Conclusion*

- 1.159. The RIC Act Chap 54:73 conditions the RIC to ensure the sustainability of the service provider, T&TEC. The finalised rates must ensure that T&TEC is in a good financial state and that customers have the ability to pay their rates.
- 1.160. The RIC examines a life-line tariff which studies the average monthly amount of electricity required by households. Low-household income is used as a base. Prices are escalated base on usage.
- 1.161. The RIC looks at different scenarios to determine the impact of rate increases on various users and tries to keep the increase within the World Bank's baseline for electricity rates, less than ten percent (10%) of household disposable income.

### *The Benchmarks used by the RIC*

- 1.162. The RIC uses a number of benchmarks. However, according to the RIC using a benchmark is not the same as adopting a benchmark. Any benchmark must be reviewed in the context of the society and the circumstances within which it is to be utilised.
- 1.163. The benchmark is viewed as the starting point, not the end point.
- 1.164. The benchmarking is used to:
- examine similar sized utilities, to determine their efficient cost of service; and
  - examine and compare the workforce number of same sized utilities, and crew sizes to T&TEC to determine the level of cost.
- 1.165. The Committee was also informed that recently, the RIC engaged in research work and considered not only regional information but also international information for example from Europe and Singapore.
- 1.166. The RIC also indicated that benchmarking does not only require that it be adopted but that it be varied for individual circumstances. The RIC examined different types of economies and will employ this same methodology when it receives the initial output of its financial model.



### ***The Need for the RIC to Compare Trinidad and Tobago to Other Countries Apart from those Listed in its Report***

- 1.167. During the second public hearing the Committee raised a concern that the last report of the RIC did not compare Trinidad and Tobago to other countries with similar economies especially those that are producers of natural gas to determine how these countries treat with the price of natural gas and its impact on electricity rates.
- 1.168. The RIC indicated that it will take into consideration other countries especially producers of natural gas to determine how these countries would have treated with the price of gas and determined the rate of electricity.

## **FINDINGS**

- 22) The RIC has an obligation in accordance with the RIC Act to ensure that rates, *inter alia*, are affordable.
- 23) The rate review considers all factors.
- 24) When conducting the analysis for a rate review there is need to be conscious of the cost to produce the electricity service and that the price of electricity to consumers must be based on the cost to provide the service.
- 25) The cost of producing natural gas is the number one factor impacting the cost of electricity.
- 26) The RIC examines T&TEC's operational cost, not the price of natural gas.
- 27) The cost of power is fixed and cannot be manipulated.
- 28) The RIC engages in adequate public consultations in accordance with its parent legislation to obtain the views of all stakeholders and examines the impact of a rate increase on various sectors, each business and on individuals before it arrives at a final rate.
- 29) The RIC's overall position as it concerns subsidies is justified.
- 30) A subsidy is the responsibility of government, therefore, the RIC has no input in determining same.
- 31) The tariff structure will seek to ensure that vulnerable customers are taken into consideration and adequately supported to receive a continuous supply of electricity by:
  - expenditure on electricity within the internationally accepted affordability threshold of ten percent (10%);

- the incorporation of a life-line tariff;
  - the Utilities Assistance Programme's discount; and
  - education on conservation.
- 32) T&TEC is unable to pay at the unsubsidised rate or to pay the NGC at the subsidised rate.
- 33) The RIC has been proactive in utilising a number of communication channels to reach, educate and inform the public.
- 34) The RIC has not been able to engage in outreach meetings due to the pandemic but will so do as soon as time and circumstances allow.
- 35) The RIC's impact assessment can only be conducted after it determines the rates.
- 36) The RIC uses a number of benchmarks and considers information from both regional and international jurisdictions. However, as noted in its reports, the RIC reported on only a few jurisdictions with economies that differ to that of Trinidad and Tobago.

## RECOMMENDATIONS

- N.** We recommend the adoption of the RIC's overall position as it concerns the purpose of the subsidy.
- O.** We recommend that included in the proposed tariff structure should be the formalisation of payment plan option for vulnerable customers particularly during periods of unprecedented situations such as the Covid-19 pandemic where many household's incomes are compromised.
- P.** Consistent with the need to adopt new ways of doing business as a result of the restrictions brought on by the COVID-19 pandemic, we recommend that the RIC utilise Video Conferencing to continue its outreach meetings.
- Q.** We recommend that the RIC engage in comparisons with jurisdictions with similar oil and natural gas producing economies and include same in its subsequent reports. These comparisons should also include comparisons for public consumption, the price of natural gas and the impact on electricity rates.

## Supply of Electricity

### *The Number of Approved Generators of Electricity*

1.169. There are currently three (3) approved utility generators of electricity:

- (1) The Power Generation Company of Trinidad and Tobago (PowerGen);
- (2) Trinidad Generation Unlimited (TGU); and
- (3) Trinity Power Limited (TPL).

### *Details on Power Purchase Agreements*

1.170. At the first public hearing, the Committee was informed that T&TEC has four (4) fixed PPAs. Two (2) PPAs with PowerGen; one (1) with TPL and one (1) with TGU. The expiry dates of the respective PPAs are as follows:

- TGU - 2041;
- PowerGen 1- 2029;  
PowerGen 2- 2037;
- TPL-2029.

1.171. The amount of energy purchased per year from the approved generators are outline in Table 8.

**Table 8**  
**Energy Purchased from Approved Generators**

<b>Approved Generator</b>	<b>Energy Purchased per year (kWh)</b>
<b>PowerGen</b>	<b>3,358,028,000</b>
<b>Trinity Power</b>	<b>437,335,000</b>
<b>Trinity Generation Unlimited</b>	<b>5,066,889,000</b>

1.172. The Commission is currently negotiating a Power Purchasing Agreement (PPA) with a consortium of three (3) entities (Light Source BP, Shell<sup>22</sup> and BP) to provide energy via two (2) renewable plants.

---

<sup>22</sup> <https://www.shell.com/about-us/who-we-are.html>

### *Projected impact of new Power Purchasing Agreements (PPAs) on existing PPAs*

- 1.173. When the capacity from the new PPA become available, it will result in significant gas savings. Although these plants are twenty-eight percent (28%) efficient because they produce non-dispatchable energy, it would surpass gas savings and literally pay for itself.
- 1.174. Generation is currently at an average of US\$4.7¢ and unsubsidised at US\$5.9¢, therefore the new PPA would not impact significantly on the current PPAs. T&TEC indicated that it needs to be mindful that it is seeking a rate of US\$.04¢ per kWh.
- 1.175. Once the negotiations for new PPA are completed and capacity becomes available, T&TEC will take all generation from the producer.

### *Companies or Firms which T&TEC Holds Shares or Is Partner to for Electricity Generation*

- 1.176. T&TEC has 51 % shareholding with PowerGen.

### *The Rates Paid by T&TEC for Generated Power from Designated Suppliers*

- 1.177. With regards to the rates paid by T&TEC for generated power from designated suppliers, T&TEC submitted the following information in Table 9 below:

**Table 9**  
**Rates paid by T&TEC for generated power for the years 2016 to 2020**

<b>Year</b>	<b>PPA 1994 (USD/kWh)</b>	<b>PPA 2005 (USD/kWh)</b>	<b>Trinity (USD/kWh)</b>	<b>TGU (USD/kWh)</b>
<b>2016</b>	0.0290	0.0158	0.0246	0.0282
<b>2017</b>	0.0303	0.0165	0.0478	0.0245
<b>2018</b>	0.0408	0.0171	0.0387	0.0228
<b>2019</b>	0.0451	0.0166	0.0334	0.0222
<b>2020</b>	0.0365	0.0244	0.0536	0.0220
<b><i>Average</i></b>	<b><i>0.0354</i></b>	<b><i>0.0176</i></b>	<b><i>0.0368</i></b>	<b><i>0.0237</i></b>

- 1.178. The Overall Average is 0.02838 (USD/kWh).
- 1.179. In terms of whether the rates paid by T&TEC for purchase of generated power are economically feasible for the utility, T&TEC indicated that it is not economically feasible for

the utility if the tariffs remain artificially low and T&TEC has ‘take or pay’ contracts where it pays for both excess capacity and energy shortfalls.

### *T&TEC's Additional Capacity*

- 1.180. T&TEC has a contracted capacity of 1,754 MW. The Tobago Cove Station is operating at 84MW capacity. T&TEC also has a small operating generation at Scarborough increasing the capacity in Tobago to 91MW capacity. Therefore, total capacity available for Trinidad and Tobago is 1,845MW. If peak demand capacity of 1,370MW is subtracted, T&TEC will have 475MW of capacity available and unused. Therefore, T&TEC has capacity.
- 1.181. As it pertains to capacity, T&TEC indicated that it quoted values anticipating that Petrotrin's Refinery, which uses 16MW would return to the grid. T&TEC also had discussions concerning the ArcelorMittal Plant. It was indicated that a company has shown interest in the possible reactivation of part of the ArcelorMittal Plant which will require Ministerial approval and other approvals to release capacity to part of what was known as the ArcelorMittal Plant. T&TEC is also having dialogue with another company that is requesting a significant amount of capacity.
- 1.182. T&TEC also informed the Committee that it has a section dedicated to the examination and planning of generation expansion which is examining the request. Assuming these approvals are granted then T&TEC can do away with the unused capacity value as quoted.
- 1.183. T&TEC also requires spare reserve capacity known as ‘spinning reserve’ capacity for contingency purposes for example when a plant is down. It will cost T&TEC to obtain capacity anywhere else if additional capacity is needed.
- 1.184. T&TEC indicated that it needs to seek capacity elsewhere. The use of renewables is an important item. Therefore, renewable generation is one of the things T&TEC needs to embrace.

### ***Impact of Closure of Alutrint Plant on T&TEC's Supply***

- 1.185. T&TEC anticipated that the now closed Alutrint Plant would consume 217MW. However, due to the closure of the Alutrint Plant, the Commission has to absorb the cost of the 217MW. The value of 200MW of capacity is \$250 million per year.

### ***Underutilised Capacity***

- 1.186. T&TEC indicated that it is cognisant that the heightened national interest in renewable energy can result in higher fixed costs associated with underutilised capacity. Further, reduction in demand will result in the Commission being saddled with PPA payments irrespective of the negative consumption pattern.
- 1.187. T&TEC indicated that it will continue to engage the IPPs to reduce the value of the contracted capacity to remain more in line with a capacity that facilitates a N-2 contingency approach, but given the duration (15 years or 30 years) of these contracts, the Commission will have no other option but to execute such negotiations when the contracts are being renewed or discontinued as deemed necessary. The Commission will continue to re-examine its operations to ensure it is performing at its optimal thereby maintaining a high degree of efficiency.

### ***Status of PPA Renegotiations to Reduce Cost for Unutilised Capacity***

- 1.188. The Commission has approached one particular power producer and engaged in dialogue regarding addressing the issue of take and pay with a view to reducing cost for unutilised capacity. Although the dialogue did not go too well, T&TEC indicated that it will be returning to have that discussion.
- 1.189. The Committee was also informed that two (2) PPAs will be expiring in the year 2029, PowerGen for 624MW capacity and TPL, therefore the time for renegotiation decisions is nearing. Decisions regarding the issue of take and pay will have to be addressed at that time.
- 1.190. T&TEC indicated that in arriving at such decisions, there will be need to look at load growth and prospective customers to come on board.

### ***Loss of Revenue for Underutilised Capacity***

- 1.191. The Committee was informed that T&TEC is currently challenged to address the issue of loss of revenue for underutilised capacity because the company is locked into long-term contracts with the IPP and the unused capacity cannot be stored.
- 1.192. Further, the Committee was asked to note that as capacity is the maximum rating of the generator, same can only be fully utilised when there is a load demand to match same. Every effort is being made to have more customers connected to the grid. Also, a discussion was held with one (1) IPP to consider a reduction in the demand request based on the PPA. T&TEC indicated that it has been unsuccessful in acquiring a reasonable solution.

### ***The Impact of the Sale of Trinity Power Limited on the Supply of Electricity***

- 1.193. T&TEC indicated that it was assured by Trinity Power Limited that although their owners have changed to Contour Global, no administrative, operational or contractual changes are foreseen. Therefore, no change to the supply of electricity is anticipated by the sale of TPL.

### ***Investment Policy***

- 1.194. The Committee was informed that the Commission did not have an Investment Policy. Notwithstanding, as per T&TEC Act all investments require presidential approval. Accordingly, an Investment Policy is currently being drafted for presidential approval. T&TEC also indicated that any investments by the Commission would be of a short term nature.

### ***Loans Granted to Approved Generators of Electricity by Year***

- 1.195. On December 19, 2005, the Commission signed a Shareholder Loan Agreement with its subsidiary, Powergen, for USD50.5 million to finance additional generation capacity. Other shareholders also extended loan facilities to PowerGen in proportion to their shareholding.
- 1.196. On March 29, 2007, the amount drawn down under the facility was TT\$314.3M (USD50M). There were no further drawdowns to date. Additionally, interest accrued and capitalised to March 29, 2007 was \$24.4M (USD3.9M) at a rate of 7.50% per annum. Subsequent to this, no more interest was capitalised.

1.197. The loan is repayable in quarterly instalments of principal and interest over a twenty-year period which commenced on June 30, 2007. The effective rate of interest is currently 4.2991%, consisting of 1.2991% LIBOR<sup>23</sup> and a 3% spread as per clause 2.04 of the Shareholder Loan Agreement.

### ***Power System Study conducted for Trinidad and Tobago***

1.198. The power system is designed on a (n-1) model (a single piece of equipment or circuit in a ring out of service) to ensure operation of the system within equipment thermal limits and substation bus voltage limits.

1.199. Power System Studies are done by Areas/Interfaces/Rings. These studies are done to ensure the adequacy and security of the power system every ten (10) years. A preliminary study is also done every three (3) years to determine if a more detailed study is required. A list of all the Areas/Interfaces/Rings and the last studies done are at Appendix XII.

### ***Generation Adequacy Assessment***

1.200. The Committee was informed that a Generation Adequacy Assessment is done annually to ensure the adequacy of generation over a ten-year period based on forecasted loads. Actual system loads are also continuously monitored and checked against forecasted loads. Additionally, based on the Commission's load forecast, once generation is required the Commission will notify the Ministry of Energy and Energy Industries (MEEI) via the Line Ministry (the MPU) for the increase required. This is done well in advance to allow for tender and award.

1.201. The last generation adequacy assessment was conducted in May 2019 and the findings were as follows:

1. For the base 2019 to 2028 Energy Sales, Peak Demand and Fuel Consumption Forecast, the generation was adequate; and

---

<sup>23</sup> London Interbank Offered Rate



2. For the optimistic 2019 to 2028 Energy Sales, Peak Demand and Fuel Consumption Forecast, the generation was inadequate in 2025.
- 1.202. The Committee was also informed that additional generation may be required by the year 2030 if a large heavy industrial customer is commissioned. It is preferred that this new generation if needed, not be positioned at any of the existing IPP sites but rather placed in North Trinidad.

### *The Impact of Infrastructure Work on Supply*

- 1.203. T&TEC indicated that it does not compromise reliability of supply in terms of its infrastructure work.

## **FINDINGS**

- 37) T&TEC has capacity given that 475MW of capacity available and unused during peak demand.
- 38) If Petrotrin's Refinery does not return to the grid, T&TEC will have a further 16MW in additional capacity.
- 39) T&TEC requires spare or 'spinning reserve' capacity for contingency purposes therefore additional capacity is necessary.
- 40) It will cost T&TEC to obtain capacity anywhere else if additional capacity is needed.
- 41) The Commission has to absorb the cost of 217MW due to the closure of the Alutrint Plant at a cost of \$250 million per year for 200MW of capacity.
- 42) There is need to optimise standby capacity on T&TEC's system.
- 43) T&TEC needs to embrace renewable generation because it requires a cost efficient energy alternative.
- 44) The Commission is pursuing renewable energy via PPA with a consortium of three (3) entities (Light Source BP, Shell and BP) which will result in significant gas savings and pay for itself.
- 45) T&TEC will take all generation from the producer once the negotiations for new PPA is completed and capacity becomes available.
- 46) The rates paid by T&TEC for the purchase of generated power are not economically feasible for the utility particularly if the tariffs remain artificially low and T&TEC has 'take or pay' contracts.

- 47) Because of the 'take or pay' arrangement in the PPAs, the Commission will have no other option but to execute such negotiations when the contracts are being renewed or discontinued.
- 48) The Commission has been proactive in approaching one particular power producer to address the issue of 'take and pay' to reduce cost for unutilised capacity but was unsuccessful. However, the Commission will be returning to have that discussion.
- 49) There will be need to look at load growth and prospective customers to come on board when engaging in renegotiations for the two (2) PPAs (PowerGen for 624MW capacity and TPL) which will be expiring in the year 2029.
- 50) No administrative, operational or contractual changes are foreseen from the change in ownership for TPL.
- 51) T&TEC has been operating without an Investment Policy however same is currently being drafted for presidential approval.
- 52) The last Generation Adequacy Assessment was conducted in May 2019 therefore, the annual assessment for 2020 was outstanding.
- 53) Where an increase in generation is required the Commission will notify the MEEI through the MPU well in advance to allow for tender and award for the increase required.
- 54) Additional generation may be required by the year 2025 if a large heavy industrial customer is commissioned.
- 55) If additional generation is needed, it should be positioned in North Trinidad.

## **RECOMMENDATIONS**

- R. Considering the cost of unutilised capacity and T&TEC's financial challenges, we recommend that T&TEC examine and implement measures to optimise standby capacity and cater for spinning reserves.**
- S. We recommend that all three (3) power producers be approached regarding the 'take or pay issue' to reduce cost for unutilised capacity where applicable.**
- T. We recommend that T&TEC negotiate for the omission of the 'take or pay' provisions in all PPA contracts being renewed or newly established.**
- U. We recommend that T&TEC submit a copy of its Investment Policy when completed to the Parliament.**

- V. We recommend that T&TEC keep up-to-date with its annual Generation Adequacy Assessment.
- W. We recommend that infrastructure to facilitate any additional generation in future be located in North Trinidad as per T&TEC's advice.

## Demand

### *Load Demand for Electricity*

1.204. Table 10 below outlined statistics on load demand for the past (5) years.

**Table 10**  
Statistics on load demand for the past five (5) years

<b>Year</b>	<b>Energy Consumed (MWh)</b>	<b>Average Demand (MW)</b>	<b>Maximum Demand (MW)</b>	<b>Date of Maximum Demand</b>
<b>2016</b>	9,415,765	1077	1,339	19 <sup>th</sup> September
<b>2017</b>	9,318,244	1072	1,355	11 <sup>th</sup> October
<b>2018</b>	9,225,091	1064	1,319	4 <sup>th</sup> October
<b>2019</b>	9,252,250	1066	1,370	12 <sup>th</sup> September
<b>2020</b>	9,253,763	1065	1,360	21 <sup>st</sup> September

*Source: Submission from T&TEC dated March 29, 2021*

1.205. Energy consumed in megawatts per hour (MWh) has seen a drop in the years 2016 and 2017 but in the three-year period thereafter this has been fairly constant.

### *The Adequacy of Electricity Generation to Meet Demands*

1.206. T&TEC informed the Committee that present generation capacity well exceeds the present demand of the country by approximately 475 MW.

1.207. The Committee probed into whether excess supply of electricity is converted to other forms of energy which can be stored and later reconverted to electricity on demand. T&TEC indicated that energy is produced instantaneously, as required. Therefore, there is no excess production of energy. As a result, energy is not stored.

1.208. Further, as capacity is the maximum rating of the generator and can only be fully utilised when there is a load demand to match same. The contracted capacity from the IPPs as indicated previously is 1,754MW for Trinidad and 91MW Tobago totalling 1,845MW. The Peak Demand is 1370MW, therefore generation exceeds demand by 475MW.

#### ***Requests for an Increase in Generation***

1.209. There have been no requests from T&TEC to the MEEI via the MPU for increases in generation capacity because, with the full commissioning of TGU, T&TEC has had excess generating capacity. Based on the natural load growth, all forecast study (residential, commercial and small industrial customers) shows that additional generation will not be needed until approximately 2030. There is a lead time of approximately five (5) years for the commissioning of a new power station plant.

1.210. However, if a prospective large heavy industrial customer is to be commissioned e.g. (NewGen, Pointe-a-Pierre Refinery or Steel Plant), then additional generation would be required based on the timeframe in which they are energised.

#### ***The Impact of New Developments on Demand for Electricity and The Commission's Revenues***

1.211. During the period 2018-2019, despite the fact that large industrial customers were reducing consumption, there was growth seen in the residential, commercial and small industrial developments. This resulted in near to equal sales in 2018-2019. However, there were no significant increases in T&TEC's revenues.

#### ***The Impact of the Pandemic on Consumption and Revenues***

1.212. T&TEC indicated that it is experiencing the impact of the pandemic given that a number of businesses are not operating.

1.213. Based on its overall analysis, T&TEC observed a significant reduction in kWh consumption over the last period. Additionally, as indicated previously at paragraph 1.36, T&TEC observed that a number of customers applied for a reduction in capacity which is affecting its cost of doing business. This was evidenced by the signing of approximately thirty (30) applications for reduction in reserve capacity by T&TEC's General Manager in May, 2021.

- 1.214. Based on the number of applications and T&TEC's analysis, many customers are migrating from industrial to commercial users at lower rates. Conversely, T&TEC has observed an increase in domestic usage because people are mostly at home due to the restrictions.

## FINDINGS

- 56) Energy consumed in MWh has been fairly constant in the three-year period 2018 to 2020.
- 57) Present generation capacity well exceeds the present demand of the country by approximately 450 MW.
- 58) Energy is produced instantaneously, as required, therefore, there is no excess production of energy and energy is not stored.
- 59) Capacity is the maximum rating of the generator and can only be fully utilised when there is a load demand to match same.
- 60) There have been no requests from T&TEC to the MEEI via the MPU for increases in generation capacity because there is excess generating capacity with the full commissioning of TGU.
- 61) Based on the natural load growth, all forecast study (residential, commercial and small industrial customers) indicate that additional generation will not be needed until approximately 2030.
- 62) A lead time of approximately five (5) years is required for the commissioning of a new power station plant.
- 63) Additional generation would be required if a prospective large heavy industrial customer is to be commissioned depending on the timeframe in which they are required to be energised.
- 64) There has been observed growth in the residential, commercial and small industrial developments despite the fact that large industrial customers were reducing consumption during the period 2018-2019.
- 65) A number of customers applied for a reduction in capacity which is affecting T&TEC's cost of doing business.
- 66) Many customers are migrating from industrial to commercial users at lower rates.

- 67) There were no significant increases in T&TEC's revenues from the growth in residential, commercial and small industrial developments.
- 68) T&TEC observed a significant reduction in kWh consumption over the last period.
- 69) T&TEC has observed an increase in domestic usage because people are mostly at home due to the restrictions.

## RECOMMENDATIONS

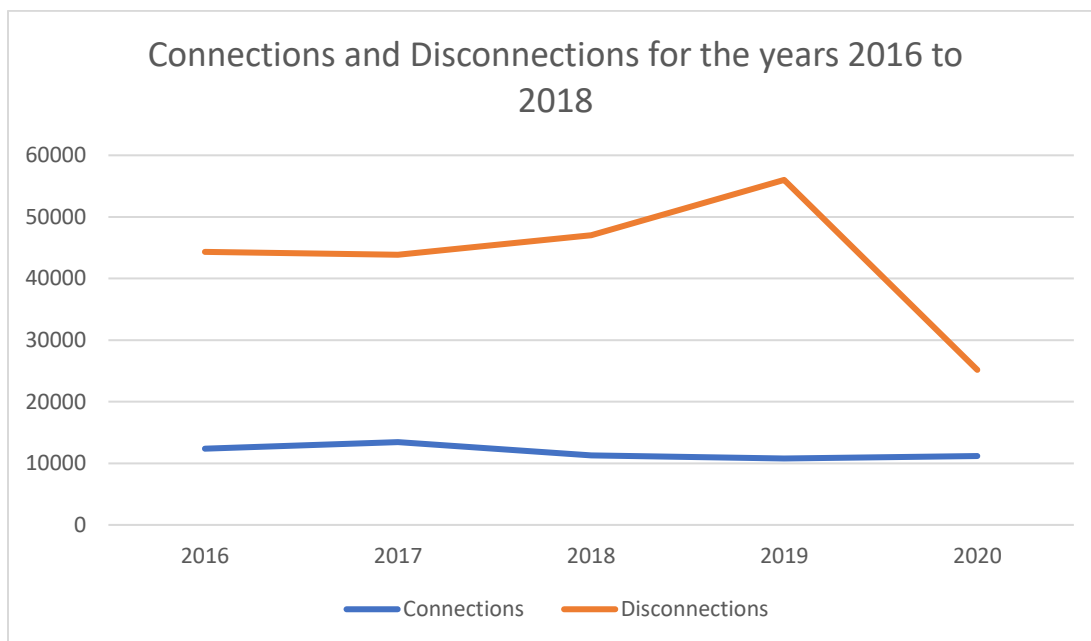
- X. **Considering that a lead time of five (5) years is required for the commissioning of a new power station plant which may be required by 2030, we recommend that T&TEC begin exploring the cost factors and other factors associated with the commissioning of a new power station plant to be located in North Trinidad.**
- Y. **We recommend that T&TEC develop strategies to:**
  - c. **attract and maintain large industrial customers, which is more profitable for the Commission; and**
  - d. **create incentives to discourage industrial customers from downsizing in capacity to commercial usage.**

Furthermore, considering the effect that the pandemic has had on industries, consideration should be given to offering payment plans and deferred payment options large industrial customers.

## Connections and Disconnections

1.215. The following information on connections and disconnections for the past five (5) years was provided by T&TEC in Figure 2 and Table 11 below.

**Figure 2**



**Table 11**  
**Connections and Disconnections for the years 2016 to 2020**

**CONNECTIONS**

Area	2020	2019	2018	2017	2016	Total
North	1,251	1,550	1,527	1,574	1,851	5,902
South	3,611	3,823	3,873	4,380	4,492	15,687
East	2,996	2,904	2,833	3,171	3,039	11,904
Central	2,568	1,715	2,227	3,349	2,171	9,859
Tobago	734	791	799	965	836	3,289
Total all Areas	11,160	10,783	11,259	13,439	12,389	46,641

**DISCONNECTIONS**

Area	2020	2019	2018	2017	2016	Total
North	2,220	5,745	5,662	5,281	5,295	18908
South	3,665	11,621	7,750	6,665	7,030	29701
East	4,857	17,412	12,436	11,023	10,583	45728
Central	2,004	6,295	4,788	4,942	6,455	18029
Tobago	1,264	4,155	5,127	2,520	2,554	13066
Total all Areas	14,010	45,228	35,763	30,431	31,917	125432

### *The Process and Timeframe for New Connections*

1.216. The process and timeframe for new connections depends on whether the existing infrastructure is close to the structure for new connections. Where all the infrastructure exists new connection can take days to two weeks. However, where T&TEC has to install plant infrastructure, extensive surveys, and designs will be required. It may also require a financial contribution from customers and the process can be protracted to months.

### *Disconnections*

1.217. T&TEC indicated that it resumed disconnection for non-payment of electricity bills in December 2020. Disconnection for non-payment was not carried out from April 2020 to November 2020 as a result of the COVID-19 pandemic.

1.218. The number of disconnections due to non-payment since December 2020 were outlined in Table 12 below:

**Table 12**  
**No. of Disconnections for Non-Payment for the months December 2020 to April 2021**

<b>Period</b>	<b>No. of Disconnections for Non-Payment</b>
December, 2020	1,113
January, 2021	2,332
February, 2021	3,711
March, 2021	3,442
April, 2021	2,903
<b>Total</b>	<b>13,501</b>

1.219. The Committee enquired into whether T&TEC was engaging in a similar disconnection exercise to WASA. T&TEC informed the Committee that it cannot provide an answer as to whether a person will be disconnected for failing to pay his or her bills. However, T&TEC continues to encourage all customers to pay their bills. All T&TEC's Service Centres are fully opened and there are many options to encourage customers to pay their bills.

1.220. T&TEC indicated to the MPU that any customer who is having difficulty with paying their bills are advised to visit T&TEC to set up an arrangement to do so over a particular period.

1.221. Given the nature of the business it is absolutely necessary that T&TEC collects its monies.



- 1.222. In response to whether T&TEC received guidance from the Cabinet to desist disconnections during the State of Emergency, T&TEC responded in the negative. However, T&TEC indicated that it received guidelines from the MPU and has been encouraging customers to pay their bills. T&TEC explained that it does not engage in disconnection for the non-payment of a first bill.
- 1.223. T&TEC has had no complaints regarding disconnections. T&TEC has been encouraging customers to pay their bills because this is necessary to ensure the continuation of its business.

### ***The MPU's Utilities Assistance Programme***

- 1.224. The Utilities Assistance Programme is based on a policy approved by the Cabinet. As such, any consideration of expanding the Programme will require variation in the policy.
- 1.225. The Utilities Assistance Programme has several components. One component of the programme includes a reduction on both electricity and water bills. There are other components related to water tank assistance and solar panel assistance.
- 1.226. Any customer whose salary is below \$5,000 is eligible to apply to the programme.
- 1.227. The MPU engages in an assessment verification process to determine the eligibility of the applicant for the programme. A maximum of \$1200 per annum can be accessed for an electricity bill and \$200. for a water bill under the Programme. In addition to the Utilities Assistance Programme, the MPU also has a Rebate Programme on the cost of electricity consumption where any customer who is generating a bill of \$300 or less per billing cycle is eligible for a 25% rebate on their bill.
- 1.228. Out of four hundred and forty-five thousand customers (445,000), T&TEC has two hundred and ten thousand (210,000) customers whose bills are \$300 or less and receives a discount of 25% which represents approximately fifty percent (50%) of residential customers. In the Budget 2021/2022, the rebate was increased to 35%.
- 1.229. Simultaneous to the Utilities Assistance Programme and the Rebate Programme, the MPU continues to support families with electricity connection especially in the time of the pandemic.

- 1.230. The MPU also has two (2) other programmes which it continues to implement, the Residential Electrification Programme which has provided electricity to several households across the country to facilitate online learning. To supplement the Residential Electrification Programme is the Electrification Programme which provides infrastructure to the household.
- 1.231. The MPU will look into the recommendation to expand the utility assistance policy by extending the criteria to include customers who are unemployed, without savings relying on pay check to pay check and renting during the pandemic.
- 1.232. During discussions, the need for the MPU to reach out to Members of Parliament's Constituency Offices arose given that customers in need of assistance approach these offices which will assist the MPU in the area of outreach.

#### ***Opportunities for Bill Reductions for Customers***

- 1.233. In addition to the Rebate Programme, T&TEC has also been encouraging customers to collect Light Emitting Diode (LED) bulbs at its service centres. The LED bulbs have a significant impact. T&TEC recognised from its analysis that only 16% of customers whose bills are in the lower tier, less than three hundred dollars (\$300), have collected LED bulbs.
- 1.234. Based on T&TEC's calculations if all four (4) LED bulbs are used over a two (2) month period, a customer's kW consumption can be further reduced resulting in an additional fifteen dollars (\$15) off his/her bill or less depending on the kW consumption used. The country also benefits from the use of LED bulbs which are more efficient than incandescent bulbs. There is also further savings for T&TEC in terms of gas usage.

#### ***The Number of Service Centres Not Distributing LED Bulbs***

- 1.235. A couple of T&TEC's Service Centres were converted into payment only centres such as Broadway, Port of Spain and Rio Claro and therefore are not distributing LED bulbs. Customers are instead encouraged to visit all other Service Centres and in Port of Spain the St James Service Centre and T&TEC's Head Office at Corner Park and Fredrick Street to collect LED bulbs.

## FINDINGS

- 70) Connections have been fairly constant over the period 2016 to 2020.
- 71) Disconnections were increasing steadily up to 2019 and plateaued in the year 2020 due to no disconnections carried out during the months of April to November, 2020 as a result of the COVID-19 pandemic.
- 72) T&TEC resumed disconnection for non-payment of electricity bills in December 2020.
- 73) A total of 13,501 disconnections were carried out from December 2020 to April 2021 even though the pandemic continues.
- 74) The process and timeframe for new connections depends on whether the existing infrastructure is close to the structure for new connections.
- 75) T&TEC has many options to encourage customers to pay their bills.
- 76) Given the nature of the business it is absolutely necessary that T&TEC collects its monies.
- 77) T&TEC received guidelines from the MPU and has been encouraging customers to pay their bills.
- 78) T&TEC does not engage in disconnection for the non-payment of a first bill.
- 79) T&TEC has had no complaints regarding disconnections.
- 80) Any consideration of expanding the Utilities Assistance Programme will require variation in the policy.
- 81) The MPU undertook to examine the recommendation to expand the utility assistance policy by extending the criteria to include customers who are unemployed, without savings relying on pay check to pay check and renting during the pandemic.
- 82) There is need for the MPU to liaise with Members of Parliament's Constituency Offices which can assist the MPU in the area of outreach.
- 83) Approximately forty-seven percent (47%) of T&TEC's customers have bills which are \$300 or less and receive a discount of 25%. Similar customers will now benefit from a 35% rebate.
- 84) The LED bulbs have a significant impact on cost savings to customers and T&TEC has been encouraging customers to collect LED bulbs at its Service Centres.
- 85) T&TEC's Service Centres located Broadway, Port of Spain and Rio Claro were converted to payment only centres and are not distributing LED bulbs.

## RECOMMENDATIONS

- Z. We recommend the expansion of T&TEC's utilities assistance policy to include customers who are unemployed due to the COVID-19 pandemic.
- AA. We recommend that the MPU and T&TEC liaise with Members of Parliament's Constituency Offices to identify persons who require assistance with paying utilities during the pandemic.
- BB. We recommend that T&TEC consider expanding its LED bulb initiative, especially amongst its lower income customers, due to the cost benefits that accrue from the use of LED bulbs.

## Electricity Infrastructure

### *Measures to Ensure Transmission and Distribution Infrastructure is Developed and Maintained*

- 1.236. As it pertains to the measures taken to ensure that the transmission and distribution infrastructure is developed and maintained to provide a safe and reliable electricity supply to customers, T&TEC tries to ensure that the electricity generation system grows and is reliable. Through its Programme for The Upgrade of Electricity Generation Infrastructure in Trinidad, T&TEC informs the MEEI when the generation adequacy programme shows that generation is required. The MEEI will secure a contract for increased generation via a tender. In the case of Tobago, the Cove Power Station (CPS) is owned by T&TEC and as such any upgrades is facilitated by T&TEC.
- 1.237. T&TEC uses a "N-1" contingency planning philosophy which ensures that there is no loss of supply to customers when an apparatus is out of service on the transmission and sub-transmission system. Many fault finding devices, manual and remote controlled auto reclosers and air break switches are installed on the Radially Operated Distribution System. Regular predictive maintenance programs using infra-red scans, physical inspections of all plant, vegetation management and preventive maintenance are also used.

### *Adequacy of Measures for the Maintenance of the Transmission and Distribution System*

- 1.238. T&TEC indicated that the measures for the maintenance of the transmission and distribution system are inadequate. T&TEC further indicated that the challenge it faces in this regard is the lack of adequate revenue.

### ***T&TEC's Development Plan***

- 1.239. To upgrade current electricity infrastructure, a five (5) year Development Plan was established and is revised annually. This Plan outlines the strategies to upgrade the electricity infrastructure and the projects that have been deemed as necessary. Some of these projects include the upgrade of various substations, replacement of power transformers at various substations, replacement and upgrade of aging underground infrastructure within the city of Port of Spain, upgrade of 12kV Feeders, replacement of bare/open conductors with fully insulated bundled High Voltage (HV) conductors at some locations on 12kV Feeders.

### ***The Areas, Most in Need of Electricity Generation Infrastructure Upgrades***

- 1.240. In terms of the areas most in need of electricity generation infrastructure upgrades, T&TEC indicated that generation would be needed in North and East Trinidad to address the significant development occurring in these areas. Further, these areas fit the profile based on the current grid design.

### ***Contracts of Guarantee, Surety or Indemnity Entered into for T&TEC's Property and Assets***

- 1.241. The Commission entered into a supply contract dated November 9, 2007 with Wartsila Finland Oy<sup>24</sup> to supply, install and put into operation a 64/67 MW generating station at the Commission's plant in Cove Industrial Estate, Tobago. On July 25, 2008, the Commission entered into a finance arrangement with HSBC Bank Plc<sup>25</sup> to provide funding for the project. This loan facility is secured by a Government Guarantee.

---

<sup>24</sup> <https://www.wartsila.com/fin>

<sup>25</sup> <https://www.hsbc.com/>

## *The Property, Assets, Rights, Powers and Obligations Transferred to Approved Generators of Electricity*

1.242. PowerGen is the only approved generator of electricity to which T&TEC has transferred property, assets rights, etc. Further details are at Appendix XIII.

## **FINDINGS**

- 86) T&TEC tries to ensure that the electricity generation system grows and is reliable.
- 87) T&TEC uses an “N-1” contingency planning philosophy which ensures that there is no loss of supply to customers when an apparatus is out of service on the transmission and sub-transmission system.
- 88) T&TEC indicated that the measures for the maintenance of the transmission and distribution system are inadequate.
- 89) To upgrade current electricity infrastructure, a five (5) year Development Plan was established and is revised annually.
- 90) Generation would be needed in North and East Trinidad to address the significant development occurring in these areas.

## **RECOMMENDATIONS**

**CC. We recommend that T&TEC examine through its five (5) year Development Plan suitable measures for the upgrade and maintenance of its transmission and distribution system and forward same to MPU for funding and implementation.**

**DD. We recommend that, as a part of its Ministerial Response, T&TEC provide:**

- a copy of its five (5) year Development Plan for electricity infrastructure; and
- an outline of its plan to provide electricity for the infrastructural developments occurring in North and East, Trinidad.

## PSIP Projects

### *The Status of T&TEC's PSIP projects*

1.243. Of the \$21.75 million allocation for Fiscal year 2021, T&TEC was in receipt of \$6,494,525.00 relating to developmental expenditure in the month of May 2021 as follows:

**Table 13**  
**Status of PSIP Releases for Projects for Fiscal year 2021**

<b>Project</b>	<b>Amount Released</b>
National Street Lighting Programme	\$310,699
New Bulk Power Projects	\$3,000,000.00
Electrification Programme	\$1,183,826.00
Replacement of Aging Transmission Infrastructure	\$2,000,000.00
<b>Total</b>	<b>\$6,494,525.00</b>

### *The Reason for certain PSIP Projects not being approved by the MPU*

1.244. The Committee requested information on the reason/s why the following PSIP projects did not receive approval from the MPU in 2021 despite having available funding as at September 2020:

- Illumination of Public Spaces;
- Illumination of Grounds of Police Stations;
- Illumination of Grounds of Regional Health Authority (RHA) Facilities;
- Illumination of Taxi Stands and Transit Hubs;
- Test Equipment for High Voltage Apparatus; and
- Protection Schemes.

1.245. In response, T&TEC informed the Committee that approvals are based on requests received, after such requests are closely reviewed by the MPU to ascertain if they meet the requisite requirements and if there is merit in acceding to the said requests.

1.246. T&TEC is still in discussion with the MPU for the transfer of the majority of these funds from slow moving projects such as those identified to more frequently used programmes such as the Street lighting programme and the Illumination of Parks and Recreation Grounds programme. The objective being to utilise this available funding.

***The Impact of PSIP Programmes on Large Skills Maintenance and Necessary Expansions for the Required Level of Service to Customers***

1.247. In terms of the impact of PSIP Programmes on large skills maintenance and necessary expansions to ensure the required level of service to customers, T&TEC indicated that there are various categories under the PSIP such as:

- street light expansions where the government would provide the necessary funds and guidance;
- recreation grounds and parks has been an ongoing project; and
- maintenance of parks.

1.248. T&TEC also indicated that it faces a larger issue with funding through the PSIP for some major projects. However, it has been receiving assistance in this area. One of the major projects is the second line from Union to Gandhi. As it pertains to this project, it was indicated that:

- The contract has been signed work has commenced;
- The project is important because it can get a capacity of 600MW from the TGU line, and there is need to get the additional 120MW onto the grid;
- T&TEC has some funding for the project and will be requesting additional funding for same in the next fiscal year 2021/2022; and
- T&TEC understands the difficulty with funding and tries to make every effort with the MPU.
- The MPU is very cooperative.

***Renewable Energy Initiative***

1.249. With regard to the Renewable Energy Initiative under the PSIP, eleven (11) out of twelve (12) site visits were conducted as follows:

- 2021 01 12 – Matura, Fishing Pond, North Manzanilla



- 2021 02 05 – Cap de Ville, Chatham, Coromandel Settlement, Cedros
- 2021 03 05 – Carapichaima, Petersfield, Gran Couva, Moruga

- 1.250. A visit to determine the suitability of a site at Galeota remains outstanding. Tentatively, it will be completed by early April 2021. An update on the remaining sites was provided by T&TEC which indicated that the site evaluation in the Galeota area remains outstanding and would be completed by June 2021.
- 1.251. The Commissioner of State Lands (COSL) has been written regarding approval to utilise the land area at Matura, Manzanilla and North Matura. However, no response had been received from the COSL.
- 1.252. The top five (5) sites thus far, based on assessments of visits conducted in January and February, 2021 are Cedros, Fishing Pond, Coromandel Settlement, Matura and North Manzanilla. The remaining sites would be evaluated pending the completion of the last site visit which was expected to be completed by mid-April 2021.
- 1.253. The draft specification has been reviewed by third parties. Based on this review, amendments to the specification are in progress and were anticipated to be completed by March 26, 2021. T&TEC provided an update on the draft specification indicating that the specification for the measurement device was finalised on March 29, 2021.

***The Preparations Being Made for the Upsurge in the Use of Renewables***

- 1.254. T&TEC indicated that it is preparing for use of renewables as an energy source. Currently, discussions are ongoing for 112.2MW renewable plant to be located mainly in Point Lisas, Esperanza and a section of it in Trincity.
- 1.255. The tender process has already been closed, and the PPA discussions are taking place. Once completed, the Commission anticipates 112.2kW on the grid in the next two (2) years plus.
- 1.256. T&TEC also indicated that it is looking at an ongoing project with the MEEI for a 700kW vehicle charge station at the Queen’s Park Savannah which will also add capacity to the grid.

1.257. Additionally, T&TEC is implementing infrastructure that is ongoing at the Piarco International Airport.

*The Value T&TEC is seeking to Obtain from Renewable Capacity*

1.258. The value of renewable capacity T&TEC is seeking to obtain is US.04cents per kW compared to the current value of electricity generation and gas at the subsidised rate at US4.7cents per kW and unsubsidised rate at US5.9 cents.

1.259. Electricity generation using renewable resources is called non-dispatchable. The grid will have to be tailored because non-dispatchable capacity will not be available 24/7, 365 days per year, it will only be available for approximately an average of thirty percent (30%) of the time.

1.260. For instance, if there is cloud cover or rain, a non-dispatchable source of energy will lose power. As a result, the non-dispatchable capacity at the rate of US.04cents cannot be guaranteed. There is therefore need to maintain the level of dispatchable resources to guarantee capacity particularly when non-dispatchable resources are unavailable. However, the move to dispatchable will result in a rate from US.04cents to US.08cents.

1.261. Renewable energy generation results in savings in fuel expenditure, and reduction in greenhouse gas emissions. It may delay the need for traditional generation.

1.262. T&TEC indicated that the country will benefit significantly from renewables because fossil fuel gas used for electricity generation will become available for sale at twice the price instead of half the price that it is currently being sold to T&TEC at.

1.263. The figure of US.08cents will be reduced to US.05cents for dispatchable energy when renewable energy sources are used and when the figure that the country will benefit from is deducted it becomes slightly comparable to the price of US5.9cents for an unsubsidised fossil fueled plant.

1.264. T&TEC indicated that there is need to examine the position of the Commission, the renewables and to be clear what is being bought into the renewables.

1.265. The Commission is moving towards renewables and has a team headed by the Chief Technical Officer which started looking into marketing photovoltaic (PV) as an option for customers and charge stations at appropriate points in preparation for meeting the requirements for the electrical car industry. It was also indicated that the regulator has to be involved because of the issue of buying and selling.

### ***T&TEC's Collaborations with Car Dealers to Power Electric Vehicles***

1.266. One car dealership is marketing electrical cars and has approached the Commission regarding same. PTSC also approached T&TEC with regards to electrical vehicles. T&TEC is liaising with the dealerships and PTSC to ensure the level of service required is provided.

1.267. T&TEC indicated its willingness to partner with any car dealership to advance the use of electric vehicles in the country.

1.268. T&TEC acknowledges that the world is heading in the direction of using electrical cars and some have pledged to move away from combustion ignition engines over the next ten (10) to twenty (20) years.

## **FINDINGS**

91) PSIP projects are closely reviewed by the MPU to ascertain whether they meet the requirements.

92) T&TEC is still in discussion with the MPU regarding the transfer of the majority of these PSIP funds from slow moving projects to more frequently used programmes.

93) T&TEC faces issues with funding through the PSIP for some major projects but has been receiving assistance in this area.

94) The Commissioner of State Lands (COSL) has not responded to T&TEC regarding approval to utilise the land area at Matura, Manzanilla and North Matura for the PSIP Renewable Energy Initiative.

95) The top five (5) sites for the PSIP Renewable Energy Initiative are Cedros, Fishing Pond, Coromandel Settlement, Matura and North Manzanilla.

96) T&TEC is preparing for use of renewables as an energy source.

- 97) Discussions are ongoing for a 112.2MW renewable plant to be located mainly in Point Lisas and a section of it in Trincity in the next two (2) years plus.
- 98) T&TEC is looking at an ongoing project with the MEEI for a 700kW vehicle charge station at the Queen's Park Savannah which will also add capacity to the grid.
- 99) The value of renewable capacity T&TEC is seeking to obtain is US.04cents per kW, however this rate cannot be guaranteed.
- 100) T&TEC's grid will have to be tailored because non-dispatchable capacity will only be available for approximately an average of thirty percent (30%) of the time.
- 101) The country will benefit significantly from renewables which will free up natural gas for sale at twice the price on the open market.
- 102) Some plants are also now more efficient, use less gas and compete with renewables.
- 103) There is need to examine the position of the Commission as it pertains to renewables.
- 104) T&TEC is considering marketing 'photovoltaics' as an option for customers and charge stations at appropriate points in preparation for meeting the requirements for the electrical car industry.
- 105) The regulator will have a role in the process of renewables because of the issue of buying and selling.
- 106) T&TEC is willing to partner with any car dealership to advance the use of electric vehicles.

## RECOMMENDATIONS

- EE. We recommend that the MPU, T&TEC, RIC and MEEI meet to discuss and thoroughly examine the position of the Commission, as it pertains to renewables and submit a policy document on same to the Cabinet for consideration.**
- FF. We recommend that subsequent to internal discussions, MPU spearhead stakeholder discussions, including with the COSL on the PSIP Renewable Energy Initiative which will involve stakeholders in the process of preparation for the initiative.**
- GG. We recommend that the COSL respond to T&TEC regarding approval to utilise the land area at Matura, Manzanilla and North Matura for the PSIP Renewable Energy Initiative.**

## Security

### *Breaches at the Commission's Sub-stations*

1.269. T&TEC confirmed that break-ins have occurred in the past five (5) years. The items stolen were Nickel Cadmium backup batteries, copper for earthing rods and copper tubing for air-conditioning.

### *Sub-station Monitoring*

1.270. The following were the measures put in place for substation monitoring:

1. Supervisory Control and Data Acquisition (SCADA) system that allows the monitoring of the status of electrical devices and control of all substations on the power system. All substations are currently monitored;
2. Substation Demand Monitoring System that allows monitoring of the demand of distribution substations. 90% currently monitored, 94% to be completed Q4 2021. Remaining 6% will be facilitated and monitored when current electrical infrastructure is upgraded; and
3. Video Surveillance Systems which monitors the compound for video checks and mitigation against intrusion and theft. Approximately 50% of the substations are currently video monitored and the remaining 50 % would be completed by Q4, 2021.

1.271. T&TEC indicated that the strategies identified for effective sub-station monitoring have not proven effective because of challenges with obtaining the necessary revenue to execute same. However, this is ongoing.

### *The Measures in Place to Ensure the Safety and Security of Light Poles and Other Electrical Equipment*

1.272. In terms of the measures in place to ensure the safety and security of light poles and other electrical equipment owned by the Commission, the Committee was informed that the entire overhead lines plant is inspected by Maintenance Technicians and recorded via the feeder drawings/ Substation drawings. These include visual, infrared and ultrasonic inspections. In Areas prone to vehicular accidents involving T&TEC's poles, reflective tapes are installed on each pole. Also, video camera with motion sensors with frequent patrols from T&TEC's

Security team. Relays and circuit breakers were installed at the substations to de-energise the circuit once a threat occurs.

1.273. Additionally, all substation equipment are secured via No. 1 locks.

*Measures in place to Prevent Theft of Electricity*

1.274. T&TEC indicated that there are three (3) measures where current stealing reports are identified:

- i. Electricity stealing reports from other customers are programmed for investigations twice per week in most Distribution Areas;
- ii. T&TEC's Metering Service Department identifies and forwards instances where customer tamper with their meter installations to the Commercial Department for action; and
- iii. Commercial Department investigates disconnected electricity accounts with progressive meter readings.

1.275. These measures are very effective because of the financial charges associated with stealing electricity for first time offenders.

1.276. First time offenders are also written to and a Note is established for future reference in the customers' electricity accounts in Customer Information System to identify instances of stealing of electricity.

1.277. Second time offenders are usually disconnected and are required to submit an Inspection Certificate, pay the current stealing charges, make a report to our Estate Police and a Note is also established in the Customer Information System before they could be reconnected. Given the fact, that disconnection is a consequence for second time offenders, T&TEC has very few third time offenders.

### ***T&TEC's Relationship with the Trinidad and Tobago Police Service (TTPS) to Address Security Issues***

1.278. T&TEC has an excellent working relationship with the TTPS. The TTPS provides tactical support when crews are required to work in crime 'hotspots'. Support, whenever available, is also provided for planned and emergency work if required. The TTPS supplements the Commission's Estate Police in protecting employees. However, this assistance from TTPS is not always available due to their limited resources. T&TEC utilises its in-house resources where possible and has structured its crews to have persons who are willing to from various areas working in these crews, and to report especially in areas where they live.

### ***The Number of Illegal Connections***

1.279. The Commission conducted an amnesty via newspaper to:

- encourage the public to come forward with information on illegal connections; and
- provide persons engaged in illegal connections with the opportunity to formally connect to the grid.

1.280. Based on an amnesty conducted by the Commission, illegal connections are estimated to be 3,000 throughout Trinidad and Tobago.

### ***T&TEC's Efforts to Treat with Illegal Connections***

1.281. T&TEC indicated that there are many different situations that are occurring where persons are not in compliance with the Commission for instance, some persons have a direct illegal, unmetered connection of electricity. T&TEC's amnesty programme encourages customers with an illegal connection to visit T&TEC to become regularise because it is unsafe and can lead to serious injury or worse.

1.282. During the period of amnesty T&TEC would have forgone the billing of persons with illegal connection who approached T&TEC to become regularised. Notwithstanding, the RIC allows T&TEC to retroactively bill customers for a period of time past. When the period of the amnesty has expired, persons who continue to be illegally connected to the grid will be disconnected and retroactively billed for the period of illegal supply once their location is detected. For this reason, T&TEC is encouraging such persons to become regulated.

Additionally, illegal connections create unsafe situations and impact negatively on T&TEC's revenues which is needed at this time to carry out its functions.

- 1.283. T&TEC also indicated that the Chairman of its Board underscored that the issue of illegal connections should be dealt with. T&TEC indicated that beyond the pandemic, it will be examining this issue.
- 1.284. In terms of whether people are responding to the amnesty, T&TEC indicated that it has had some traction given that approximately forty-seven (47) customers responded to the amnesty. However, T&TEC indicated that it has an inclination that there are more persons with illegal connections therefore the response has not been as expected.

#### ***Measures to prevent loss of life owing to electrocution by T&TEC lines***

- 1.285. Continuous advertisements via the radio and print media to inform citizens of the dangers associated with T&TEC's infrastructure. A good example being the Carnival season where citizens are reminded of the need to be cognisant of height of T&TEC's overhead lines and the associated dangers.

## **FINDINGS**

- 107) All substations are currently monitored using Supervisory Control and Data Acquisition (SCADA) system and by Q4, 2021 it is anticipated that all substations will be monitored using the Substation Demand Monitoring System and Video Surveillance Systems.
- 108) The strategies identified for effective sub-station monitoring have not proven effective because of challenges with obtaining the necessary revenue to execute same. However, this is ongoing.
- 109) The measures in place to prevent theft of electricity are very effective because of the financial charges associated with stealing electricity for first time offenders.
- 110) T&TEC has very few third time offenders.
- 111) T&TEC has an excellent working relationship with the TTPS to address security issues. However, assistance from the TTPS is not always available due to their limited resources.



- 112) T&TEC has been utilising its in-house resources where possible and strategically structuring its crews to assist with security issues.
- 113) The response to the Commission's amnesty has not been as expected but has had some traction given that approximately forty-seven (47) customers responded to the amnesty.
- 114) T&TEC engages in continuous advertisements via the radio and print media to inform citizens of the dangers associated with T&TEC's infrastructure.

## RECOMMENDATIONS

- HH. We recommend that T&TEC encourage the public to report illegal connections by developing an anonymous hotline.
- II. We recommend that T&TEC augment its use of Social Media to inform citizens of the dangers of illegally accessing and tampering with T&TEC's infrastructure.

## Outages

### *Types of Outages*

1.286. According to the RIC, T&TEC reports outages in three (3) categories:

- **Planned Outage** – is an outage that is scheduled and customers affected are notified seventy-two (72) hours in advance of the planned works;
- **Unplanned Outage** – is an impromptu outage that is scheduled to correct a defect, which would not allow seventy-two (72) hours advanced notice to the affected customer based on the urgency; and
- **Forced Outage** – is an unforeseen outage affecting customer supply due to a fault (e.g. Trees, animals, vehicular accident, etc.).

1.287. These are defined below and the number of outages in each category for the past five (5) years is shown in the table 14 below:

**Table 14**  
**Categories of outages for the period 2016 to 2020**

Year	Category of Outages		
	Planned	Unplanned	Forced
2020	2,021	5,387	9,730
2019	1,974	5,192	8,732
2018	1,233	3,484	8,172
2017	1,380	3,665	8,955
2016	1,374	3,611	8,967

*The Number of Outages Reported by the Commission for the Past Five (5) Years by Year*

1.288. The number of outages reported by T&TEC for the past 5 years is presented in the table below as submitted by the RIC:

**Table 15**  
**Outages reported by T&TEC for the years 2016 to 2020**

Year	Number of Outages
2020	17,138
2019	15,898
2018	12,889
2017	14,000
2016	13,952

Source: T&TEC

1.289. From the information in the table 14 above, the Committee observed a sharp increase in outages from 2018 to 2019 by 3,009 and a further increase for 2020 by 1,240. T&TEC confirmed that it observed an increase in outages over the last few years and attributed the increase in the number of outages to line clearing issues and a delay in establishing line clearing contracts in 2019 and 2020. Those contracts were enforced in late 2020 (September into October). T&TEC has been pushing to engage in extensive line clearing to reduce outages. Essentially, T&TEC has noted the increase in outages, conducted the analysis and is implementing measures to reduce outages.

1.290. T&TEC indicated that it will continue to look at the analysis of the information on outages and examine areas with an observed increase in outages with a view to designing maintenance activities specific to those areas. T&TEC has examined information from over the last two (2)

to three (3) years and identified general areas that experience frequent outage and these areas are being targeted.

- 1.291. T&TEC is also examining the causes of outages such as trees, vermin and is trying to use technology to install on its lines to prevent outages caused by same.
- 1.292. T&TEC is looking at using technology to assist in the modernisation of the grid such as auto reclosers and additional devices to reduce outages. Technology such as single phase auto reclosers is being examined for T&TEC’s electricity lines to supplement them with the three phase auto reclosers.
- 1.293. An improvement with regard to outages is anticipated by 2022.

***Planned Outages***

- 1.294. Table 16 outlines the number of planned outages by year for the past five (5) years as submitted by T&TEC:

**Table 16**  
**The number of planned outages by year for the past five (5) years**

Area	2020	2019	2018	2017	2016	Total
North	186	177	116	171	147	797
South	304	411	356	302	216	1589
East	598	683	298	634	704	2917
Central	134	67	92	103	66	462
Tobago	799	636	371	170	241	2217
<b>Total all Areas</b>	<b>2,021</b>	<b>1,974</b>	<b>1,233</b>	<b>1,380</b>	<b>1,374</b>	<b>7,982</b>

***Measures to Reduce Future Planned Outages***

- 1.295. T&TEC indicated that one of the measures it is examining closely is the increased use of hotline methods to carry out maintenance works by increasing the number of hotline codes to assist in reducing the number of outages as a result of maintenance works.

**Unplanned Outages**

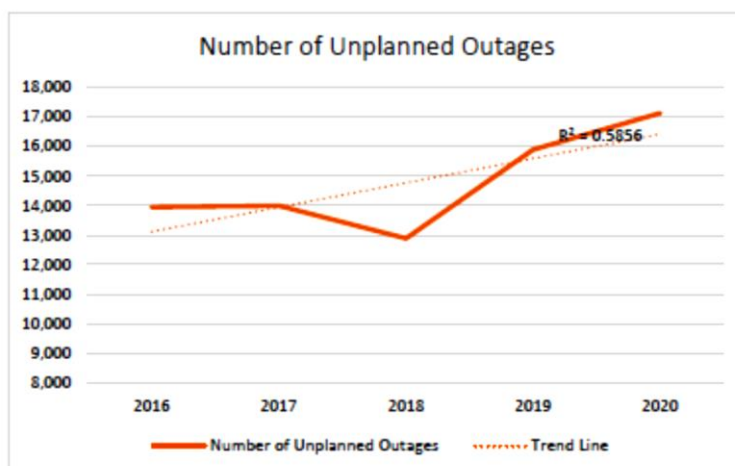
- 1.296. T&TEC classifies unplanned work as jobs executed without informing customers of the outages at least seventy-two (72) hours before the supply is taken off. A significantly high percentage (approximately 75%) of the unplanned outages are short in duration.
  
- 1.297. Several such outages are conducted daily and, in this regard, it is difficult to advertise specific start times because several factors can cause delays in the execution of the said jobs. It should be noted however, that although the work is planned, the short duration outages are not advertised and are therefore classified as unplanned.
  
- 1.298. T&TEC provided in Table 17 the number of unplanned outages for the years 2016 to 2020 for the Distribution Areas:

**Table 17  
Unplanned Outages for the years 2016 to 2020**

<b>Unplanned</b>						
	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
<b>North</b>	1223	857	795	961	775	<b>4611</b>
<b>South</b>	1013	896	801	631	446	<b>3787</b>
<b>East</b>	1497	1751	705	657	703	<b>5313</b>
<b>Central</b>	1144	1046	709	951	768	<b>4618</b>
<b>Tobago</b>	601	642	467	355	731	<b>2796</b>
<b>Total all Areas</b>	<b>5478</b>	<b>5192</b>	<b>3477</b>	<b>3555</b>	<b>3423</b>	<b>21,125</b>

- 1.299. The RIC indicated that generally, the number of reported unplanned outages have been increasing over the past five years as seen in the figure 3 below:

Figure 3



### *Areas Prone to Unplanned Outages*

1.300. The areas prone to unplanned outages are outlined in Appendix XIV.

### *T&TEC's Ability to Identify Individual Customers That Are Affected by Unplanned Outages on the Distribution System*

1.301. T&TEC is able to identify individual customers with the Outage Management System (OMS) where the AMI meters communicate with the Control Centre informing of customer outages. T&TEC will automatically receive information on outages via its SCADA and other systems in advance of customer calls regarding same. Therefore, the customers will be confirming outages with T&TEC via its reports. The OMS will assist T&TEC to respond in a timelier manner.

1.302. T&TEC acknowledged that it received many complaints regarding the difficulty faced by some customers in contacting the Commission via its call centres. T&TEC anticipates that the implementation of the OMS will allow T&TEC to streamline its incoming calls regarding outages and improve the service provided by its call centres.

1.303. The customer 85% of OMS completed with full rollout expected by end of 2021.

1.304. Subsequent information from T&TEC indicated that the OMS has been fully implemented in the four (4) out of five (5) Areas. Implementation in fifth Area would be completed by the fourth quarter 2022.

#### ***The Effectiveness of T&TEC's application and the Response Time for Treating Requests***

1.305. T&TEC's average response time to a customer suffering an outage or anything affecting supply is approximately two (2) hours, whether the request is made via T&TEC's application or phone. All of the requests via application or phone are bulked and dealt with it based on priority.

1.306. In terms of a breakdown of the response time, approximately 60% will be responded to within an hour and the remaining 40% above an hour.

#### ***Measures to Improve Management of Power Outages***

1.307. T&TEC has implemented the following measures to improve the management of power outages:

1. Preventative Maintenance which involves a rigorous inspection schedule in which defects are managed via a database and are prioritised based on the probability of failure. This also includes the use of line covers, bird diverters, autoreclosers, sectionalisers/trip savers, smart fault indicators and drones;
2. Live line work where work is done on main circuits without interruption to the customers' electricity supply. In so doing, jobs that would have usually required outages to thousands of customers using conventional methods, are now completed safely without interrupting customer supply;
3. Use of the OMS to detect, monitor and trend outages, including repetitive outages; and
4. Predictive Maintenance which would involve the use of technology to detect impending failure that are not visible. These technologies include but are not limited to: Infrared imagery and Ultrasonic technology.

1.308. Once any issues/problems are identified, maintenance activities are scheduled to change out defective equipment or update existing infrastructure before it affects the customers' supply in an unplanned manner.

1.309. Every outage is reported to the Duty Engineers and Senior Supervisors who effectively manage the response to these outages. The response time is tracked and reported each month as a Key Performance Indicator (KPI). This is important to ensure that T&TEC responds to customer outages in a timely manner.

#### ***Fleet Management and Outage Response***

1.310. Thirty-nine (39) vehicles were outfitted with Global Positioning System (GPS) devices to date, (sixteen (16) have been installed in Transmission vehicles, and twenty-three (23) in Public Lighting Department (PLD) vehicles). Twenty-six (26) new units earmarked for the Tobago's fleet were added by the end of April 2021. This entire project will be completed by the third quarter of 2022 and will include installations of one hundred and thirty-eight (138) vehicles in South, one hundred and ninety-six (196) vehicles in North, seventy-one (71) vehicles in Central, seventy-nine (79) vehicles in Distribution East and fifty-eight (58) vehicles in Tobago.

#### ***Measures in Place to Restore Power in a Crisis***

1.311. In addition to receiving customer's calls in a crisis, the Commission's Outage Management System will be used to provide information on the areas affected by any crisis experienced on the system. This will allow for the quick mobilisation and deployment of its internal resources to the affected zones.

#### ***Plans for Upgrades in Tobago to Prevent Outages***

1.312. The Commission's Plans for Upgrades in Tobago to prevent outage include:

- To revisit the generation dispatch schedules at the CPS to mitigate load shedding due to a single generator at the CPS suffering a forced outage; and
- Plans for system upgrade works on both the Transmission and Distribution systems.

1.313. Further details are at Appendix XV.

## **FINDINGS**

115) The number of outages in each category has been increasing for the years 2016 to 2020.

- 116) The increase in the number of outages were attributed to line clearing issues and a delay in establishing line clearing contracts in 2019 and 2020. T&TEC has noted the increase in outages, conducted the analysis and is implementing measures to reduce outages.
- 117) T&TEC is engaging in initiatives to reduce the number of outages such as targeting general areas that experience frequent outages, examining the causes of outages, using technology to assist in the modernisation of the grid, and the increased use of hotline methods to carry out maintenance works.
- 118) An improvement with regard to outages is anticipated by 2022.
- 119) A significantly high percentage (approximately 75%) of the unplanned outages are short in duration.
- 120) Although the work is planned, short duration outages are not advertised and are therefore classified as unplanned.
- 121) It is difficult to advertise specific start times of outages because several factors can cause delays in the execution of the said jobs.
- 122) T&TEC received many complaints regarding the difficulty faced by some customers in contacting the Commission via its call centres.
- 123) The OMS is critical for restoring power in a crisis and will assist T&TEC to identify individual customers affected by an outage, to respond to outages in a timelier manner and streamline its incoming calls regarding outages thereby improving the service provided by its call centres.
- 124) Implementation of the OMS would be completed by the fourth quarter 2022.
- 125) T&TEC's average response time to a customer suffering an outage or anything affecting supply is approximately two (2) hours, whether the request is made via application or phone.
- 126) The outfitting of T&TEC's vehicles with GPS to better respond to outages will be completed by the third quarter of 2022.

## RECOMMENDATIONS

- JJ. We recommend that T&TEC utilise social media to advertise short duration outages. Although it may be difficult to determine specific start times of these outages, an advisory informing customers that they may experience short duration outages will assist affected customers in preparing for same.**



**KK.** We recommend that T&TEC provide an outline of its line clearing and maintenance plan/policy and its measures to prevent the recurrence of a delay in establishing line clearing contracts.

**LL.** We recommend that T&TEC provide a status report on its initiatives to prevent frequent outages.

## Benchmarks and Standards

### *T&TEC's Performance to International Utilities*

1.314. T&TEC benchmarks its services to international utilities and monitors its performance. T&TEC's performance has been equally comparable to international utilities, in some cases better than international utilities and in other cases not as good.

1.315. T&TEC continues to put mechanisms in place to improve its performance.

### *T&TEC's performance under Guaranteed Standards*

1.316. In accordance with section 6(1)(e) of the RIC Act, the RIC developed a Guaranteed Standards Scheme for the quality of service that T&TEC provides to its customers. The Scheme consists of eight (8) Guaranteed Standards which specify service levels which must be met for each individual customer by the service provider. T&TEC is required to make compensatory payment to affected customers if it fails to provide the level of service stipulated. The utility's performance under the guaranteed standards is generally high, and its performance for each of the standards for the period 2015 to 2019 is as follows:

**Table 18**

**T&TEC's performance of Guaranteed Standards for the years 2015 to 2019**

Standard	Service Description	Performance Measure	Compliance Rates (%)				
			2019	2018	2017	2016	2015
GES 1	Response and Restoration Time after unplanned (forced) outages on the distribution system.	Time for restoration of supply to affected customers - within 10 hours	99.04	99.76	99.08	99.64	99.90
GES 2	Billing Punctuality (new customers)	Time for first bill to be mailed after service connection: (a) Residential – within 60 days (b) Non-Residential –within 30 days	99.90 92.10	99.90 100.0	99.90 100.0	99.80 98.10	99.96 96.90
GES 3	Reconnection After Payment of Overdue Amounts or Agreement on Payment Schedule	Time to restore supply after payment is made - within 24 hours	99.94	99.96	99.91	99.95	99.96
GES 4	Making and Keeping Appointments	Where required, appointments will be made on a morning or afternoon basis	100.0	100.0	100.0	100.0	100.0
GES 5	Investigation of Voltage Complaints	(i) Response - All voltage complaints to be responded to within 24 hours. (ii) Rectification- All voltage complaints to be rectified within 15 working days.	99.97 99.83	100.0 99.80	99.91 98.40	99.97 98.70	99.86 99.50
GES 6	Responding to Billing and Payment Queries.	Substantive reply within 15 working days.	100.0	100.0	100.0	100.0	100.0
GES 7	New Connection of Supply	Service drop and meter to be installed within 3 working days.	99.99	100.0	99.90	99.90	99.90
GES 8	Payments Owed under Guaranteed Standards	Time to credit compensatory payment: (i) Residential – within 30 working days (ii) Non-Residential – within 60 working days	N/A N/A	N/A N/A	0.0 100	0.0 N/A	0.0 N/A

1.317. T&TEC has consistently achieved an average compliance rate of over 96% for the past seven (7) years, resulting in high levels of customer service performance.

### *Compensation to Customers*

1.318. Under the Guaranteed Standards Scheme, T&TEC is required to make compensatory payments to affected customers whenever there is a breach of a guaranteed standard. Compensatory payments are automatically assessed and credited to customers' accounts for all guaranteed standards, except Guaranteed Electricity Standards (GES) 1 (Restoration Time after unplanned outages) as T&TEC is unable to identify the individual customers that are affected by an outage without a claim. T&TEC is currently rolling out an outage management system to allow for automatic compensation under GES 1. The payments made by T&TEC and amounts owed in compensation for the past five years are shown in the table below as provided by the RIC:

**Table 19**  
**T&TEC's Compensatory Payments 2016 -2020**

Year	Payments Made (TT \$)	Amount Owed in Compensation (TTS)*
2020	1,208	0
2019	3,654	0
2018	2,652	0
2017	4,164	500
2016	5,490	2,386

\*All amounts owed were paid off by T&TEC and there is currently no outstanding balance.

1.319. T&TEC indicated that 0.014% (or 0.00014) of electricity sales revenue is paid in compensation arising from the GES and damage appliance claims.

#### ***T&TEC's Overall Standards***

1.320. The RIC indicated that there are seven (7) Overall Standards under the Guaranteed Standards Scheme. These cover areas of service where it is not appropriate or feasible to give individual guarantees, but where the utility is expected to provide pre-determined minimum levels of service. They do not carry penalties for non-compliance but are monitored by the RIC, and T&TEC's performance is published annually. The details of the standards are at Appendix XVI.

1.321. According to the RIC, T&TEC's performance under the Overall Standards has been generally high for most standards, except for Overall Electricity Standard (OES) 5 (Streetlight Maintenance) and OES 6 (Response to Written Customer Queries) for which the utility's performance has been mixed to poor. The performance over the over the years 2015 to 2019 is shown in Appendix XVI.

1.322. T&TEC's submission confirmed that it has achieved a compliance rate of over 92% for the past 7 years across all the standards, except OES 5 and 6. Improved monitoring procedures have since been implemented resulting in increased compliance across all standards.

1.323. Notwithstanding, T&TEC clearly identified that it needs to examine closely these two (2) items, street lighting and its call centres.

***T&TEC's Challenges with Meeting Overall and Guaranteed Standards as it Pertains to Street Lighting***

1.324. T&TEC is challenged with meeting its overall and guaranteed standards in the area of street lights because it doubled the number of street lights in the country. Given its financial situation, T&TEC is making every effort in terms of its resources to meet its commitments for repairs on street lights.

***The Number of Street Lights in Need of Repair***

1.325. T&TEC's pre-hearing submission, indicated that the number of streetlights in need of repair as at March 18, 2021 was 7,959. The composite figure was based on a combination of customer reports and surveys completed for highways and main roads. The repairs were scheduled to be completed before August 31, 2021.

1.326. However, T&TEC subsequently indicated that the number had been reduced to 5,550 with the implementation of some initiatives.

1.327. The Commission anticipates that by August 2021, the number of outstanding streetlight issues will be further reduced to naught and it will be able to deal with street lighting reports within approximately a week.

1.328. A further clarification into the outstanding figures and the requested completed figures were provided in the table 20 below which provides a breakdown of reports associated with 'Main Roads', 'Highways' and 'Municipalities':

**Table 20**  
**Outstanding and Resolved Reports -Street Lights**

Category	Location	As at Mar 18th 2021	As at April 30th 2021
Outstanding	Main Roads	405	244
	Highway	187	160
	Municipalities	7367	5326
	<b>Total</b>	<b>7959</b>	<b>5730</b>
Completed	Main Roads	237	392
	Highways	493	520
	Municipalities	4088	9130
	<b>Total</b>	<b>4818</b>	<b>9522</b>

1.329. During the period March 18, to April 30, 2021, two thousand four hundred and seventy-five (2,475) reports regarding street lights were received.

#### *Light Poles in Need of Repair*

- 1.330. In the last five (5) years T&TEC has replaced three thousand, five hundred and thirty (3,530) wooden poles on the system with concrete and steel poles.
- 1.331. T&TEC continues to conduct frequent inspections of its plant to identify defective equipment. As a result, any defective pole identified are assigned a priority and replaced in the required timeframe. Priority '1s' are treated as urgent and attended to immediately. For the last five (5) years seven hundred and fifteen (715) Priority 1 poles were attended to.
- 1.332. The Pole Replacement Programme is a part of a larger maintenance plan which identifies inspections and maintenance schedules associated with overhead lines, substation equipment and underground cable installations. Visual inspections are conducted and light poles to be replaced are done in-house and scheduled according to the priority of the defect of the poles. It is imperative to note that a number of pole replacements are also due to vehicular accidents.
- 1.333. Three hundred and sixty-three (363) poles were replaced due to vehicular accidents in the last five (5) years.

1.334. The Commission’s replacement program includes the change out of High-Pressure Sodium (HPS) along highways and other roads ways. One hundred and thirty-two (132) HPS, streetlights along the Lady Hales Avenue, San Fernando and Lady Young Road, Barataria, are to be upgraded to the higher efficiency LED luminaires. This process is ongoing.

***Requests for Street Lighting, Parks and Grounds Illumination and The Number Installed***

1.335. T&TEC indicated that all requests received are referred to the MPU for consideration and approval. Approvals cannot be granted to all requests unless investigations reveal that same is meritorious given that the MPU must be cognisant of the recurrent charges which are no longer paid for by the Municipalities. A breakdown of jobs received and completed over the past five (5) years is shown below:

**Table 21**

**Breakdown of Street Lighting Jobs Received and Completed by T&TEC for the years 2017 to 2021**

Year	2021		2020		2019		2018		2017		Total (5 Years)	
	Received	Completed	Received	Completed	Received	Completed	Received	Completed	Received	Completed	Received	Completed
Requests for Streetlights	261	13	444	150	441	105	439	73	508	84	2093	425
Requests for illumination of Parks	0	0	0	0	1	0	0	0	1	2	2	2
Requests for illumination of Recreation Grounds	0	1	7	19	19	14	13	5	12	20	51	59 **

NB: \*\* - B/f values included

Source: Additional Submission from T&TEC May 25, 2021

***Payments Made by the Respective Municipal Corporations for Street Lights***

1.336. The Committee was advised that recurrent payments regarding street lights are no longer made by the respective Municipal Corporations; they are paid for by the MPU.

***The Number of Complaints Received by the RIC about T&TEC***

1.337. Table 22 below provides the data on the number of complaints received by the RIC about T&TEC as at the end of each respective year:

**Table 22**  
**No. of Complaints received by the RIC regarding T&TEC for the years 2016 to 2020**

Status	2016	2017	2018	2019	2020	Total
No. of Complaints Received	1025	911	590	347	333	3206
No. of Complaints Resolved	868	748	500	292	300	2708
No. of Complaints Withdrawn*	4	0	0	1	0	4
No. of Complaints Unresolved	153	163	90	54	33	494
Resolution Rate	85%	82%	85%	84%	90%	-
Resolved in favour of Customers	828	718	466	262	273	2547
Resolved in favour of T&TEC	40	30	34	30	27	161

\*Complaints that were withdrawn were only done based on the customer's request.

1.338. Complaints against T&TEC are filed into the following nine categories identified below. The number of complaints received between the period 2016 to 2020, and their respective percentages by category, is provided in the table below:

**Table 23**  
**Categories of Complaints received during the period 2016 to 2020**

Complaint Category	No of Complaints	Percentage
Street Lights - Repair & Installation	1904	59.4%
Request for Service	272	8.5%
High / Low Voltage	194	6.1%
Other	186	5.8%
Poles - Removal & Relocation	172	5.4%
Power Outages	130	4.1%
Damaged Appliances	128	4.0%
Billing Query	111	3.5%
Lines - Removal/relocation/repair	109	3.4%

The category "Other" comprises of complaints related to the following:

- Other Liability Claims (Damage to Property)
- Illegal Connection
- Vegetation Management (Tree Trimming)

***The Value of Rebates to Customers Paid by The Commission for the past five (5) Years by Year***

1.339. Over the period 2016 to 2020, T&TEC has paid \$0.99M in rebates to forty-three (43) customers who filed their complaints with the RIC:

**Table 24**  
**Rebates paid by T&TEC for the years 2016 to 2020**

2016	2017	2018	2019	2020	Total
\$	\$	\$	\$	\$	\$
226,311	11,365	113,125	35,892	606,946	993,639

## FINDINGS

- 127) T&TEC’s performance has been equally comparable to international utilities, in some cases better than international utilities and in other cases not as good.
- 128) The Commission has performed quite well under both the Guaranteed Standards and the Overall Standards, consistently achieving an average compliance rate of over 96% and 92% respectively for the past seven (7) years, resulting in high levels of customer service performance.
- 129) T&TEC’s performance under the Overall Standards has been generally high for most standards, except for OES 5 (Streetlight Maintenance) and OES 6 (Response to Written Customer Queries) for which the utility’s performance has been mixed to poor.
- 130) T&TEC indicated that it needs to examine OES 5 and 6 closely.
- 131) T&TEC is challenged with meeting its overall and guaranteed standards in the area of street lights because it doubled the number of street lights in the country.
- 132) Given its financial situation, T&TEC is making every effort in terms of its resources to meet its commitments for repairs on street lights.
- 133) 0.014% (or 0.00014) of electricity sales revenue is paid in compensation arising from the Guaranteed Electricity Standards and damage appliance claims.
- 134) The largest amount of street light issues emanates from the municipalities.
- 135) The initiatives T&TEC has been employing were successful in reducing 2,409 outstanding streetlight issues from 7,959 to 5,550 within three (3) months March 18, 2021 to June, 2021.



- 136) The Commission anticipates that by August 2021, the number of outstanding streetlight issues will all be resolved and it will be able to deal with street lighting reports within approximately a week.
- 137) In less than half of a month, March 18, 2021 to April 30, 2021, two thousand four hundred and seventy-five (2,475) reports regarding street lights were received.
- 138) In the last five (5) years, T&TEC has replaced three thousand, five hundred and thirty (3,530) wooden poles on the system with concrete and steel poles.
- 139) For the last five (5) years, seven hundred and fifteen (715) Priority 1 poles were attended to.
- 140) Similar to T&TEC's performance under OES 5 and 6, the highest number of complaints received were in the category of Streetlight – repair and installation and Requests for Service.
- 141) The number of complaints received by the RIC about T&TEC have been consistently decreasing over the years 2016 to 2020.
- 142) The majority of the complaints for the years 2016 to 2020 were resolved in favour of customers as opposed to T&TEC.
- 143) The Resolution Rate increase in the year 2020.
- 144) T&TEC paid approximately sixty-one percent (61%) of total rebates for the years 2016 to 2020 to customers in the year 2020.

## RECOMMENDATIONS

**MM. We recommend that T&TEC continue to implement initiatives to reduce the number of street light issues.**

**NN. The Committee looks forward to T&TEC resolving all outstanding streetlight issues by August 2022, and we recommend that T&TEC submit a progress report regarding same in its Ministerial Response.**

## Human Resources at T&TEC

### *The Various Categories of Employees at the Commission*

1.340. According to the MPU, in accordance with Section 10 (1) of T&TEC's Act Chapter 54:70, T&TEC comprises an Executive Management Team led by the General Manager and as at the end of December 2020, there were two thousand, six hundred and four (2,604) permanent staff and two hundred and ninety-nine (299) contract staff.

1.341. T&TEC outlined its various categories of employees in Table 25 as at March 16, 2021:

**Table 25**  
**Various Categories of Employees at T&TEC**

Description	Establishment as at March 16 <sup>th</sup> 2021			
	Permanent	Contract	Temporary	Total
Executive	50	2	0	52
Senior Staff	163	1	0	164
Monthly Rated	1266	12	95	1373
Monthly Rated Estate Police	46	0	0	46
<b>Total Monthly Rated</b>	<b>1525</b>	<b>15</b>	<b>95</b>	<b>1635</b>
Hourly Rated	864	0	243	1107
Hourly Rated Estate Police	202	0	1	203
<b>Total Hourly Rated</b>	<b>1066</b>	<b>0</b>	<b>244</b>	<b>1310</b>
<b>All Employees</b>	<b>2591</b>	<b>15</b>	<b>339</b>	<b>2945</b>

1.342. The staff at T&TEC are dedicated, hardworking and go beyond the call. The technical capabilities of T&TEC's employees are extremely high. Employees that have left the organisation have migrated and are absorbed quickly by other companies for example Ontario Hydro.

### *Adequacy of trained and skilled workers to deliver an efficient service*

1.343. T&TEC indicated that it has the required training and skills needed to deliver an efficient service. However, if gaps exist the Commission proactively seeks training to address same e.g. renewables.

***Succession Planning***

1.344. 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.

***Benefits to Employees at the Commission***

- 1.345. Employees at the Commission are afforded the benefits such as:
- Death Benefit- applicable to only permanent employees;
  - Employee Savings Plan for Oilfields Workers’ Trade Union (OWTU) and Estate Police Association (EPA) staff where 1.5% of basic salary is paid by the employee and 3% is paid by the Commission;
  - Employee Home Ownership Plan (EHOP)- a total of 155 employees accessed this plan in the past five (5) years at a total value of \$139,965,149.65; and
  - Examination and Award Scheme – a total of forty-seven (47) employees were granted incentives/awards under the Examination and Award Scheme in the past five (5) years by year.

***The Value of the Employee Savings Plan paid by the Commission***

1.346. The Commission’s contribution to Savings Plan by year for the past five (5) years were:

**Table 26**

**T&TEC’s contributions to Savings Plan for the years 2016 to 2020**

<b>Year</b>	<b>Contribution to Savings Plan</b>
2016	\$21,362,423.68
2017	\$25,168,808.18
2018	\$16,343,638.90
2019	\$15,719,784.54
2020	\$15,449,962.88
<b>Total</b>	<b>\$94,044,618.18</b>

***The Number of Employee Deaths in Service over the Past Five (5) Years***

1.347. Nineteen (19) employees have died in service over the last 5 years as follows:

**Table 27**  
**No. of Employee Deaths in Service for the years 2016 to 2020**

<b>Year</b>	<b>No. of employees died in service</b>
2016	6
2017	6
2018	4
2019	1
2020	2
<b>Total</b>	<b>19</b>

***The Measures to Treat with the New COVID 19 Pandemic***

- 1.348. A total of thirty-four (34) employees of T&TEC tested positive for the Covid-19 virus. As a result, T&TEC has implemented measures to safeguard its employees.
- 1.349. Even though T&TEC is an essential service, it tries to rotate employees in a way that would not impact on its services to customers. After extensive discussion with the union and the major bargaining unit, the Commission placed all non-supervisory staff on a fifty percent (50%) rotation, that is, three (3) days on two (2) days off and vice versa or one week on (1) and then off. However, the Commission was unable to extend the rotation to field staff because of the importance of the service they are required to deliver such as monitoring streetlights. Alternately, the Commission implemented staggered working hours to reduce congregation of its field employees. T&TEC also had situations where some employees were afforded to work from home such as Legal Officers and Information Technology (IT) personnel. Although T&TEC cannot afford to not have employees at the Cove Power Plant control room, it has put things in place to ensure that they are safe.
- 1.350. T&TEC's Service Centres are a critical arm of its operations, however this area has the most customer contact. T&TEC implemented a range of measures to ensure the safety of employees. For example, closing hours were changed from 3:45pm. to 2:30pm so that employees can leave at 3p.m. At the start of the pandemic, glass partitions, dips to receive money, intercom systems to interact with customers, sinks, temperature testing, and hand sanitisers were implemented. Also, T&TEC ensures that its Security manages the Service

Centres closely. Based on all the measures implemented the Commissions deemed the Service Centres as one of the safest places in the Commission.

- 1.351. Sanitisation is critical to T&TEC. T&TEC has made its offices safe and implemented all the possible safety measures to reduce the risk of contracting the Covid-19 virus and to protect employees.
- 1.352. The Commission also produced an employee handbook which contains all the expected protocols. The Commission had some instances of persons not following the rules and is dealing with the issue which calls for a behavioural change. T&TEC has been reinforcing all the requirements, the Ministry of Health's protocols and has been using posters, ongoing announcements as reminders of what is expected.
- 1.353. Notwithstanding the above-mentioned measures on August 5, 2021, T&TEC indicated in a press release that, *inter alia*, "T&TEC has decided that all office employees will return to work on August 3rd and all field employees on August 5<sup>th</sup>".<sup>26</sup> The OWTU described the decision by management of T&TEC to call all employees back to work as irresponsible.<sup>27,28,29</sup> T&TEC responded to the concerns raised by the OWTU and indicated *inter alia* that the return of the full workforce is necessary as the rotation measure is affecting the reliability of its service<sup>30</sup>.

---

<sup>26</sup> CNC 3 News and Trinidad and Tobago Guardian August 5, 2021 "T&TEC: No choice but to bring workers back out"

<https://www.cnc3.co.tt/ttec-no-choice-but-to-bring-workers-back-out/>

<https://www.guardian.co.tt/news/ttec-no-choice-but-to-bring-workers-back-out-6.2.1367601.18c965e374>

<sup>27</sup> Trinidad Express August 6, 2021 "Union shocked as T&TEC calls employees back to work"

[https://trinidadexpress.com/newsextra/union-shocked-as-t-tec-calls-employees-back-to-work/article\\_6a42b14a-f6c8-11eb-84b2-2b821a6d9b4f.html](https://trinidadexpress.com/newsextra/union-shocked-as-t-tec-calls-employees-back-to-work/article_6a42b14a-f6c8-11eb-84b2-2b821a6d9b4f.html)

<sup>28</sup> Trinidad and Tobago Guardian August 6, 2021 "OWTU: Return of all T&TEC staff to work can cause COVID spike"

<https://guardian.co.tt/news/owtu-return-of-all-ttec-staff-to-work-can-cause-covid-spike-6.2.1367687.7c6b8d261a>

<sup>29</sup> Trinidad and Tobago Newsday August 5, 2021 "OWTU accuses T&TEC of endangering workers, public"

<https://newsday.co.tt/2021/08/05/owtu-accuses-ttec-of-endangering-workers-public/>

<sup>30</sup> Trinidad and Tobago Newsday August 6, 2021 "T&TEC responds to OWTU complaint: Return of full workforce is necessary"

<https://newsday.co.tt/2021/08/06/ttec-responds-to-owtu-complaint-return-of-full-workforce-is-necessary/>

### *The Measures to Reduce Wait Times That May Lead to Longer Lines Particularly for the Elderly*

- 1.354. The Commission has implemented a number of measures to discourage customers from visiting its service centres. In March, 2020, T&TEC developed a Quick Pay page for customers to make payments via credit card or visa debit card. The Quick Pay application allows payments to be credited almost immediately and provides the customer with balances of their accounts. Therefore, customers on the disconnection list who make a payment using this application, almost immediately are struck off the list of arrears.
- 1.355. T&TEC also offered previously an e-billing option so customers do not have to wait for a paper bill via the Trinidad and Tobago Postal Corporation (TTPOST), bills are emailed. Apart from the e-bill option, notification of outstanding amounts is emailed to a customer once T&TEC has the customer's email address.
- 1.356. The Commission is seeking to further develop customer facing systems where reports/complaints can be made and accessed online.

## **FINDINGS**

- 145) The staff at T&TEC are dedicated, hardworking and go beyond the call.
- 146) The technical capabilities of T&TEC's employees are extremely high.
- 147) T&TEC has the required training and skills needed to deliver an efficient service and if gaps exist the Commission will proactively seek training to address same e.g. renewables.
- 148) 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.
- 149) A total of thirty-four (34) employees of T&TEC tested positive for the Covid-19 virus.
- 150) T&TEC implemented measures to reduce the risk of contracting the Covid-19 virus and to protect its employees and customers.
- 151) Although T&TEC is an essential service, it implemented measures to protect employees such as rotation, work from home, and staggered hours where possible in a way that would not impact on its services to customers but later had to revert to all office employees returning to work because the measures were negatively impacting on the reliability of its service.

- 152) The Commission is seeking to further develop customer facing systems where reports can be made and accessed online.

## RECOMMENDATIONS

**OO.** We recommend that T&TEC prepare a succession plan for the MPU's consideration to ensure the adequacy of staff, given that two hundred and sixty-seven (267) persons are due for retirement in the next five (5) years.

## Contracted Works

### *Timeframe for Payment for Contracted Works*

- 1.357. Tree Trimming is done on a contractual basis and payments for Tree Trimming works are made in accordance with the payment schedule identified in the contract. Payments are made in approximately two (2) months after receipt of invoice for completed works. If the installation of banners/pennants are given to contractors, a similar payment regime is applied.

### *Measures to Ensure Value for Money of Contractual Works*

- 1.358. T&TEC carries out inspection on all works being executed by contractors to ensure works are being done to T&TEC's standard. The contractor does not receive payments unless the job is completed to T&TEC's satisfaction and standards. The contracts contain clauses that identifies penalties for poor quality of work.

## FINDINGS

- 153) T&TEC has adequate measures in place for ensuring value for money of contractual works.

## **OBJECTIVE 2. THE CHALLENGES RELATED TO MANAGING POWER AND ELECTRICITY SERVICES IN TRINIDAD AND TOBAGO**

### *The Main Challenges faced by T&TEC in relation to Administration and the Management of Power and Electricity Services across Trinidad and Tobago*

- 2.1 T&TEC submitted the following challenges in relation to the administration and management of power and electricity services across Trinidad and Tobago:
- Challenge of acquiring Right of Ways to construct new Transmission and Sub transmission circuits;
  - Vegetation Management;
  - Foreign Exchange (USD) challenges; and
  - Low tariffs.
- 2.2 The MPU also submitted information on T&TEC's challenges and actions at Appendix XVII.
- 2.3 According to the MPU, T&TEC currently uses an all-encompassing approach to tackling the challenges faced by the Electricity Sector. The MPU also indicated that T&TEC prioritises its operation by not compromising on the reliability of service provided to customers.

### *The MPU's role in assisting to Address T&TEC's Challenges*

- 2.4 In respect of the Ministry's role, MPU essentially functions in a supportive and facilitative role in the Commission's approach to tackling challenges and provides strategic direction for implementation of government policy for the Electricity Sector.

### *The Issue of Acquisition of Right of Ways*

- 2.5 T&TEC is having an issue with acquiring right of ways to gain access to install infrastructure. It lacks a Power Utility Corridor which exists in other jurisdictions where portions of land are earmarked for construction for utility infrastructure. T&TEC therefore finds itself competing for lands to install infrastructure. T&TEC tries to acquire lands where possible. It also tries to



avoid installing infrastructure where it can create unsafe situations by avoiding construction where its lines may be close to where individuals could build infrastructure.

- 2.6. T&TEC is seeking to include right of way access in its revised legislation to allow the Commission the flexibility to install the infrastructure on the system.
- 2.7. Section 37 of 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. Additionally, where a customer raises an issue of nuisance, T&TEC has to move its infrastructure.
- 2.8. T&TEC tries to get funding and receives same under the PSIP to have right of way access when installing transmission upgrade infrastructure.

#### ***Clarity on the Land Acquisition Matter at Union Ghandi Village***

- 2.9. The Committee was informed that although the Union Ghandi 220KV Line was in the making for quite some time, the Commission is now at the stage where physical construction work on the project has commenced. Actual construction on the line has started.
- 2.10. T&TEC underscored the importance of the Union Ghandi 220KV Line which it deemed as absolutely critical for the country's electricity needs. T&TEC explained that currently it only has one major line which leaves the TGU substation and provides capacity to the grid for half of the country's load demands under normal or off peak conditions and approximately 70 to 75% during peak conditions. However, the line is over ten (10) years old and requires urgent maintenance.
- 2.11. In order to engage in maintenance on the major TGU line, installation of the second line, the Union Ghandi 220KV line has to be completed urgently.
- 2.12. T&TEC served notices under Section 37 of its Act which allowed it to commence the process to acquire the needed lands. Section 37 of the Act clearly outlines the process for installation. Parallel to this, T&TEC has been having individual dialogue with each resident regarding the acquisition of lands. T&TEC offered the residents involved in the matter a value for the land

it is seeking to acquire. T&TEC indicated that there was misunderstanding however, the matter has since been resolved. T&TEC underscored that it is seeking to offer the fair price for the lands it is seeking to access.

- 2.13. In cases where customers presented themselves to the Commission with the documents, T&TEC is offering payments for the particular piece of land. Any other matters that may arise will be dealt with on a case by case basis.
- 2.14. Work on the Union Ghandi 220KV project is ongoing. T&TEC anticipates to maintain its commitment to be fair to all the residents and to ensure the rules will be followed with regard to discussion, and compensation for the parcels of land once the required ownership documentation is provided.

#### ***RIC's Main Challenges with T&TEC***

2.15. The RIC's main challenges with T&TEC are outlined below:

- **Rate Setting** – The RIC has experienced setbacks with the timely submission of the Business Plan and thereafter, with the quality of the submission, when compared to what is required by the RIC. This creates delays in the RIC's timeline for completion of its price review exercise. Refer to ---- for details.
- **Reporting on Standards** – as part of its compliance obligations, T&TEC is required to periodically submit data on its operations to the RIC. The RIC's main challenge has been the timely submission of the required data, and its accuracy. This results in undue delay in the timely publication of RIC's reports.
- **Customer Redress** – from the perspective of investigating complaints by consumers, of their failure to obtain redress from T&TEC with respect to rates, billing and unsatisfactory service, the main challenges have been getting T&TEC to provide new electricity connections within a reasonable time from the date the customer made the request to T&TEC, and replacing defective street-lights. Another challenge has been eliminating the need for customers to have to make a claim for breaches under GES 1.

### ***T&TEC's Challenges with Meeting the Standards Established with the RIC***

- 2.16. The MPU informed the Committee that T&TEC generally meets the RIC Standards, however, there are challenges related to streetlight repairs and associated responses to written customer queries/requests, within the stipulated timeframe. These are OES 5 and 6, respectively. The inability to meet the OES requirements as it relates to streetlights are directly related to the tariffs which have not been increased since 2009; additionally, the rates then did not take into account the number of streetlights that presently exist.

### ***Measures Being Taken by the RIC to Address the Challenges Identified***

- 2.17. With respect to rate setting, the RIC has prepared an Information Requirements: Business Plan document, with detailed guidelines to assist T&TEC in preparing its submission. The RIC is also readily available to clarify any aspect of these guidelines, to further assist T&TEC with fulfilling the requirement. Upon receipt of the Business Plan, the RIC performs internal validation and verification checks, and reverts to T&TEC for clarification, before the data are utilised for regulatory decision-making.
- 2.18. The RIC has conducted an audit of the regulatory reporting system of T&TEC in the Distribution Areas and other departments that are required to collect and report regulatory data to the RIC. T&TEC is now required to prepare a Compliance Manual to standardise the regulatory data collection and reporting activities across all distribution areas.
- 2.19. In relation to the delays experienced by customers who request new connections, the RIC recognised the problem that was occurring and has since modified GES 7 to address this issue. The RIC expects to see improvement on this matter, once the new Quality Service Standards (QSS) is implemented by T&TEC. An implementation meeting between RIC and T&TEC was carded for April 8, 2021.
- 2.20. Street Light maintenance is already an overall standard, however, the RIC will examine this issue as part of its pricing determination.

- 2.21. With respect to automatic payments being made for breaches to GES1, this will be contingent on the implementation by T&TEC of an island wide OMS, which is yet to be implemented for all distribution areas.

## FINDINGS

- 154) According to the MPU to address T&TEC's financial constraints, the rate review should result in a tariff increase.
- 155) Financial constraints have prevented T&TEC in settling outstanding salary negotiations for the various bargaining units.
- 156) T&TEC has been increasing employee awareness on the changing business environment and the Commission's expectations through ongoing communication.
- 157) T&TEC is using a job rotation initiative to enhance skill sets towards employee development and increased productivity.
- 158) There is an additional cost associated with Security Services to perform works in hotspots.
- 159) The Transmission Department is in need of a new building for the employees and the large transmission equipment.
- 160) The MPU is working with the COSL to locate a suitable site for the Transmission Department.
- 161) T&TEC uses an all-encompassing approach to tackling the challenges faced by the Electricity Sector.
- 162) T&TEC prioritises its operation by not compromising on the reliability of service provided to customers.
- 163) T&TEC lacks a Power Utility Corridor where portions of land are earmarked for construction for utility infrastructure.
- 164) T&TEC tries to acquire lands where possible.
- 165) T&TEC tries to avoid installing infrastructure where it can create unsafe situations.
- 166) T&TEC's Act allows it to serve notice to install infrastructure but does not allow for any right of way or ownership.
- 167) T&TEC is seeking to include right of way access in its revised legislation to allow the Commission the flexibility to install the infrastructure on the system.
- 168) Where a customer raises an issue of nuisance, T&TEC has to move its infrastructure.
- 169) The Union Ghandi 220KV line has to be completed urgently.

- 170) The matter of land acquisitions regarding the Union Ghandi 220KV line has since been resolved.
- 171) T&TEC is offering payments for lands for the Union Ghandi 220KV line.
- 172) Work on the Union Ghandi 220KV project is ongoing.
- 173) The RIC has experienced setbacks with the timely submission of the Business Plan and the quality of the submission from T&TEC and has been proactive in preparing an Information Requirements: Business Plan document, detailing guidelines to assist T&TEC in preparing its submission.
- 174) T&TEC is now required to prepare a Compliance Manual to standardise the regulatory data collection and reporting activities across all distribution areas.
- 175) An improvement is anticipated with the modification of GES 7 to address this issues of providing new electricity connections within a reasonable time, and replacing defective streetlights.
- 176) The inability to meet the OES requirement for streetlights is directly related to tariffs that have not been increased since 2009 and do not take into account the current number of streetlights.
- 177) The RIC will examine Street Light maintenance as part of its pricing determination.
- 178) The island wide OMS which is yet to be implemented for all distribution areas will assist with automatic payments being made for breaches to GES1.

## **RECOMMENDATIONS**

**PP. We recommend that T&TEC be granted right of way access via revised legislation to allow the Commission the flexibility to install and maintain required infrastructure on the system.**

**QQ. We recommend that in reviewing the proposed tariff increase, the RIC take into consideration the increased number of streetlights.**

## **OBJECTIVE 3. THE RECOMMENDATIONS TO IMPROVE THE MANAGEMENT STRATEGIES AT THE COMMISSION**

### **Institutional Arrangements, Management and Performance**

### ***The Impact of T&TEC's Current Institutional Arrangement on Productivity and Efficiency in its Processes and Operations***

- 3.1. According to the MPU, T&TEC's current institutional arrangement has improved productivity and efficiency in the internal processes and operations. This has been achieved through continuous improvements techniques, which includes software systems developed by Information Systems Department (IT) and software systems purchased from external providers (O.M.S., Interactive Voice Response (IVR), Vehicle Tracking System).

### ***Management Models to Improve T&TEC's Management and Operations***

- 3.2. The MPU informed the Committee that T&TEC currently has an Executive Management Team. T&TEC is structured into four (4) functional Divisions: Technical Operations, Finance, Human Resources and Operations, each led by a Chief Technical Officer, Chief Financial Officer, Chief Human Resources Officer and Chief Operating Officer, respectively, who reports directly to the General Manager. Other Departments reporting directly to the General Manager are Secretarial, Internal Audit and Corporate Support.
- 3.3. The MPU indicated that it should be noted that the Commission uses several management models for various sections of its operations; therefore, several management models are under consideration in T&TEC's draft Business Plan 2021 to 2025, to improve overall efficiency. The details of these will be finalised in due course and made public.

### ***The Measures Required to Improve the Management of Power and Electricity Services by T&TEC***

- 3.4. The MPU submitted the following with regards to the measures required by T&TEC to improve the management of power and electricity services:

#### **Technical**

1. Ensure all Areas institute the necessary tree trimming contracts to facilitate better vegetation management;
2. Fully implement OMS to allow identification of all outages and associated ripple effects to facilitate more efficient prioritisation of jobs;
3. Fully implement the Vehicle Tracking System to facilitate more efficient dispatch of crews;

4. Complete construction of two (2) 220kV circuits from Union Estate to Gandhi Village to facilitate full dispatch (720MW) of power from Trinidad Generation Substation. This will improve system stability and reduce total gas usage related to power demand;
5. Replace critical aged infrastructure and vehicles;
6. Construct a Power Station at a location in North or East Trinidad to mitigate the risk of not having the required (N -2) contingency on the Pt. Lisas Bamboo Interface; and
7. Install additional Generation in Tobago within the next five (5) years to meet the expected demand in the next five (5) years.

### ***Financial***

8. Continue to enforce the Commission debt collection initiatives; and
9. Ensure that the periodic Rate Review occurs every 5 years as stipulated in Section 48 of the RIC Act.

### ***Administrative***

10. Launch and fully disseminate the new Strategic Plan 2021-2025 to employees;
11. Human Resources;
12. Improve Employee relations; and
13. Improve Productivity.

### ***Ways T&TEC Can Improve Its Overall Performance***

- 3.5. The RIC indicated that T&TEC can improve its overall performance by implementing procedures across distribution areas to standardise its data collection and reporting functions. This will improve the reliability and timeliness of its submissions to the RIC, inclusive of its Business Plan/Information Requirements Submission.

## **FINDINGS**

- 179) T&TEC's current institutional arrangement has improved productivity and efficiency in the internal processes and operations.
- 180) Several management models are under consideration in T&TEC's draft Business Plan 2021 to 2025, to improve its overall efficiency.

- 181) The measures required by T&TEC to improve the management of power and electricity services as submitted by the MPU are achievable as the majority of the measures are already being implemented by T&TEC.
- 182) T&TEC can improve its overall performance by implementing procedures across distribution areas to standardise its data collection and reporting functions.

## RECOMMENDATIONS

**RR. We recommend that T&TEC, MPU and RIC meet to discuss and implement procedures across distribution areas as indicated by the RIC to improve T&TEC's overall performance which should also prove useful in standardising T&TEC's data collection and reporting functions.**

## Policy and Legislation

### *The Changes required to Power Purchase Agreements and to Legislation*

- 3.6. The Committee was informed by T&TEC that changes to the PPAs and to the Laws of Trinidad and Tobago are required to address T&TEC's main challenges.

### *The Changes required to T&TEC's Act to improve the Management and Operations of the Utility*

- 3.7. As it pertains to the changes required to T&TEC's legislation in order to improve T&TEC's Management and Operations, the Committee was informed that in 2017, the Commission completed a thorough review of its Act and made recommendations these are at Appendix XVIII. Same was forwarded to the MPU for consideration.
- 3.8. T&TEC indicated that the legislative amendments are very important because there are two (2) aspects of the legislation:
  - i. Renewables - a lot of work is ongoing with the MPU in this regard. T&TEC had discussions with the MPU concerning the renewables in the legislative amendments, items such as the feed-in tariffs especially for customers who want to bring renewables onto the grid. The information is with the MPU and it is well advanced. It may not be too far away from approval.



- ii. Localised - The other proposal is localised and was also forwarded to the MPU. A lot of work was also put into this proposal. 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.

### ***The Status of the Proposed Legislative Amendments to T&TEC's Act***

- 3.9. As it pertains to the status of the proposed legislative amendments to T&TEC's Act, the MPU indicated that it works with a number of key stakeholders and is at the end process with regards to the revision of the feed-in<sup>31</sup> tariff policy. The MPU also indicated that it is working out an implementation plan for same.
- 3.10. As it pertains to the other legislative amendments, T&TEC is currently at the end process of finalising these amendments to take to the Cabinet and onwards to the Parliament.
- 3.11. The MPU is separating some amendments because some matters are different and are at various levels of importance.

### ***The Order of Priority of the Necessary Amendments in T&TEC's Act***

- 3.12. T&TEC provided the order of priority of necessary amendments in T&TEC's Act at Appendix XIX.

### ***Measures to Improve the Pool of Technical Skills at The Commission***

- 3.13. Current Training Programmes are continually reviewed, and changes are made to maintain best industry practice.

## **FINDINGS**

- 183) Changes to the PPAs and to the Laws of Trinidad and Tobago are required to address T&TEC's main challenges.

---

<sup>31</sup> A feed-in tariff, is a policy tool designed to promote investment in renewable energy sources.  
<https://www.investopedia.com/terms/f/feed-in-tariff.asp>

- 184) The Commission completed a thorough review of its Act and made recommendations for the MPU's consideration.
- 185) The MPU works with a number of key stakeholders, is at the end process with regards to the revision of the feed-in<sup>32</sup> tariff policy and is working out an implementation plan for same.
- 186) T&TEC is currently at the end process of finalising other amendments to take to the Cabinet and onwards to the Parliament.

## RECOMMENDATIONS

**SS. We recommend the legislative review of T&TEC's Act Chapter 54:70 by the MPU based on T&TEC's review of the Act and its recommendations.**

## Conservation

### *Measures to Encourage Conservation of Electricity*

- 3.14. At the time of the last rate review, the RIC mandated T&TEC to engage in public education to encourage conservation and energy efficiency. The RIC has also, encouraged conservation and energy efficiency as part of its public education efforts. Conservation, when there is a metered supply, is an effective way to manage bills. The RIC will continue to mandate T&TEC to educate its customers in this area, and the RIC will continue efforts also.
- 3.15. Both T&TEC and the MPU submitted that T&TEC recently launched an Energy Management Application to aid customers with energy conservation. Customers can monitor and manage their consumption through the application, via the Customer Web Access (CWA).
- 3.16. The Application allows users to set goals for kWh consumption or bill total, monitor their usage habits and use a calculator to estimate the electricity consumed by their specific appliances.

---

<sup>32</sup> A feed-in tariff, is a policy tool designed to promote investment in renewable energy sources.  
<https://www.investopedia.com/terms/f/feed-in-tariff.asp>

- 3.17. Each tool is linked to historical usage, allowing the customer to make realistic plans based on lifestyle. This is particularly beneficial for customers who may have noticed an increase in their bills stemming from higher consumption, with persons being at home for longer periods because of the COVID-19 pandemic.
- 3.18. T&TEC and MPU also submitted that T&TEC's customers are being advised to switch to energy efficient LED bulbs and practice energy management and simple energy conservation habits as posted on its website, Facebook posts and the media, in an effort to reduce customer's electricity consumption and the charges on their electricity bill.

***The Status of LED Light Bulb Distribution Programme***

- 3.19. According to T&TEC's pre-hearing submission 215,970 light bulb were distributed as at March 22, 2021. At the second public hearing held on June 24, 2021 the Committee was informed that T&TEC purchased 1.6 million bulbs of which 895,000 have been collected.
- 3.20. The light bulbs were supplied by Nova Lighting Limited, at a cost of TTD 5.51 (VAT exclusive) per LED lightbulb.
- 3.21. The total cost of the LED light bulb distribution programme as at May 25, 2021 are outlined in Table 28 below:

**Table 28**  
**Breakdown of Cost of LED Light Bulb Distribution Programme**

<b>Expenditure Item</b>	<b>Amount</b>
<b>Capital Cost</b>	<b>\$8,803,726.57</b>
<b>Overtime Cost</b>	<b>\$14,320.93</b>
<b>Marketing Cost</b>	<b>\$163,285.00</b>
<b>Additional Storage Cost</b>	<b>\$68,919.00</b>
<b>Total</b>	<b>\$9,050,251.50</b>

*Source: Additional Information from T&TEC May 25, 2021*

3.22. The Commission has observed a reduction in the electricity consumption which could be attributed to a number of factors such as reduced business operations due to the COVID-19 protocols, request for reduction in reserve capacity and reductions via the use of the LED bulbs.

***Measures in place to Conserve Electricity from Street Lights***

3.23. To conserve electricity from street lights, the Commission has ceased the procurement of HPS Luminaires, which has a higher energy demand and lower efficiency when compared to LED Luminaires. All new installations are done using LEDs.

3.24. Additionally, the introduction of “smart” technology over the next five (5) years will further benefit energy saving through controlling the operation of the lights (i.e. dimming, on/off scheduling and improve maintenance response for “day-burners”). Further, where no electrical infrastructure exist, T&TEC has utilised solar LED Luminaires.

3.25. The percentage of street lights currently carry HPS Luminaires compared to LED Luminaires are outlined in the table below:

**Table 29  
Number of Street Lights by Type**

<b>Location</b>	<b>HPS Lights</b>	<b>LED Lights</b>	<b>Total</b>
<b>Trinidad</b>	<b>194191</b>	<b>3161</b>	<b>197193</b>
<b>Tobago</b>	<b>9963</b>	<b>165</b>	<b>10128</b>
<b>Trinidad and Tobago</b>	<b>202607</b>	<b>3326</b>	<b>207321</b>

**HPS - 98%      LED - 2%**

## FINDINGS

- 187) The RIC continues to mandate that T&TEC to educate its customers in conservation, and continues its conservation initiatives.
- 188) T&TEC's Energy Management Application will aid customers with energy conservation.
- 189) T&TEC's customers are being advised to switch to energy efficient LED bulbs and practice energy management and simple energy conservation habits in an effort to reduce customer's electricity consumption and the charges on their electricity bill.
- 190) The introduction of "smart" technology over the next five (5) years will further benefit energy saving through controlling the operation of street lights.
- 191) T&TEC has utilised solar powered LED Luminaires where no electrical infrastructure exists.
- 192) Only two (2) percent of street lights currently carry LED Luminaires.

## RECOMMENDATIONS

**TT. We recommend T&TEC prepare a programme for the change out of HPS to LED luminaries over a specified period of time and present same to MPU for consideration and funding where possible.**

## Renewables

### *The Areas where T&TEC has Utilised Alternate Solar LED Luminaires*

3.26. Presently, the Commission has installed Solar LED's along the Manzanilla to Mayaro Road where no electrical infrastructure exists. Eighty (80) Solar LED's were installed at this location.

### *Number of Homes with Solar Installations*

3.27. Currently, seventeen (17) homes are in receipt of electricity by way of solar installations as funded by the MPUs' Solar Panel Assistance Programme as illustrated in Table 30 below:

**Table 30**  
**No. of Solar Installations funded by the MPU's Solar Panel Assistance Programme for the years 2015 to 2019**

No. of Homes	Year
1	2015
4	2016
6	2017
4	2018
2	2019

***Plans to Integrate Power Generated from Renewable Energy Sources into T&TEC’s Local Electrical Grids***

3.28. BP, Shell, Lightsource Consortium is the IPP that won the bid for the provision of 112.2 MW of Solar PV renewables. This is to be integrated at sites as follows:

- 92.2 MW at the Brechin Castle 132 kV bus;
- 10 MW at Orange Grove 12 kV bus;
- 10 MW at Piarco 12 kV bus.

3.29. As it pertains to whether T&TEC is purchasing power generated from off-grid solar power systems, the Committee was advised that this study is presently ongoing.

3.30. Based on supplemental information, T&TEC indicated that the study has advanced and will be completed by the end of July 2021.

***An Update On the Four (4) Major Sites Proposed for Wind Renewable Energy***

3.31. Based on the initial 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 per site to obtain a reliable assessment to make a final decision to support the investment. This effort will involve the installation of measurement metres.

- 3.32. T&TEC is also engaged in some civil works, for example, soil analysis to determine what will be required for installing wind meter infrastructure or if a new technology called LIDAR<sup>33</sup> can be implemented. T&TEC is currently working with the MPU and a consultant to provide some guidance regarding the way forward.
- 3.33. T&TEC is looking to advance the project to a state where within the next twelve (12) to eighteen (18) months it should be able to determine whether to implement the wind turbines at the four (4) sites and if so, the amount of energy T&TEC will be able to obtain from each wind turbine.
- 3.34. There is need to get all the measurements in order to determine the amount of power to be derived from the wind turbines. T&TEC is at the stage of measurements.
- 3.35. T&TEC installed a 2.5kW wind turbine at Gasparillo a few years ago, which is a smaller wind turbine and is examining its performance and using the information to analyse the circuitry and the type of knowledge and experience that will be required to manage same. The Commission is working on the project fully to try to get some positive results.

### *The Status of the Use of Wind Energy in Tobago*

- 3.36. The initial study on the use of wind energy in Tobago which was conducted in 2013 proved inconclusive. The Commission is taking measurements over the next five (5) years to determine if this alternative is viable. T&TEC conducted this study at a cost of TT\$140,005.90.

### *The Impact of the Use of Solar Energy On the Demand for Electricity*

- 3.37. With the use of grid-scale solar PV generation, the demand of electricity is the same. However, for the use of rooftop Solar, the demand of electricity from the grid can reduce.

---

<sup>33</sup> Light Detection and Ranging (lidar) is a technology used to create high-resolution models of ground elevation with a vertical accuracy of 10 centimeters (4 inches).

[https://www.usgs.gov/faqs/what-lidar-data-and-where-can-i-download-it#:~:text=Light%20Detection%20and%20Ranging%20\(lidar,10%20centimeters%20\(4%20inches\).](https://www.usgs.gov/faqs/what-lidar-data-and-where-can-i-download-it#:~:text=Light%20Detection%20and%20Ranging%20(lidar,10%20centimeters%20(4%20inches).)

3.38. The Commission is giving consideration to the use of Rooftop Solar.

## FINDINGS

- 193) T&TEC is taking a good approach towards renewable energy by embracing the opportunity instead of viewing it as a threat to the Commission's operations.
- 194) Seventeen (17) homes receive electricity by way of solar installations as funded by the MPUs' Solar Panel Assistance Programme.
- 195) The study on purchasing power generated from off-grid solar power systems has advanced and will be completed by the end of July 2021.
- 196) T&TEC is in the process of obtaining a reliable assessment to make a final decision to support the investment in wind energy.
- 197) The initial study on the use of wind energy in Tobago which was conducted in 2013 by T&TEC at a cost of TT\$140,005.90 proved inconclusive.
- 198) If grid-scale solar PV generation, the demand of electricity is the same but if rooftop Solar generation is used the demand of electricity from the grid can reduce.
- 199) The Commission is giving consideration to the use of Rooftop Solar.

## RECOMMENDATIONS

- UU. **We recommend that the Commission take the lead role in renewable energy sources for power generation in Trinidad and Tobago including the promotion of solar rooftop generation for individual homes.**
- VV. **We recommend that the Commission examine models in various jurisdictions that include renewable energy for example Germany and Sweden.**
- WW. **We recommend that the Commission diligently pursue a policy for the purchase of surplus off-grid solar power from individuals.**

## Infrastructure



### *Implications to Replacing Overhead Lines with Underground Lines*

- 3.39. During the first public hearing T&TEC indicated that it is looking at where it can install underground infrastructure. T&TEC also indicated that although it is trying its best, it is difficult to convert to underground infrastructure because the overhead infrastructure already exists such as building and roads, as opposed to having to engage in excavation to install underground infrastructure.
- 3.40. T&TEC has encouraged new customers to go underground however, they also shy away from that process because of the high cost involved.
- 3.41. Similarly, where possible the Commission encourages customers to use the underground option as the reliability is greater. A good example of the utilisation of underground infrastructure is in the city of Port of Spain where the 6.6kV underground system is presently being upgraded.
- 3.42. In terms of the number of households currently with underground infrastructure, T&TEC indicated that such information was difficult to quantify.
- 3.43. Presently, no consideration is being given to transferring existing Residential & Commercial customers supplied via overhead lines to an underground electrical supply because while the reliability of supply to customers will be improved, the cost of such a conversion is not commensurate with the potential benefits, and therefore cannot be justified from this viewpoint without empirical data. If considered, the primary focus will be to reduce operating and maintenance (O&M) costs.
- 3.44. Given the predicament financially, underground infrastructure would have to be looked at going forward.
- 3.45. As it pertains to the area that will be given consideration to conversion to underground lines, T&TEC indicated that the city of Port of Spain as well as highly vegetated areas will be considered.

- 3.46. The Committee was also advised that apart from underground lines, overhead insulated conductors will be utilised that will allow the Commission to avoid tree cutting.
- 3.47. T&TEC has a number of things in place as it pertains to insulated conductors which are being used in Tobago on the North side and a number of locations in Trinidad.

## FINDINGS

- 200) The Commission encourages customers to use the underground option as the reliability is greater.
- 201) It is difficult to convert to underground infrastructure because the overhead infrastructure already exists.
- 202) It is difficult to quantify the number of households currently with underground infrastructure.
- 203) While the reliability of supply to customers will be improved, the cost of converting to underground infrastructure is not commensurate with the potential benefits.
- 204) T&TEC will give consideration to conversion to underground lines in the city of Port of Spain.
- 205) Apart from underground lines, overhead insulated conductors will be utilised that will allow the Commission to avoid tree cutting.

## RECOMMENDATIONS

**XX. We recommend that T&TEC in collaboration with the MPU explore incentives to encourage new customers to utilise underground infrastructure.**

## Climate Change and Disaster Preparedness

### *Measures Being Taken by T&TEC to Prepare for the Impact of Climate Change*

- 3.48. The measures envisaged to prepare for the impact of climate change are at appendix XX

### *T&TEC's Disaster Preparedness Plan*

- 3.49. T&TEC indicated that when formulating the Strategic Plan 2021-2025, all employees were consulted. In the Plan, the Strengths, Weaknesses, Opportunity and Threats (SWOT) analysis

identified T&TEC's disaster preparedness as a weakness. However, T&TEC indicated that it has systems in place for disaster preparedness and the reason for disaster preparedness being identified as a weakness is because it feels it can do better than what currently exists.

- 3.50. According to T&TEC there are two (2) main aspects of disaster preparedness that will be required: labour and material. The Commission is 90% successful with regards to the availability of labour in a disaster but is at 30% with regards to material resources.
- 3.51. As it pertains to labour, the Commission partnered with CARILEC<sup>34</sup> and other entities that would provide assistance to T&TEC and has details, local contacts, all the contact numbers required, and employees. As such, the Commission is fairly satisfied in the labour aspect of assistance. However, the Commission has a concern with regards to material resources which is insufficient in the event of an emergency. The use of mobile substations was a past initiative that has worked fairly but is not sufficient to manage the entire country.
- 3.52. The Commission is seeking to obtain another set of mobile stations once the Board's approval is received. Parallel to this initiative, T&TEC anticipates to acquire a specially designed amphibious vehicle to access flooded areas. Delivery of same is November, 2021.
- 3.53. Correspondingly, T&TEC has implemented a number of initiatives to procure emergency spares. Through the line Minister and Chairman, the Commission has partnered with Florida Power and Light Company for assistance and guidance with disaster preparedness.
- 3.54. T&TEC is examining how it acquires its spares, in terms of contacts of suppliers to provide spares in a short space of time. The Commission is also tailoring procurement for key items such as poles, transformers, conductors and insulators. T&TEC indicated that it has not mastered the tailoring procurement for key items yet but needs to do so. The Commission

---

<sup>34</sup> The Caribbean Electric Utility Services Corporation (CARILEC) is an association of electric energy solutions providers and other stakeholders operating in the electricity industry in the Caribbean region, Central and South Americas and Globally. <https://www.carilec.org/about-us/>

started the process to get commitments for if an emergency occurs, for instances where the commission requires a second year supply in the first year it can be manufactured without having to pay for same but with a commitment that T&TEC will purchase if not in the first year, in the second year.

- 3.55. T&TEC indicated that there is need to do better in the area of material resources. However, Commission has a system in place and is moving with forward with the system.

## FINDINGS

206) Of concern to the Committee is that disaster preparedness is identified as a weakness in the SWOT analysis in T&TEC's Strategic Plan 2021-2025.

207) T&TEC is 90% prepared with regards to the availability of labour in a disaster but is at 30% with regards to material resources.

208) In the context of the impact of climate change particularly on Small Island Developing nations it is extremely important that T&TEC is adequately prepared for any disaster.

## RECOMMENDATION

**YY. We recommend that T&TEC review and improve its disaster plan as it is a matter of urgency.**

**ZZ. We recommend that T&TEC conduct a detailed study to determine the adaptation and mitigation measures needed to minimise the adverse impact of climate change on its operations and infrastructure.**

4.1. Your Committee therefore respectfully submits this Report for the consideration of the Houses.

Mr. Deoroop Teemal  
Chairman

Mr. Nigel de Freitas  
Vice-Chairman

Mr. Kennedy Richards, MP  
Member

Mr. Symone de Nobriga, MP  
Member

Mrs. Lisa Morris-Julien, MP  
Member

Dr. Muhammad Yunus Ibrahim  
Member

Mr. Anil Roberts  
Member

Mr. Barry Padarath, MP  
Member

# APPENDICIES

---

# APPENDIX I

---

MINUTES OF PROCEEDINGS DATED  
MAY 05, 2021

**MINUTES OF THE SEVENTH MEETING OF THE JOINT SELECT COMMITTEE  
ON LAND AND PHYSICAL INFRASTRUCTURE  
HELD ON WEDNESDAY MAY 05, 2021, 2021 AT 1:30 P.M.**

**Present:**

Mr. Deeroop Teemal	-	Chairman
Mr. Nigel De Freitas	-	Vice Chairman
Mr. Symon de Nobriga, MP	-	Member
Mrs. Lisa Morris-Julian, MP	-	Member
Mr. Kennedy Richards, MP	-	Member
Mr. Saddam Hosein, MP	-	Member
Mr. Anil Roberts	-	Member

**Secretariat:**

Mr. Johnson Greenidge	-	Secretary
Ms. Renee Batson	-	Assistant Secretary
Ms. Katharina Gokool	-	Graduate Research Assistant

**The meeting was facilitated via Zoom Video Conference**

**PUBLIC HEARING (VIRTUAL): AN INQUIRY INTO THE MANAGEMENT OF T&TEC  
AND RELATED RECOMMENDATIONS**

7.1 The meeting resumed at 2:00 p.m.

7.2 The following officials joined the meeting:

**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

7.3 The Chairman welcomed the witnesses present and gave opening remarks. Introductions were exchanged.



7.4 The General Manager, T&TEC gave an opening statement.

7.5 The **Appendix** herein contains a summary of questions and concerns raised during the hearing.

7.6 The following additional information was requested from T&TEC:

- (i) Provide the savings/revenue generations expected in the next five (5) years from the twelve (12) point Operational Plan.
- (ii) Provide a report on the Commission's aged receivables.
- (iii) Provide details of T&TEC's Risk Management Policy.
- (iv) Provide the number unplanned and forced outages for the past five (5) years by year.
- (v) Outline the order of priority in terms of necessary amendments being sought as it pertains to the Commission's strategic planning and management strategies.

## **ADJOURNMENT**

9.1 The meeting was adjourned to **Wednesday May 19, 2021 at 1:30 p.m.**

9.2 The adjournment was taken at 3:52 p.m.

I certify that these Minutes are true and correct.

Chairman

Secretary

*May 10, 2021*

## **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.

#### **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 Savannah 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.
- xxxi. 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.
- xxxii. Non-dispatchable will lose power if there is cloud cover or rain.
- xxxiii. The non-dispatchable electricity generation rate of 4 cents cannot be guaranteed.
- xxxiv. There is need to maintain the level of disputable resources particularly when non-dispatchable resources are unavailable.
- xxxv. The move to dispatchable will result in a rate from 4 cents to 8 cents.
- xxxvi. 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.
- xxxvii. 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<sup>35</sup> 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.

---

<sup>35</sup> <https://www.carilec.org/>

- 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.
- 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.
- xxxiii. 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 \$2,175861408B 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**

- i. T&TEC is at the border line and can impact reliability in the future if it is not careful.
- ii. It is very important that T&TEC gets a solution.
- iii. 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.
- iiii. T&TEC is at a point where it can slip and if it does reliability will be affected.
- lv. 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.
- lxxxix. 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.
  - xc. 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.
  - xc. T&TEC is currently working with the MPU and a consultant to provide some guidance regarding the way forward.
  - xcii. 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.
  - xciii. 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.

*Committee's Secretariat*  
*June 14, 2021*

# APPENDIX II

---

MINUTES OF PROCEEDINGS DATED  
JUNE 24, 2021

**MINUTES OF THE RESCHEDULED EIGHTH MEETING OF THE JOINT  
SELECT COMMITTEE ON LAND AND PHYSICAL INFRASTRUCTURE  
HELD ON THURSDAY JUNE 24, 2021 AT 9:30 A.M. (IN CAMERA) AND  
THEREAFTER AT 10:00 A.M. (IN PUBLIC)**

**Present:**

Mr. Deeroop Teemal	-	Chairman
Mr. Nigel De Freitas	-	Vice-Chairman
Mr. Symon de Nobriga, MP	-	Member
Mrs. Lisa Morris-Julian, MP	-	Member
Mr. Kennedy Richards, MP	-	Member
Mr. Saddam Hosein, MP	-	Member
Mr. Anil Roberts	-	Member

**Secretariat:**

Mr. Johnson Greenidge	-	Secretary
Ms. Renee Batson	-	Assistant Secretary
Ms. Katharina Gokool	-	Graduate Research Assistant

**The meeting was facilitated via Zoom Video Conference**

**2<sup>nd</sup> PUBLIC HEARING (VIRTUAL): AN INQUIRY INTO THE MANAGEMENT OF  
T&TEC AND RELATED RECOMMENDATIONS**

- 3.1 The meeting resumed at 10:01 a.m.
- 3.2 The following officials joined the meeting:

**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

**Officials from the Ministry of Public Utilities**

Ms. Nicolette Duke	Permanent Secretary
--------------------	---------------------

Ms. Beverly Khan	Deputy Permanent
Ms. Arlene Collis	Director of Economic
Ms. Gale Dulal	Electrification Sector Specialist

**Officials from the Regulated Industries Commission**

Mr. Glenn Khan	Executive Director
Mrs. Dawn Callender	Chairman
Ms. Carol Balkaran Deputy	Executive Director
Ms. Nadia John	Legal/Corporate Secretary
Mr. Derrick Phillip	Assistant Executive Director, Technical Operations

- 3.3 The Chairman welcomed the witnesses present and gave opening remarks. Introductions were exchanged.
- 3.4 The chief representatives present gave opening statements.
- 3.5 The **Appendix** herein contains a summary of questions and concerns raised during the hearing.

**ADJOURNMENT**

9. The adjournment was taken at 3:52 p.m.

I certify that these Minutes are true and correct.

Chairman

Secretary

*September 07, 2021*

***Appendix***

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

### **T&TEC's reason for the delay in submitting the requisite data to the RIC**

- xlvi. T&TEC completed the majority of its Business Plan.
- xlvii. The Business Plan is completed however, the final item, the price of the gas is a very important item which determines the end value of the rate.

### **Purchasing price of Natural Gas from the National Gas Company (NGC)**

- xlviii. The current cost of gas is \$1.5882 per MMBtu from the NGC.
- xliv. The 1.5882 value determines what the cost of gas is and the overall operational cost at T&TEC.
  - i. When the present cost is taken into consideration, the value is approximately \$995M, close to \$1B.
  - ii. Where there is no subsidy on the price of natural gas, the rate will be US9¢ per kilowatt, per hour.
  - iii. Any unsubsidised rate begins at US12¢ per kilowatt per hour in any jurisdiction.
- lv. T&TEC is suffering an annual loss of \$1.1B and is unable to pay the NGC even at the subsidized rate.
- lv. The subsidized rate is one half of the value of gas on the open market.
- lv. At US1.5882 per MMBtu, T&TEC is still unable to pay the subsidized rate. To pay even the unsubsidised rate, has created a shortfall of US1.1Bn annually to T&TEC.

### **Whether T&TEC has a dedicated department or staff that is responsible for providing timely information to the RIC**

- lvi. T&TEC has a small department which interacts exclusively with the RIC.
- lvii. Reporting to the RIC is mostly up-to-date.

### **Whether T&TEC is engaging in a similar disconnection exercise to the WASA**

- lviii. T&TEC continues to encourage all customers to pay their bills.
- lix. All T&TEC's Service Centres are open to the public and fully operational.

- lx. There are many options to encourage customers to pay their bills.
- lxi. T&TEC indicated to the Ministry of Public Utilities (MPU) that any customer who is having difficulty with paying their bills are advised to visit T&TEC to set up an arrangement to do so.

#### **Opportunities for Bill reductions for Customers**

- lxii. Out of four hundred and forty-five thousand customers (400,045), T&TEC has two hundred and ten (210) customers whose bill is \$300 or less and receives a discount of 25%.
- lxiii. T&TEC purchased 1.6 million bulbs of which 895,000 have been collected.
- lxiv. Based on T&TEC's analysis only 16% of customers whose bills are in the lower tier, less than three hundred dollars (\$300), have collected their bulbs.
- lxv. Customer's kilowatt consumption can be further reduced if LED bulbs are used over a two (2) month period, resulting in a reduction of fifteen dollars (\$15) off their bills.
- lxvi. The country benefits by using LED bulbs which are more efficient than incandescent bulbs and there is further savings for T&TEC in terms of gas usage.
- lxvii. A couple of T&TEC's outlets are not distributing LED bulbs such as Broadway, Port of Spain and Rio Claro.

#### **Whether the pandemic affected consumption and reduced revenue**

- lxviii. T&TEC observed a significant reduction in kilowatt hours.
- lxix. In addition, T&TEC observed that a number of customers applied for a reduction in capacity which is affecting its cost of doing business.
- lxx. T&TEC signed approximately thirty (30) applications in May, 2021 for reduction in reserve capacity.
- lxxi. Many customers are migrating from industrial to commercial users at lower rates.
- lxxii. T&TEC has observed an increase in domestic usage because people are home.
- lxxiii. Based on its overall analysis, T&TEC observed a significant reduction in kilowatt per hour consumption over the last period.

#### **Whether T&TEC has received guidance from the Cabinet to desist disconnections during the State of Emergency**



- lxxiv. T&TEC has received guidelines from the MPU and has been encouraging customers to pay their bills.
- lxxv. T&TEC does not engage in disconnection for the non-payment of a first bill.
- lxxvi. T&TEC has had no complaints regarding disconnections.

#### **Projected impact of new Power Purchasing Agreements (PPA's) on existing PPA's**

- lxxvii. Once the negotiations for new PPA's are completed and capacity becomes available, T&TEC will take all generation from the producer.
- lxxviii. T&TEC needs to be mindful that it is looking to a rate of USD4¢ per kilowatt per hour.
- lxxix. Generation is currently at an average of US4.7¢ and unsubsidised at US5.9¢, therefore the new PPA's would not impact significantly on the current PPA's.
- lxxx. Once the capacity from the new PPA's become available, they will result in significant cost savings.

#### **Clarity on the land acquisition matter at Union Ghandi Village**

- lxxxi. Although the Union Ghandi 220KV Line was in the making for quite some time, the physical work on the project has only now commenced.
- lxxxii. The circuit one of T&TEC's only line which leaves the TGU substation and provides capacity to the grid is over ten (10) years old and requires urgent maintenance.
- lxxxiii. The TGU line supplies half the electricity load under normal conditions and approximately 70 to 75% during peak conditions.
- lxxxiv. T&TEC served notices under Section 37 of its Act which allowed the Commission to commence the process.
- lxxxv. T&TEC has been having individual dialogue with each resident as it pertains to acquisition of lands.
- lxxxvi. T&TEC anticipates to maintain its commitment to be fair to all the residents and to ensure the rules will be followed with regard to discussion, and compensation for the parcels of land once the required documentation is provided.
- lxxxvii. T&TEC confirmed that the land acquisition matter at Union Ghandi Village has been resolved.

#### **Reason for the increase in the number of unplanned outages**

- lxxxviii. The increase in unplanned outages over the last few years has been attributed to line clearing issues owing to delays in establishing line clearing contracts in 2019 and 2020.
- lxxxix. Contracts were enforced in late 2020, that is, September into October.
  - xc. T&TEC has been pushing to engage in extensive line clearing to reduce outages.
  - xci. T&TEC is using modern technology such as auto enclosures and other devices to reduce outages.
  - xcii. T&TEC is examining the causes of outages such as trees, vermin and is trying to use technology to treat with outages.
  - xciii. An improvement with regard to outages is anticipated by 2022.

#### **Discussion on new and illegal connections**

- xciv. T&TEC has an amnesty programme which encourages customers with an illegal connection to visit T&TEC to become regularised.
- xcv. Once the period of the amnesty has expired, customers who continue to be illegally connected will be disconnected must pay for the period of illegal supply.
- xcvi. Approximately forty-seven (47) customers responded to the amnesty.
- xcvii. The process and timeframe for new connections depends on whether the existing infrastructure is close to the structure for new connections.
- xcviii. Where infrastructure exists new connections can take up to two weeks.

### **Key Issues Discussed with the Ministry of Public Utilities (MPU)**

#### **The reason for the non-confirmation of the Natural Gas Price**

- xcix. The process for confirming the Natural Gas Price does not only involve the MPU, a larger committee is addressing the issue.
  - c. The price of natural gas that T&TEC purchases at, is a key factor in determining the Business Plan and any rate review process.
  - ci. The MPU developed several scenarios of what the gas price could be.
  - cii. The MPU has taken into consideration, the impact on different segments of consumers, their ability to pay. These considerations are also balanced with the utility and its ability to meet operational expenditure as well as undertake capital investments to ensure the supply of electricity continues to be reliable and of high quality.

- ciii. All the scenarios, its impact and implications on the various objectives and elements on the matter is currently before the Energy Sub-Committee of the Cabinet.
- civ. The MPU developed an Economic Model and examined both the economic impact on T&TEC and the social impact in terms of various segments of the country, standard of living and differing rate increases to different prices.
- cv. The analysis requires careful deliberations as well as consideration on the implications on the natural gas market and the way in which dwindling resources in terms of natural gas, are effectively utilised.
- cvi. The MPU has placed significant emphasis on the consumer's ability to pay especially residential customers of T&TEC.
- cvii. The MPU considered a subsidy based on the current economic situation.
- cviii. The issue of subsidizing on the gas price side of the equation was very prominent in most of the scenarios examined by the MPU.

**The reporting relationship between or role of the MPU in terms of timely submissions of reports from the T&TEC necessary for the RIC to conduct rate review?**

- cix. The MPU's Customer Service Unit also receives complaints and contributions from the public and notifies the T&TEC. T&TEC is asked to respond and to accommodate action within a specific period.
- cx. MPU also makes its own assessment on whether T&TEC is meeting the quality standards established by the RIC.

**Whether the MPU's utilities assistance programme will be expanded to more persons and the length of time it takes to process an application for payment of a T&TEC Bill**

- cxii. The Utilities Assistance Programme is based on a policy approved by the Cabinet. Any expansion of the Programme will require variation in the policy.
- cxiii. The Utilities Assistance Programme has several components. One component of the programme includes a reduction on both electricity and WASA bills. There are other components related to water tank assistance and solar panel assistance.
- cxiiii. Any person whose salary is below \$5,000 is eligible to apply to the programme.
- cxv. The MPU engages in an assessment verification process.
- cxvi. A maximum of \$1200 per annum can be accessed for electricity under the Programme.

- cxvi. The MPU also has a Rebate Programme where any customer who has a bill of \$300 or less is eligible for a 25% discount. Approximately fifty percent (50%) of residential customers are benefiting from the Rebate Programme.
- cxvii. The MPU oversees the following programmes as well
  - a. the Residential Electrification Programme which provides electricity to several households across the country to facilitate online learning; and
  - b. the Electrification Programme which provides electrical infrastructure to the household.

### **The Status of T&TEC's Legislative Amendments**

- cxviii. The revision of the feeding tariff policy is almost complete and the MPU is working out an implementation plan for same.
- cxix. The MPU is separating some amendments because some matters are different and are at various levels of importance.
- cxx. It is important that T&TEC charges a tariff that would keep the utility whole considering all of its costs including that of natural gas, generation, transmission and distribution.

### **Key Issues Discussed with the Regulated Industries Commission (RIC)**

#### **The basis of the RIC assessment and the reason for the gap in conducting a price review of T&TEC rates**

- cxxi. The RIC conducts periodic reviews every five (5) years.
- cxxii. At the end of the last review, efforts were made to conduct another rate review however rate reviews require information to be submitted.
- cxxiii. The RIC experiences delays in receiving information and having the full body of variables to conduct a successful review.
- cxxiv. The gap in the price Review was attributed to T&TEC's lack of reporting to the RIC.
- cxxv. The RIC did not receive all of the information necessary to conduct the rate review.
- cxxvi. Once the RIC receives all of the initial information from the T&TEC, the review may take approximately twelve (12) months.
- cxxvii. The RIC tests the information it receives through an economic model and does not simply accept the need for an increase in rates.

- cxxviii. The RIC analyses and examines the impact of a recommended rate increase on various sectors, the need for a subsidy and who should provide the subsidy.
- cxxix. After the process of analysing the impact of a recommended rate increase has ended within one to three months, the RIC will be able to determine the effect of a rate increase.
- cxxxx. The RIC considers different scenarios to determine the impact of rate increases on various users and tries to keep the World Bank's baseline for electricity rates, less than ten percent (10%) of household disposable income.
- cxxxii. The RIC will take into consideration other countries especially producers of natural gas to determine how these countries would have treated with the price of gas and arrive at the rate of electricity.
- cxxxiii. The RIC formulates its own position.
- cxxxiiii. The RIC also engages in a lot of benchmarking and examines various international and regional jurisdictions from two perspectives, the type of quality of service standards, the rates and the performance associated with it as well as how they conduct rate reviews for implementation in the organisation.
- cxxxv. The RIC uses a financial economic model which is the basis of commencing its analysis.

**Whether the cost of producing natural gas is the number one factor impacting the cost of electricity**

- cxxxvi. The cost of producing natural gas is the number one factor impacting the cost of electricity.
- cxxxvii. The RIC examines T&TEC's operational cost not the price of natural gas.
- cxxxviii. The RIC accepts the cost of natural gas because T&TEC cannot do anything about the price of natural gas.
- cxxxix. The RIC is not unconcerned about the price of natural gas but when engaging in the analysis, the operational cost of T&TEC is examined and not that of the NGC.
- cxxxix. A subsidy is the responsibility of government, the RIC has no input in determining the subsidy.

**The RIC's Public Outreach and Communications Plan**

- cxli. The RIC uses a number of communication channels to reach, educate and inform the public through advertisements, information brochures, community outreach meetings and presentations.
- cxli. The RIC has not been able to engage in outreach meetings due to the pandemic.

- cxlii. The RIC would recommence outreach meetings as soon as time and circumstances allow.
- cxliii. The RIC is incubating an online platform via Facebook for interfacing with the public.
- cxliv. It was the aim of the RIC to hold more consultations than in the past, including two in Tobago as well as Arima and Central.

*Committee Secretariat*

*September 07, 2021*

# APPENDIX III

---

UNREVISED VERBATIM NOTES OF  
PROCEEDINGS DATED MAY 05, 2021

**UNREVISED**

**UNREVISED VERBATIM NOTES OF THE SEVENTH VITUAL MEETING OF THE  
JOINT SELECT COMMITTEE ON LAND AND PHYSICAL INFRASTRUCTURE HELD  
ON WEDNESDAY, MAY 05, 2021, AT 2.00 P.M.**

**PRESENT**

Mr. Deeroop Teemal	Chairman
Mr. Nigel de Freitas	Vice-Chairman
Mrs. Lisa Morris-Julian	Member
Mr. Saddam Hosein	Member
Mr. Kennedy Richards	Member
Mr. Symon de Nobriga	Member
Mr. Anil Roberts	Member
Mr. Johnson Greenidge	Secretary
Ms. Renee Batson	Assistant Secretary
Ms. Katharina Gokool	Graduate Research Assistant

**TRINIDAD AND TOBAGO ELECTRICITY COMMISSION**

Mr. Kelvin Ramsook	General Manager
Mr. Neil Balgobin	Chief Financial Officer
Mr. Chrisalston Belle	Chief Technical Officer
Mrs. Jacqueline Cheeseman	Chief Human Resource Officer
Mr. Curvis Francois	Chief Operating Officer
Mr. Karl Woods	ICT Officer

**Mr. Chairman:** I would like to reconvene the Seventh Meeting on the Committee for Land and Physical Infrastructure of the Parliament of Trinidad and Tobago, and to welcome everyone present, as well as the viewing and listening audience to this enquiry. I would like to advise that this meeting is being broadcast live on the Parliament's Channel 11 and Radio 105.5 FM, and the Parliament's YouTube

Channel, *ParlView*. I would like to welcome officials of the Trinidad and Tobago Electricity Commission, T&TEC, and introduce myself. I am Deeroop Teemal, Chairman of the Joint Select Committee on Land and Physical Infrastructure, and I would like to invite Committee members, if you can please introduce yourselves. You can go in any order.

*[Introductions made]*

**Mr. Chairman:** Member Hosein, are you there? Member Hosein, you are muted.

*[Introduction made]*

**Mr. Chairman:** Okay. Thank you. Those are the members of our Committee. And the purpose of this particular meeting is to commence the first public hearing pursuant to the Committee's enquiry into the management of T&TEC and related recommendations with representatives of T&TEC. I would just like to remind everyone that our objectives of this enquiry. We have three major objectives:

1. To examine the current management strategies of 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.
- So, at this point, I would like to ask the Chairman of T&TEC for—or the General Manager,



sorry, of T&TEC for introductions of him and his team, and also invite him to make some brief opening remarks, which are limited to not more than probably five minutes. The General Manager,

**Mr. Ramsook:** Right. Thank you, Chairman, and members of the Joint Select Committee for Land and Physical Infrastructure. Let me say hello to all the—I know this is coming live so let me say hello to all the members of the population outside there. Thank you very much. So my name is Kelvin Ramsook, I am the General Manager at T&TEC. So, Chairman, I would probably let them go around and introduce themselves so you could see them.

**Mr. Chairman:** Yes, sure.

**Mr. Ramsook:** Thank you very much.

*[Introductions made]*

**Mr. Chairman:** Okay, thank you officials. Mr. Ramsook, I would invite you to make some brief opening remarks before we get into the questioning.

**Mr. Ramsook:** Sure. Thank you very much, Chairman. So, the commission wants to officially thank the Committee for this hearing today. It gives us an opportunity to advocate a number of details related to our operations at T&TEC. We at T&TEC, you know, have been doing a number of—in terms of our mandate—operational issues that would have benefited the customers at large in Trinidad and Tobago. Of course, given the issue with the pandemic, that has not made our situation as easy, but nevertheless, we have moved forward. We have made a number of adjustments in T&TEC and having done that, we continue to provide the level of service comparable to—we have benchmarked our service to many utilities internationally. So we continue to provide the level of services, and we monitor our performance and we compare it with a number utilities throughout the world, and the evidence continues show that our performance has been equally comparable. In some cases, better. Of course, in some cases, not as good. But certainly, as we continue to strive to move forward, we continue to put mechanisms in place to improve our performance.

So, as I said, we are happy for this meeting here today. It will give us a wonderful opportunity to interact with the Committee. I know the Committee will be looking at some of the answers. And of course, whatever recommendations you make, I am sure it is going to be for the benefit of T&TEC and by extension, the country, as we provide service to the nation. Thank you very much, Chairman. Right, Chairman, we are not hearing you. I am not too sure if your mike is muted?

**Mr. Chairman:** Oh sorry, sorry about that. I was just saying for members to direct their questions and concerns through the Chair, and to please keep your microphones muted until recognized by the Chair, and please for members to use the raise-hand feature so that we can recognize you accordingly, and you can make your contribution. So I will now open the floor to members of the Committee to ask questions that they may have and I will probably invite member Hosein to start off the questioning for the Committee. Member Hosein?

**Mr. Hosein:** Thank you very much, Chair. Good afternoon everyone from the T&TEC. This evening I just want to focus some attention on what is taking place with respect to the financing of the commission and the fiscal measures taking place there. I have seen based on the submissions that were given to us by the T&TEC in March, I believe, there is one issue that raised some concern for me. It says that the commission has been making a continuous loss, I believe the last nine years. Can you give us an indication of why this is so?

**Mr. Ramsook:** Right. Good afternoon, Sir. Okay, so the commission has been operating with an income of roughly \$3.2 billion and an expenditure of \$4.3 billion. So that puts us at a difference of \$1.1 billion, which is really the difference and it is, what you would consider, the loss related to our operations. Just to put it in perspective, tariff revenue accounts for 37 cents per kilowatt hour. I am just using that to guide you a bit. And when you move away from that, our expenditure is 48 cents per kilowatt hour.

So, just to let you know what our expenditure is, our expenditure is broken up into generation which is \$1.63 billion. The cost of gas is roughly \$1 billion. The cost of salary and wages, employee-related benefits, this is the total cost, \$995 million. Then you have capital local and foreign as well as taxes and so on, that takes you about \$600 million. It puts you about \$4.3 billion. So when you look at the percentages, the majority of that expenditure is related to generation, which is a combination of conversion and gas. So that is the 1.63 billion plus the 1 billion, which is 2.63 billion. So that is roughly 67, 68 per cent of the pie when you look at it related to the commission's operations. Salary and wages, I know it is always an issue, let us take it one time. That is 23 per cent of our business operation. So, because of that the answer is, to get to a value that allows you not to operate—so we operate at a loss of 11 cents per kilowatt hour. So to get to a value of moving away from that 1.1 billion, some item has to shift. So let us look at tariff revenue; that either has to shift up. Right?

But before we go there let us look at expenditure. So in the expenditure category, you have fixed PPA, Power Purchase Agreements. We have four Power Purchase Agreements, two of them are expiring in 2029, one in 2037 and one in 2041. So those PPAs exist right now on the system based on our business operations. So that is \$1.63 billion that you pay. The cost of gas, right, that we use on the system accounts for that \$1 billion. So as I said you are now talking \$2.63 billion. Then you have to purchase materials, carry out your business with materials and so on, plus taxes that you have to pay and so on. That in itself is roughly about \$600 million. So the question you have to ask then: Where can we shift? Because salary and wages, total expenditure, \$995 million. The commission—let us put it clear—has 2,924 employees of which 312 employees are temporary in that 2,924. That is the latest figure of the day. If you look at the trends over the last 10 years, you will see that we hover around that value and, of course, we are practically lower than where we were 10 years ago in terms of the number of employees. But our customer base has changed from where it is to now 502,000 customers that we have on the system. So our customer base has changed and we look at our employee ratio.

Now, just to be clear in case it is being asked, so we have done a manpower audit and we are looking at the—we have looked at our employees. We feel satisfied the employees that we have on board are adequate to meet our requirements and we have always kept around that figure, and we have looked at benchmarking customer-to-employee ratios with other utilities. So we have also looked at that to see where we are in the picture of things. And given where we are with the employees' aspect, that seems to be, in our opinion, acceptable.

So the question at hand is where do we go to bridge that \$1.1 billion? The commission has been doing a number of things in place. We are not just saying we are going out to the general public. We have been doing a number of things. For example, let us talk gas. So when you talk natural gas cost, we have done a number of initiatives to reduce that cost from where it was to where it is now. The issue with the natural gas though is that there is a 3 per cent escalation. But bear in mind, I have indicated that that cost is a billion dollars, and we do not pay—that is the difference that we do not pay. We pay everything else and that billion dollars—1.1 billion that we have spoken about, which is the difference between income and expenditure, is made up by us not being able to meet our commitments to the National Gas Company. We do pay some payments to the National Gas Company but certainly it is not in the level of the value that the gas bill is, which is a billion dollars per year.

**Mr. Hosein:** Mr. Ramsook, is the gas subsidized by the State?

**Mr. Ramsook:** Right. So the gas is subsidized by the State. So gas is sold at US \$1.5882 per MMbtu. We pay in TT, but just to point it out, it is subsidized by the State. The true price of gas hovers—you know, a couple years ago it was \$3, it is 2.96, it is 2.76. So for all intents and purposes, the gas price—we are subsidized by 50 per cent average of the true price of the gas in the public market. We sell at US 5.5 cents—I am using this at a guide—at 5.5 cents per kilowatt hour. If you unsubsidize T&TEC,

you offer the gas at the full price, and you unsubsidize T&TEC, then we will sell at 9 cents US per kilowatt hour. Let us say that.

Let us say we do not have any issues with the gas. That is the one that we get subsidies—we get at a lower price, so then we will sell at 9 cents per kilowatt hour. Anywhere in this globe, any unsubsidized electricity will start off at 12 cents per kilowatt hour. So this is the issue that we are operating with, that everything we do—so I have given you the majority categories, and everything that we do we try to see how best—and we do—I want to make this very clear to the public, as best as possible, we do not compromise on the reliability of supply in terms of our infrastructure work. So that is very important for us at T&TEC, and the Executive Management, the entire staff at T&TEC—and I want to say this. I mean, sometimes people see the trucks outside there and they see one or two issues, but we have a lot of dedicated, hardworking employees that go beyond the call. And I am saying what we do here in terms of our business operation, one of the key things is that we do expansion. Whatever has to be done, transfer of infrastructure, transmission infrastructure, all the infrastructure—of course, there is more that we can do, but as best as possible, the minimum that we could do to make sure the system grows and is reliable, we continue to do at T&TEC. So I just want to pause—

**Mr. Hosein:** Just to be clear, the \$1 billion gas price that you quoted for us, roughly \$1 billion gas price, that is the subsidized price?

**Mr. Ramsook:** That is correct, Sir. That is the subsidized price.

**Mr. Hosein:** And you mentioned four purchase—four Power Purchase Agreements. Who did we sign these agreements with?

**Mr. Ramsook:** Right. So you have two with PowerGen; one with Trinity and one with TGU. TGU, 2041; PowerGen has two, one is 2014, and it is now—2029 it is going to expire and the other one is going to expire at 2037. And the Trinity is 2029, it is going to expire.

**Mr. Hosein:** And just to be clear, I know you mentioned that the salary and wages— and you indicated how dedicated the employees are at the commission.

**Mr. Ramsook:** Yes, Sir.

**Mr. Hosein:** It is a high wage bill, and T&TEC is making a loss. I just want to be abundantly clear, there is no plan at this time for T&TEC to send home any workers?

**Mr. Ramsook:** Not at this time but the entire—when we compare—so we have compared this figure to, again, international figures, and when I talk international, Caribbean and abroad. So, that figure, as I say, is 23 per cent of our total expenditure. And at this time, you know, based on the manpower audit, Mrs. Cheesman is looking at that. We have no intention at this time—we are trying our best to make sure that all our employees remain on board. But just to put it in perspective, I want to say this. It is important that I say this. If you say 312 employees need to go home, that is \$52 million. I am looking for a billion—\$1.1 billion.

So I just want to put that in perspective. And I also want to say this to you. Forgive me for saying it. If you look at the numbers, T&TEC—the way we run our business, I cannot take somebody from out there overnight and put them to climb to poles, put them to maintain transformers. So we have to go through a training programme. When we look at the number of people that are going in the next five years, because we have looked at that also, it is 267 people, if my memory serves me right, that are going to leave in the next five years. So I have to cater for bringing people on board, training them, giving them enough time to train, because of the nature of our business, to be able to be incorporated in the business in full. Thank you very much, Sir.

**Mr. Hosein:** And also, illegal connections. Do those illegal connections contribute to a loss that the commission would have reported?

**Mr. Ramsook:** Right. So our losses on the commission is made up of two categories. Our losses on

the system are roughly 9 per cent, of which the majority that is what you call technical losses. Technical losses is the line—you have long lines and there would be heat and all the other issues, so that is the technical loss. The non-technical loss would be anything related current stealing and so on. We did the analysis and we are looking at  $\frac{1}{4}$  per cent, 0.25 per cent of what we feel would be contributing towards current stealing.

**Mr. Hosein:** And how many, if you did an audit or so, how many illegal connections are there roughly in Trinidad and Tobago? If you could give a figure.

**Mr. Ramsook:** So we would have done an amnesty and we would have sent that amnesty in the newspaper for people—for customers to come forward, individuals to come forward and identify, and give them the opportunity to come on the grid. Now, I am going to guesstimate this—I want to make this clear—so this is going to be a guesstimate of how much might be on the grid, and I would probably say in the region of about—I would say about 3,000 throughout Trinidad and Tobago.

**Mr. Hosein:** Three thousand?

**Mr. Ramsook:** That is correct, Sir.

**Mr. Hosein:** And, Chairman, if you permit me one last question on this area. Mr. Ramsook, you indicated that the commission is seeking to obtain an economic tariff that would enable it to meet all its obligations as they become due, and in addition, manage dispatch review to minimize gas usage. You mind giving us what is the value of this economic tariff that the commission is seeking?

**Mr. Ramsook:** Right. So I could answer you very simple, Sir. So that matter—we have completed our business plan. The Ministry of—our line Ministry is looking at it, and that is all I am going to say at this point in time. So I certainly would not be able to say anything further on this. But just to mention, Sir, I think it is important I say this, eh. The commission, as I said, has—and you would have seen it in the package we included. We have gone through a number of initiatives. Anything that we can do to market our business to reduce cost, to be able to bring in revenue other than from light and power, we have been doing it. And as we speak, we continue to do that. We have a business unit. Mr. Francois is in charge of that unit and he has a number of initiatives that he has in place. So I want to make it clear, the management is not saying the solution to our issue is a review. I want to make that very clear. We are looking at every possible avenue because we know the situation outside there. We get our calls, we live it every day with the customers that call us. So, thank you very much, Sir.

**Mr. Chairman:** Thank you, Mr. Ramsook. One thing I would just like to follow up on based on what was asked by member Hosein. In page 3 of the response to question 4 that was sent by T&TEC to our questions—response. In terms of the commission's finances for the past five years, the question was asked, the efforts being taken, if any, to improve the financial position of the commission. Now, you have answered that to quite some extent. But in your written response, you mentioned about the Business Development and Administrations Department. I think you have said it is headed by Mr. Francois and you referred to a five-year operational plan, and you went on to list 12 items that the commission is looking at in order to increase revenue to the commission. Could the committee get an idea of where we are generally with this operational plan? And what quantum of revenue is T&TEC expecting to generate over the next five—say the next five years, by execution of this 12-point plan that you have submitted to the Committee?

**Mr. Ramsook:** So I will put you on to Mr. Balgobin and he would probably—and either Mr. Francois will start it off, and if I have to join back in, I will join in.

**Mr. Balgobin:** So the 12-point plan you are referring to is a number of initiatives across the organization. Some have to do with reducing gas consumption based on the dispatch of power from the most efficient producer first, which is TGU; building the second double circuit line from Union Estate to Grande to bring that full dispatch of power on to the national grid. Then there are initiatives to improve revenue in terms of the price we charge customers for services that we render to them,

for example, for the movement of lines or any other works, what we refer to it as major contracting costs, the transformer rental rates, pole rental agreements with the communications providers. These are all geared towards either reducing cost or increasing revenue from non-lighting power sources. I do not have with me right now exactly how much these various measures would yield, but Mr. Belle is going to talk about the dispatch of power and how that would impact on T&TEC's financial position.

**Mr. Chairman:** Okay, Mr. Belle?

**Mr. Belle:** Good afternoon again all. In terms of the dispatch, you find that the dispatch and how we dispatch machines at the various IPPs, it is very critical, because the more we run the more efficient machine, the lower the gas consumption will be. So in recent years, we have been speaking with IPPs and seeking information as to which are the more efficient—

**Mr. Chairman:** Could those—other than Mr. Belle, could everyone else mute their mikes please because we are getting some feedback? Please continue, Mr. Belle.

**Mr. Belle:** Yes. So, in dealing with the IPPs and getting as much information as we can, we have been able to identify the more efficient machines. So you find that during the dispatch now, we are dispatching the machines based on their efficiencies and that is helping us to reduce that whole gas consumption. And as we continue to do it, we will get more. So once we get that, we are in the region, at presently, at about TT \$5 million annually that we—I mean, sorry, \$100 million that we will be able to save over—so that dispatch becomes very critical, and that is why we are focusing on that area to improve it as much as we can.

**Mr. Chairman:** Okay. Thank you. Mr. Ramsook, what I would like to ask, if—I know Mr. Balgobin said he would not have all the figures and everything, and projections available at his fingertips. But if the commission could submit to the Committee in writing, you know, from these 12 points that you have identified here: What are the savings/revenue generation that you expect from these measures and if it could be projected for probably the next five years? The Committee would greatly appreciate that.

**2.30 p.m.**

**Mr. Ramsook:** Certainly, Chairman, we will provide that information.

**Mr. de Freitas:** Mr. Chair? Mr. Chairman, might I jump in here with a question?

**Mr. Chairman:** Yeah. Sure, member de Freitas.

**Mr. de Freitas:** Thank you. So I have heard the individuals from T&TEC talk about generating revenue, but I have not heard anything in relation to renewables and whether that is an avenue that T&TEC is looking at. And the reason I am saying this is because—just one that I could think about—is what is to come in about 20 to 25 years' time, which is the upsurge in the use of electric vehicles which falls squarely in the lap of T&TEC. Is T&TEC preparing for the upsurge in the use of renewables, things like charging stations that would be required once we get to that point, because as you would know, there is an intent globally to ban the use of combustion vehicles, and therefore move solely and wholly manufacturing and sales to electric vehicles. So is T&TEC preparing for the possible revenue source later on?

**Mr. Ramsook:** Certainly, Sir. And I am glad you raised that question and I just want to take some time to explain what is happening with us with regard to renewables. So, at this point in time, discussions are ongoing for a 112.2-megawatt renewable plant. Most of it is going to be located in Point Lisas Esperanza and a section of it at Trincity. So that discussion is already ongoing and once that materializes, the tender process has already been closed, the PPA discussions are taking place and once that is completed, we are expected to have that 112.2 megawatts on the grid.

Just a point to raise—and it is very important that I raise this point. And we are also looking at 700 kilowatts at the Queen's Park Savannah which is a vehicle charge station and it is also going to

be putting capacity on the grid. That is also an ongoing project with the Ministry of Energy and Energy Industries and T&TEC. And inclusive of that, we also have an infrastructure that is going on at the Piarco International Airport.

But just to put it into perspective, it is important that I raise this point. So when you talk—so the value that we are looking at to get that capacity with renewable, it is US four cents per kilowatt hour. That is the kind of value we are looking at this point in time. The value of the gas, the value of the—our generation cost right now is US 4.7 cents per kilowatt hour. So I am comparing it. So it is lower, so just to be clear. With the renewable, it is four cents—it is 4.7 cents, right, is the US, that is the cost right now that is costing us for both generation and gas at the subsidized rate.

At the unsubsidized rate, it is 5.9 cents. So it is better. So we are paying more, it is 5.9 cents, right, at the unsubsidized rate. So I use the unsubsidized rate assuming that, you know, we unsubsidize the gas, just the value that is 5.9 cents. Four cents when you go renewable. But this renewable that we are bringing on board, it is important to note, it is called non-dispatchable. So that non-dispatchable is going to cost you four cents. That is the kind of value, as I said, we pay when we combine generation and we combine gas, 4.7 cents at the subsidized rate and at the unsubsidized rate, 5.9 cents.

What we mean by non-dispatchable? It means we are going to have to tailor the grid so that when this capacity is injected on the grid, it is not going to be available 24/365. It is going to only be available at an average about 30 per cent of the time. So you are supplying capacity on the grid, a day like today, cloud cover, rain, you are going to lose that power. So that capacity, at four cents, you are going to lose it. So it is no guaranteed capacity.

So having said that, it is like taking a vehicle—so the bus is running with photovoltaics at the top and it is running. But once the cloud comes out, the bus is going shut down. It means that I am going to have a bus still available to be able to pick up the passengers. So I have to still maintain this level of generation whether I have non-dispatchable resources. When I go into the term “dispatchable”, where you add battery backup and so on, you move from four cents to eight cents. So you move from four cents to eight cents for it to be non-dispatchable.

I got to be fair in the statement though, and I will tell you why I am going to say this. So you get an idea of what—that is the way you are sure now you are going to have capacity as you need it with renewables. The country though, will benefit significantly in there because the gas that I was taking for the—fossil fuels that I was taking to run the plant right now, will be freed up for which the country could sell at twice the price because it is selling to T&TEC at one-half the price. When I minus that figure that the country will benefit from, the figure of eight cents moves to five cents for dispatchable. So it is slightly comparable to the 5.9 cents that I told you a while ago for an unsubsidized plant with fossil fuel.

Having said that, prices are dropping as time goes by and we will probably reach that value hopefully where, overall, it will come down to much lower than the fossil fuel. But also, just to put into perspective, you are also getting plants now that are far more efficient and even those plants are using less gas, and therefore they are also competing a little bit with the renewables. But at the end of the day, you have to look at where you are and you have to look at the renewables and you have to be clear what you are buying into the renewables. But the Commission is moving directly with the renewables. As I said, we expect to conclude that matter and have that plan in another year and a half, two years. Let us say next two years plus, that is the 112.2-megawatt plant.

Having said that, we have a team, Mr. Belle is heading that team and he has already started to look at the issue of marketing photovoltaics to customers as an option [*Interruption*] sorry about that, Sir. Yeah, so he is looking at marketing photovoltaics as an option and also, also we are looking at charge stations at appropriate points—that is one of his mandates—so that once the electric industry vehicles take over that we will be clearly ready, right, to meet the requirements. Of course, the regulator

has to be involved because this whole issue of how you sell and so on, is going to be very important. Thank you very much.

**Mr. de Freitas:** Okay. And just the last question. So, I am glad to hear all of what you just said. Are you all in anyway in collaboration with the car dealers so that they are aware of when, you know, all of this comes to fruition so that they themselves can pivot in relation to combustion vehicles versus electric vehicles? Because as it is right now, they do bring in some but it is not something that is widespread. And I expect some point in the future that it will become widespread that they themselves will need to purchase more electric than they would combustion vehicle. So are you all working in tandem with them? Are they aware of all of this?

**Mr. Ramsook:** Mr. Francois will take it.

**Mr. Francois:** Right. Good afternoon, again, everyone. So far, there is only one of the new car dealerships that are marketing electric vehicles in any big way. And they have approached us—so we are—T&TEC is willing to partner with any car dealership in order to advance the use of electric vehicles in the country. As you would have mentioned, certainly, the world is heading in that direction. And after—next 10 to 20 years some of the countries have pledged to do away with combustion ignition engines. So, certainly we are partnering with them.

Also, PTSC would have approached us as well and, you know—so we are liaising with these dealerships, we are liaising with our sister utility in order to ensure that we provide the level of service that is required for these customers. Thank you.

**Mr. Chairman:** Thank you. Mr. Ramsook, if I could just piggyback on what member de Freitas asked and what you outlined. Thanks for that information. But I am just thinking about additional capacity coming on to the grid from renewable energy sources. And then, in terms of the PPA, we have in existence a take or pay or take or pay agreements under all the PPAs. So would we not be in a predicament where you have additional capacity coming on which we will have expenditure on and then we are locked in situations with the PPAs where we have to pay for unutilized capacity.

**Mr. Ramsook:** Thank you very much, Sir. I am glad that you have raised that question. So the system, as it stands, the contracted capacity is 1,754 megawatts. Tobago Cove Power Station is operating at 84 and we have a small generating operation at Scarborough, that makes it 91. Total capacity available, 1,845 megawatts. If you take the peak demand as 1,317 megawatts, we average about 475 megawatts that we have available on the system as capacity. So you raised an excellent question there, Chairman, because I have capacity, I have capacity and then if I have to go anywhere else, it is going to cost me—but I have to also look at going somewhere else too because renewables are a very important item in the agenda and certainly it is one of the things that we have to embrace.

So at the 475 megawatts capacity, I just want to raise a little issue with regard to that. I have to also have what you call “spinning reserve”. So I am go back to the bus. So the bus is driving down the road and taking up passengers. So I have a bus, the largest bus that I have will take up 135 passengers. That is at TGU, the plant is rated 135 megawatts. So that, I have to have spare capacity in the event that that bus breaks down, that I could take up 135 people. So reserve capacity, 135 minus from 475.

Then I also have to take into consideration that I may have a bus down. So I may have a plant down. So if I have that, passengers are going to be affected so I have to have capacity again to supply. So if I say another 135—I use the largest, the worst case condition, right? So I say another 135, right? That is 270, it puts me at 200 megawatts of capacity sitting there. The value of 200 megawatts of capacity is \$250 million a year. That is the kind of cost that I am dealing with, that I have sitting that I have to deal with.

Now, bear in mind that, just a note, with the closing of the Alutrint plant, that plant was expected to take 217 megawatts. With the closure of that Alutrint plant, the way the Power Purchase

Agreement was set up, the Commission, with the closure of that plant and the fact that that 217 megawatts that TGU was putting together to supply them, will now go to the Commission for which the Commission had to pay for.

**Mr. Chairman:** Right. So it is just that I was seeing a sort of potential—a situation where—I mean, we have to optimize standby capacity on your system. And the thing is—because in optimizing, it means you want to try to keep at optimal level, that expenditure, that 250 million for that 200 kilowatts that you are talking about. Because, I mean, unfortunately, the Commission is in a deficit situation and I am sure it will be a challenge for the Commission—for you all when you look at all of the scenarios as to what is the optimal arrangement, you know, that you will be looking at. And I guess that will be taken into consideration in your business planning that you are engaged in at this point in time.

**Mr. Ramsook:** That is correct, Sir.

**Mr. Chairman:** Because you are not going to recover everything with tariffs. I do not see the RIC giving you that luxury. So that, in terms of this take and pay, is there any room within those PPAs for renegotiation?

**Mr. Ramsook:** That is another excellent question. So we have approached all the PPAs. We have approached one particular power producer. We have engaged in a dialogue with that possibility. I want to admit, it did not go too well but we are going back again to have that discussion. But bear in mind the point I raise, in 2029, which is approaching us very closely from this point in time, we are nearing making decisions—we will then have to make those kinds of decisions. So two of the PPAs are going to be coming to a conclusion in 2029, PowerGen PPA at 624 and the Trinity PPA, Power Purchase Agreement.

The thing about this, Sir, is that we also have to look at our load growth and what are the prospective customers that will come on board. And when I gave you this figure, I took into consideration Petrotrin that normally will use 60 megawatts—the Refinery—I expect, you know, that hoping things will go well and that will return back. We have gotten some discussions with what used to be called the Mittal plant and a company has shown some interest in a portion of reactivating that plant. Of course, they will have to get all their approvals and so on. I will have to get ministerial approval and all those things like that.

So assuming that these items take place then, you know, I could then—there is another company—I do not want to give the name—that is also asking for quite a significant amount of capacity that Mr. Belle is having dialogue with. And we hope that that also—we succeed in that arrangement, in which case very quickly you could then do away with that value that I told you about. And therefore, we have been planning our—we have a section that plans and looks at generation expansion and that is an item that we are looking at. Thank you, Sir.

**Mr. Chairman:** Okay. Thank you, Mr. Ramsook. I would like to go to member Morris-Julien. She has some questions that she would like to pose to you all.

**Mrs. Morris-Julien:** Thank you, Chairman. Through you, Mr. Chairman, Mr. Chairman Ramsook, how are you?

**Mr. Ramsook:** I am very good—General Manager, but I like the chairman position. *[Laughter]* The chairman would not like that. So I do not want to get fired.

**Mrs. Morris-Julien:** Apologies, Mr. Ramsook.

**Mr. Ramsook:** No problem.

**Mrs. Morris-Julien:** Mr. Ramsook I am quite familiar with you and your work ethic and I know how you usually operate and how you do business. So I expect you will be able to answer fully this pressing question that we have regarding your COVID-19 plans currently because you have been listed as an essential service. However, you are also an organization with many administrative staff and I am curious about what arrangements you are making with the new restrictions.



**Mr. Ramsook:** Thank you very much and thank you for your kind words. I do appreciate it. So I will put you on to Mrs. Cheesman. She is very versed at this and she would answer clearly all the details.

**Mrs. Morris-Julien:** Thank you.

**Mrs. Cheesman:** Okay. So maybe I should give you a little bit of history in terms of when the pandemic started until now. We would have had a total of 34 employees who would have been positive for COVID-19. And we would have put a lot of things in place, in terms of preparing ourselves to safeguard our employees, lots and lots of measures and we continue to do so.

With respect to the recent restrictions, what we would have done is that we would have made arrangements to—even though we are an essential service and I know people depend on us out there—we tried as best as possible to see where we could rotate our employees in such a way that it would not impact on the central services we have to deliver to the customers. So within the office, all our non-supervisory staff, we would have put them on a 50 per cent rotation and we are doing it on a three-day, two-day arrangement, where they stay home for three days, one week and then the following week, two days, and we rotate it like that. This would have come about after we would had some extensive discussions with the union and the majority bargaining unit and we would have come up with, you know, the three/two arrangement that we would have extended to our office.

In term of the field staff though, why we were not able to give a rotation there because of the importance of the service that they have to deliver to make sure the lights are kept on, we have made arrangements where we stagger their reporting time to work. So we have crews that will report at 7.00 a.m., some will report at 8.00 a.m. and this will disallow any kind of congregation that may take place with everybody coming at the same reporting time. And when they finished their work out there and they return to the yard, to their various work sites, they would prepare for the next day and leave office one time. So we do not have them working the full day, they go, they do all the essential duties, they come back, prepare for the next day and then they are allowed to leave.

Our service centres, we would have—now, that is a very critical arm of the operations and we would have changed our service centres' closing hours from quarter to four, we would have gone down to half past two so that our employees in the service centre, as soon as they finish balancing, they could leave by about three o'clock. They would be able to leave and go home and that is where we are at. We have put a lot of—especially—the service centres is the area where we have the most customer contact, people coming in, going to pay their Bills and do other business operations, and we would have put in a lot of measures within that area to ensure the safety of our employees.

We would have done several, several things, from even the start of the pandemic where we would have put in glass partitions between the staff and the customers, put dips for them to receive the money, intercom system installed so that the customer service reps would interact with the customers via that medium. Where possible, we would have put sinks outside of the service centres so that customers upon entering they would wash their hands. We take their temperatures as soon as they reach. We have our sanitizer there for them to use. We make sure that we have security managing the service centres very closely to make sure people are not coming in without masks, they have to wear their masks. So we have done quite a bit that we feel that we can say the service centres, where we have the majority of customer—external interaction, is probably one of the safest places within the Commission based on all the measures we have put in place.

In terms of our employees, we would have done an employee handbook with all the protocols expected, you know, if you are sick do not come to work, wear your masks, sanitization ongoing. We have all our—sanitization is a very, very critical part of what we do and we have made the place very safe so that when the person—when we are here, we reduce the risk of contracting the virus. Now, as I mentioned, we would have had quite a number of cases but we are not immune to the virus, it is live out there, but we have put in all possible measures to try and protect our employees as best as possible.

Now, we have had some issues, you know, like the country, persons who might be found not wearing their masks, not wearing it properly and we are dealing with that because it calls for, you know, a behavioural change for persons to protect themselves against the virus and we have been reinforcing all the requirements, the Ministry of Health protocols, we have the posters all around, we make ongoing announcements reminding people what is expected. So, to get back to your direct question we have put measures in place to try and not have everybody in the workforce at the same time and in areas where we could have allowed people to stay away from work, in the interest of not having a lot of people out there, we would have done so. We also had situations where it can be afforded for people to work from home.

So, for example, our legal officers, they can work from home. We have persons within our IT department who could deliver, you know, what our needs are off-site, from home. So as far as possible, we have looked at every angle of the operations to see where we could actually put people on a rotation, where we need you to be here, there are some positions like that. Our control room, our Cove Power Plant, we cannot afford to not have our employees there but we have put things in place to safeguard their—to make sure that they are safe.

**Mrs. Morris-Julien:** Thank you very much. Through the Chairman, I am very impressed to see that you all have everything in place. I do have one question though when it comes to your customers because in reducing the time, that may lead to lengthier lines. Just recently with pension, payments being this week, I saw long lines around all the banks and also in the T&TEC service area—the area that I reside in. Have you put anything in place? Now, I am telling you, I only recently learned how to pay my bill online and I am fairly tech-savvy. What are you putting in place or have you anything to put in place for customers during this time, especially our older citizens?

**Mr. Francois:** All right. So what we would have done is, since the beginning of the pandemic last year March, we would have developed a quick pay page where customers can go in and pay via their credit card or their VISA debit cards and they could make a payment in three or four very quick steps. They can make a payment, it gives the balance on the account and it allows you to pay and it hits your account almost immediately. So if a person was in fact on the disconnection list, then they would come off the list immediately once they make that payment via the online quick pay page.

Also, we would have offered e-bills from before that. So we offer e-billing and via this approach, you do not have wait to get your paper bills from TTPost but they come direct to you in your inbox. We would have also—once we have customer's email address, we send the e-bill notifications to that customer. So again, they can get not an e-bill per se, but they can get what their outstanding bill is and they can go to quick pay and make that payment directly afterwards.

So we have a number of things in place to allow customers to not have to come into the Commission and we are further trying to develop systems that are customer-facing systems so you can make things like reports and so on, you can make that online. We are further doing that—in terms of our IT infrastructure, we are trying to make it as online as possible for our customers. That is what we are doing right now for the time being.

**Mrs. Morris-Julien:** Okay. Thank you. Through the, Chairman, I have another question. Now, two years ago, we would not have envisioned COVID-19 and all of its ramifications, and we have our tendency to say things like, “God is a Trini”, and do not seem to have a good preparation plan. And when I say we, I mean collectively, as a nation, as a people, we tend to shrug off especially when it comes to natural disasters. So in the SWOT analysis there seemed to be a weakness in your disaster preparedness and I am asking, is there a disaster preparedness plan? What is the reason why there is—with what is going on in St. Vincent, for example, what do you have in place? Are you currently looking to put something in place because we need to find out how we would deal in the event of a natural disaster, being that you are indeed one of the most essential services? I did not have electricity for the

whole day yesterday and I cried. So what are the plans?

**Mr. Ramsook:** Right. Good afternoon again. So when we did our strategic plan, we made sure that we went around to all our employees and as a result, we got their opinions and so on. Now, while we said there is a weakness in the disaster preparedness, we still have systems in place. And I will tell you what they are, but we feel—we are a little concerned because we feel we could do a lot better than what we have existing at this point in time.

So, in terms of disaster preparedness, there are two aspects if we were to get a hit via a hurricane, earthquake or any other disaster that hits us that we require help. The types of help that we require will be both labour and materials. On the labour side, we have partnered with CARILEC and we have partnered with a number of other institutions that would provide assistance for us. So we have contact numbers, we have all the details related to that, we have our local contacts for all the assistance we could get locally, we have our employees. So we feel fairly satisfied on the labour aspect of assistance. Should the time arise where we need that assistance, we have clear systems now in place to deal with that, contacts, all the arrangements, what is required and so on.

In the case of material requirement, I want to admit that is a little concerning to us. So we have done a number of things in the past, we have done the mobile substations. That has worked fairly okay but it is not sufficient to manage the entire country, just small pockets that go out. We are looking to purchase another set once we get board approval and then in parallel to that, we are also acquiring an amphibious vehicle. So the amphibious vehicle we expect to acquire in November and that is a vehicle that will move from the road to the flooded area, to the river, to the sea, automatically. So it will drive from one point, you get a flood, you get an area where we cannot access, it is going to be able to access it. It is a specially designed vehicle that we expect to acquire. All the arrangements have been made. It is just awaiting delivery in November of this year, if all goes well. So we have done our issues with the amphibian vehicles and so on.

Parallel to that, we have now put a number of systems in place to acquire what you call “emergency spares”. Through the initiative of our line Minister as well as our Chairman, we have partnered with Florida Power & Light. So we have interacted with the Florida Power & Light. Of course, at this point in time, that, because of COVID we need to—we have to move further with that. But we have partnered with them. We have interacted with them to give us assistance and guidance, especially in the case of disaster preparedness. Because they, of course, have good systems in place. So we are using that, we are looking at how we acquire our, what you call, our “spares”. We are looking at suppliers and contacts for suppliers who would provide us with spares and we have to look at people who would be able to do that in a short space of time.

We are also tailoring our procurement slightly for key spares like: poles, transformers, conductors and insulators. I want to say that we are not that good yet and we really need to get there. We have started the process where we could get commitments in the event that I need a second year supply in the first year, that I can get it manufactured and sitting there, without having to pay for it. But of course, with a commitment that I will buy it, if I do not take it in the first year, that I will take it in the second year.

So if an emergency occurs, I could then quickly get poles, conductors and insulators, transformers, quickly into the country to be able to deal with the issue of disaster preparedness and so on. So I would say—on the labour side, I would say that I am 90 per cent there. On the material side, I am not too good with that. I will put myself 30 per cent there and I need to do better with that. We have a system in place and we are moving with that system.

**Mrs. Morris-Julien:** Chairman, if you would just allow me one last comment, please, to address Mr. Ramsook. Mr. Ramsook, member de Nobriga, member Kennedy Richards, we are all past local government practitioners. So we are very much involved or were once very much involved with

disaster management. I must express my concern because, yes, labour is important, but it is extremely urgent that you deal with the material matter because we are seeing what is happening globally and we cannot speak about: well, at least we have the staff because we could use Greenvale, for example.

**3.00 p.m.**

I saw your crews out there feverishly working throughout the night in order to protect persons from coming in contact with live electricity with the floodwater. And from my viewpoint, they themselves were not sure what they had to do. So I must express concern with regard to your disaster preparedness plan and I really hope that you go full force with this, Mr. Ramsook, because it is extremely important in your organization. Thank you very much. Chairman, thank you.

**Mr. Chairman:** Thank you very much, member Morris-Julien. Mr. Ramsook, just to add to what the member was saying is that, you know, we—the Committee—we would urge you to look at what member Morris-Julien is suggesting, particularly in the context of the impact of climate change. Because you would be aware that with climate changes and the impact it is having on the small island developing nations is increasing every year and we have seen evidence of that in Trinidad and Tobago over the past years, so if some degree of urgency could be given to that aspect of the Commission's work. I like to invite member Saddam Hosein. Member Hosein had some other questions that he would like to pose to the Commission. Member Hosein.

**Mr. Hosein:** Thank you very much again, Chairman. So again, I would ask a couple questions relating to the Commission. I was looking at the debts that are owed to the Commission and roughly it is about \$1.8 million. Am I right?

**Mr. Ramsook:** Right. So averaging 1.3/1.4 billion when you take the total value at this point in time, majority of which are private and public. So you have the total value and then—

**Mr. Hosein:** But based on the—

**Mr. Ramsook:** Submissions, yeah. But the arrears will put you at 1.4, but the total would be in that vicinity you spoke about.

**Mr. Hosein:** And out of that 1.8 about—well, the highest is lighting and power for the public which is about \$1.1 billion in debts owed from public authorities to the Commission. What steps are being taken in order to recover some of these moneys that are owing to the Commission? Because, I mean, the Commission could do with whatever moneys is available to it, and you have \$1.8 billion outstanding.

**Mr. Ramsook:** Okay. So that is, again, a good point raised there. When we speak about the debt though, I have to take it in a holistic manner. So it is public debt that you have spoken about, but on the other end, I also get assistance. So it is a sort of balancing arrangement where—you know, when we are dealing with Government accounts, I get significant assistance from the Government when it comes to—well, PSIP has one, but also the payments of the NGC bills and so on. So when you balance it off, really, it goes the other way. So take for example up to 2018, whatever I owed the National Gas Company has been set up as an arrangement by the Government to pay in full via a government guarantee—well, via a government arrangement. So that has moved away all the debts from NGC up to 2018, and of course, we are having further discussions. Yes, you have those issues where you have outstanding balances from Government institutions but when you sum what I get, minus what I have outstanding overall, there is a positive value in terms of what I actually receive.

Having said that though, we continue to interact with a number of the agencies and we have been going to them—well, with COVID on we have been having virtual meetings—and we are getting commitments from them, from a number of the agencies in terms of some payments. It is one of the key initiatives from the Vice Chairman Mr. Romney. He has taken that up as that one of his key initiatives also. So we have seen some positive improvements— not to the extent that we would like— but certainly we have seen some positive improvements in terms of our collection when it comes to

public accounts.

**Mr. Hosein:** And the point with respect to—RIC submitted some comments to us and RIC basically said that they are undergoing a rate review for T&TEC rates. Now, what I want to ask you, Mr. Ramsook, are you aware when was the last rate review? One. And two, the RIC wants to finish this rate review in December 2021, but they have indicated that T&TEC has not submitted a business plan to date, can you indicate why the Commission would not have submitted that business plan?

**Mr. Ramsook:** Right. I would let Mr. Balgobin take it from there. So he will give you the details.

**Mr. Balgobin:** T&TEC has prepared a business plan. A key ingredient in the business plan is the price of national gas which is still under negotiation between the Government, National Gas Company and T&TEC. So the business plan that was submitted to the RIC has a placeholder value for that price of national gas. But until the price is firmed up and we have the authorization from the line Ministry to submit the business plan to the RIC, we need to hold on that. But all the other work associated with the business plan has been completed and once that price of natural gas is determined, we will be in a position to submit the business plan to the RIC. The last review period was—*[Interruption]* Sorry?

**Mr. Hosein:** Sorry.

**Mr. Balgobin:** Go ahead.

**Mr. Hosein:** I was just going to ask right, the price of national gas, that is the only thing that is holding back the business plan right now?

**Mr. Balgobin:** All of the other inputs into the business plan have been firmed up.

**Mr. Hosein:** Okay. And when you expect to get that information?

**Mr. Ramsook:** So I have been having dialogue with the Ministry and they are working on that aspect of things. So I do not anticipate it will be too long before I get that information, but it is the line Ministry that will—they are looking at it right now and I expect it should not be too long to get that details.

**Mr. Hosein:** And the date of the last review?

**Mr. Balgobin:** The last rate review took place—give us a price up to 2009. So the last increase we had was in 2009.

**Mr. Hosein:** Thank you. Chairman, I have one more question with regard to the revenue side of the Commission. Mr. Ramsook, you indicated that the Alutrinc plant would have had an oversupply now on the grid but then you alluded to, that you are having negotiations with Mittal and some other companies. Roughly, can you give us a figure of what is the loss of revenue of the Commission having regard to the numerous closures of plants in the Point Lisas estate?

**Mr. Ramsook:** So the annual loss that we have observed—and not only with the closure of plants but also customers asking for reduction in reserve capacity is \$60 million per year.

**Mr. Hosein:** 1-6?

**Mr. Ramsook:** 6-0.

**Mr. Hosein:** 6-0 million per year?

**Mr. Ramsook:** That is correct. In addition to those institutions—remember, we also have the most recent one but we hope that that will rectify itself soon with M5000 and M4, and then I indicated in the case of Petrotrin and so, and so. But we also had a number of requests for reductions in capacity by a number of customers based on their business operations, and when we looked at the overall impact on the organization, we are averaging \$60 million annually.

**Mr. Hosein:** And, Mr. Ramsook, with respect to the gas price that is holding back the business plan, is that related anyway to the renegotiated gas terms agreements?

**Mr. Ramsook:** No, no, no. The Ministry will guide us with that. There will be a number of factors that the Ministry will use and I am sure one of the key factors the Ministry would use is the impact on

the country. I mean, I do not want to go into that direction but certainly that will be a factor they will also use.

**Mr. Chairman:** Thank you, member Hosein. Mr. Ramsook, before we go to member Richards who has his hand up, just two supplemental questions I would ask on the basis of what member Hosein was raising. One is coming back to your business plan and your business model. On page 16 of Appendix 1 of your strategic plan 2021—2025, it is stated there that:

T&TEC's existing business model is considered to be flawed and results in the Commission's inability to cover operation expenses.

Would you care to elaborate on that, Mr. Ramsook, or any member of your team? Because Mr. Balgobin did mention that your business plan that is to go to the RIC, it is ready, we are just waiting on the NGC matter to be sorted out. But if your existing business model is considered to be flawed, as you have stated in your strategic plan, has there been a drastic revision to your business model going forward? It is on page 16 of your—

**Mr. Ramsook:** Sorry about that, Chair. I got it. So yes, now when we did this business plan, we put the raw details in there because we would have—this business plan was—sorry, not the business plan—the strategic plan, we involved all our employees, we involved everybody on board. The issue of the weakness in the plan was clearly identified based on income and expenditure. So when we say the weakness identified aspect is not adequately explored—sorry. Right. The present business model is considered to be flawed and the results of the Commission's inability to cover operation expenses, it is really related to our income—in terms of how we are structured, both with the income and the operating expenditures that exist that is not allowing us to meet our expenses. So it is really in that concept that statement was made.

**Mr. Chairman:** All right. Thanks for giving us that explanation. And the other one is in terms of your debt collection. You did respond about the public debt to member Hosein, but I know that the private debt is still in the order of about \$500 million up to 2020. How aggressive is your debt collection policy? Because the document that you submitted to the Committee about your debt collection policy seems to be rather dated. And could you update us, in terms of your debt collection policy, in terms of its aggressiveness and effectiveness?

**Mr. Ramsook:** Right. So that is an easy one. So, at this point, it is averaging \$227 million, if my memory serve me right. We received the majority of that debt, when we dealt with private accounts related to the desalination plant, they have since—recently paid us an amount. So we have received some funding from that institution. Part of the discussion that is ongoing with that institution is that \$30 million interest related to outstanding arrears and that we are having discussions with them. When you minus the figure and you have to look—when you look at the figures that we provided you, it is made up current bills as well as arrears. And when you look at the current bills—we listed the entire amount and that is why you see a higher figure when we list the entire amount. And therefore, the true outstanding amount for private accounts, the latest was 121, it is the 30 days, that is the bills that are 30 days and that is not due yet. So that cannot be considered arrears. And when you minus the desalination portion, you are down to \$170 million, and then you minus the 121, you are roughly down to \$50 million as outstanding amount for private accounts. When you take 422,000 customers—I am just using an example. We have 502,000 customers and you take 422 customers and you just say, “Well look, let us put \$200 that some them owe”, you will quickly come up to a figure of \$50 million.

**Mr. Chairman:** Okay. Thank you. But would it be possible to submit to the Committee in writing an aged receivables report so that we will be able to access—we will have on record what you are saying, what you are telling us here.

**Mr. Ramsook:** Certainly. We will submit that. Mr. Francois will submit it.

**Mr. Chairman:** Okay. Thank you. Member Richards?

**Mr. Richards:** Thank you very much, Mr. Chairman. I just have a three-part question. Firstly, it said that the Commission owes NGC over \$2 million. What has to be done in order for us to clear that debt? That is one. Two, we are living in the age of technology. I have noticed that T&TEC had an application. How effective is that application in terms of the day-to-day management of T&TEC and its operation? And third part of that question is, say for instance in that application we report an outage of a street light or maybe an area is without power, what is the response time given through that application for those things to be rectified? And I may have a follow-up after that.

**Mr. Ramsook:** So I will let Mr. Belle take the second part, but I will take the first part. So in terms of the National Gas Company—so the present outstanding balance—I am giving you the US and the TT equivalent, 321,647 as of March, which is 2,175,861,408. That is the accumulation up for 2019, 2020, and part of 2021, up to March. So prior to 2018, as I said, we were able to get into an arrangement assisted by the Government of Trinidad and Tobago in terms of the payments of all of the outstanding balance to the National Gas Company prior to 2018. So that has been dealt with, with the assistance of the line Ministry as well as the Government. So the outstanding balance that we have now, we continue now to have discussions with the Ministry also to go with another similar arrangement where that balance could be dealt with, so that our books, in terms of the outstanding balance to NGC, could be dealt with. So we are having some discussions and we are hoping that that becomes fruitful.

On the other end, I think the discussion today would have led to where we are in terms of that gap of \$1 billion a year in terms income and expenditure, and I did identify the clear details of all the different expenditures. And as I said, we have looked at all the possible options and we have put a number of initiatives, but we are going to get nowhere close to dealing with that bill—that annual bill of the \$1.1 billion. So it is really a case where, as I said, you are at 5.5 cents; unsubsidized, you are at nine cents and really the business operation, as I said, at minimum starts at 12 cents in a similar type business anywhere, in any jurisdiction for what you will consider the nature of our operations.

So while again we are going to make every effort, I do not want to say that we are going to get a solution. Certainly, it is an issue and it is an existing issue and I am hoping this Committee also, as we provide you with the data, certainly some—we also have been working at it, that the Committee will recognize our situation also here at T&TEC.

**Mr. Richards:** So, Mr Ramsook, if the Government says that it cannot meet that shortfall via the Ministry of Public Utilities, then what next?

**Mr. Ramsook:** That is an excellent question. I like to beg. So to be honest with you, you know, we have to have a balance—I mean, listen, we all live here. I see customers every day. I take my calls when I get it and I see lot of people out there also trying to make it. You are right. I understand what is happening. We all live here and we are in a situation. I mean, I do not want to say we would not get a solution but I want to be honest I am scared, equally scared. You know, we are dealing with people and their lives, and electricity does create a big impact. So, I mean, I really do not have the answer. I mean, you have asked an interesting question and I honestly do not know how to respond to it. I mean, I could only say we have to continue to see how best we could get this thing to work and that is why we at T&TEC, with the dedicated staff and management, we are trying our best to hold that steering tight and to keep the value as low as possible and to keep that reliability to our customers. I will let Mr. Belle deal with the issue. I am trying to shy away from the answer for that question, but I will let Mr. Belle deal with the issue with the app.

**Mr. Richards:** Before you go to the app, something interesting just popped in my mind. As I told the Chairman before, I do not really have any pre-ate questions and questions would only come as I go forward. In terms of running the business model, is your present rate going to be sufficient in the future? I am not thinking right now. Now, we understand the situation right now with the cash and

everything in the country and worldwide. It is not just a Trinidad and Tobago thing. But is your present rate that you are charging right now, going to be sufficient in the foreseeable future when you have to undergo things like heavy maintenance and your regular maintenance and the operations? I understand that you are in a debt and you have to find millions and millions of dollars, but we are taking it further. Because we do not want to create a situation where T&TEC now is going further in debt and we are just sinking and just keep going down the slippery slope to a point where you have no return. So what is the plan going forward the T&TEC management is coming up with?

**Mr. Belle:** Mr. Richards, excellent point. So really let me say where we are at. [*Technical feedback*] We are really at the borderline and if we are not careful, we could really impact reliability down the road. And it is important, let me say this now, because if we—

**Mr. Chairman:** We are getting some feedback, would you make sure that you are muted.

**Mr. Ramsook:** Yes. I want to say this. It is very important that we get a solution because we are at a borderline and we could go either direction. So just to answer you, we have kept thing very firm in terms of making sure that our expansions take place and it happens in time, and all the different issues that we have to deal with, our infrastructure, transformer upgrades, overhead line maintenance, overhead line upgrades, all the infrastructure that has to be done to make sure, we cater for the future reliability. But we are at a point where we cannot slip and if we slip, it means it could affect reliability going forward and that is my concern. I want to be honest with you, at this point, yes, we are. But you see, if you slip, to recover is not going to happen overnight. It will take time because the nature of our business, you know, it requires infrastructure and things to be done differently. So going forward, I am being honest with you, it is going to be very difficult in terms of what we have existing. And it really requires—as your Committee, you know—a conversation, you know—what are the possibilities. I have given you all the major operating cost items, I have given you the income items, I have given you what our initiatives are, and we have sort of reached a stage where if we are not careful, we are going to have to start to look at reliability. I have been in this business too long, I really would not want to see that happen and, as I said, it is a concerning issue.

**Mr. Richards:** Thank you very much, Mr. Ramsook. Just the part with the technology.

**Mr. Ramsook:** Right. Mr. Belle will deal with that.

**Mr. Belle:** Good afternoon, Mr. Richards. Concerning the app and the response time, through the app, whether the request is made through the app or if it is made via the phone or so, the average response time to a customer suffering an outage or anything affecting his supply is just about two hours or so. In that, it would be a breakdown. We have about 60 per cent, we will get back within the hour and the remaining 60, just above the hour. So it will range. But the average time is about two hours to get back for the restoration of supply.

Concerning the street lighting, as we said, when we submitted the information to the JSC, you would have seen we had an outstanding amount of about roughly 8,000. So we saw that we were a bit off the ball with the street lighting and the repairs. So we have since put in some initiatives and we have been able to take that outstanding figure down to roughly 550. So the expectation here is that by August, we will have that down to zero so we will be dealing with the street lighting reports as they are reported, say within a week or so, we will responding to those street lights.

**Mr. Richards:** Thank you. But you did not answer the part with the app as a tool, how has that benefited or has that provided any benefits for T&TEC in terms of the operations?

**Mr. Belle:** So I did start with it because the app is just one of the measures used to make the report. So as I was saying, if the report comes through the app, it is dealt with as it comes through the phone line. All of them are bulked and we deal with it based on priorities after that. So the response time through the app is roughly the same, just within that two-hour band.

**Mr. Richards:** Okay. And in terms of technology, is it only that app alone that you have or are there



other forms of technology that you have to interface with the public which may increase the operation?

**Mr. Belle:** So the one I know the public will love to hear is the—we are commissioning what we call our outage management system. What that is, is that once supply is lost, T&TEC will automatically receive it via our SCADA and our systems that we will get that information long before the customer calls, that there has been an outage and the outage is suffered. So what the customers will really be doing is to confirm with us that what we have received via the outage management is accurate and from there we will be able to respond a lot faster. So the new system is that outage management app where the meters are what will be sending the signal back to the base. So once the meter is without power, we will get that information almost immediately telling us that the customer has suffered an outage. So we are using different technologies.

**Mr. Richards:** All right. Thank you. And Chair, before I go, just one question I want to ask before I go. In terms of risk management, do you guys have a risk management policy as to how you create a framework with regard to your employees? Because T&TEC is doing work with electricity, that is a lot of risk and I know that you—so do you have a risk management policy and how do you go about doing that risk management policy?

**Mr. Ramsook:** I just want to highlight one issue with Mr. Belle on the outage management. So we are really happy about that and we know one of the items that our customers get very—they are not happy with us is our call centre. We know that in our call centre, a lot of complaints come in where customers sometimes find it difficult to get to us. We expect that once that outage management system is in place we will know when customers lose supply, and therefore, we are going to be able streamline the many incoming calls to avoid that issue. So we expect, as we move in the future, once we set this thing up properly—and it is already happening—when you call, if you are registered, we will be able to tell you, you live in John Street, Curepe, and we are aware of your outage and we are working on it. What it will do is allow us to stream off a number of the incoming calls and focus on the other calls that are not affected by the outage. So that our call centre, I know, low marks, and we really want to work at that to make sure that we do a lot within our call centre.

In terms of risk, we have an enterprise risk management system and we have a team that is dealing with that. That falls under Mr. Francois. We would have done our risk register. We would have identified a number of risks. We are now looking at the order of priority of our risks. We are looking at areas that are prone to higher levels of risks and we are looking at what we are putting in place to avoid these risks. And member—so I know the issue of disaster preparedness did in fact come up and that is also an item that is engaging our attention there. I know Mrs. Morris-Julien would have raised and certainly it is one of the items that we are looking at. And, as I said, we are looking at our entire risk—and we are looking in order of priority as we deal with the different risks that is happening with us. So we do have a risk register which we are tailoring and we are looking at it very closely.

**Mr. Richards:** Thank you very much, Mr. Ramsook. And thank you very much, Mr. Chairman.

**Mr. Chairman:** Okay. Thank you, member Richards. Mr. Ramsook, would it be possible for you to provide the Committee with some details of your risk management policy?

**Mr. Ramsook:** Certainly, Sir. No issue, Sir.

3.30 p.m.

**Mr. Chairman:** In terms of the PSIP and the projects under the PSIP, how critical are these projects to the Commission's expansion programmes, your transmission systems? And cuts in the PSIP, are they compromising in any way your large-scale maintenance and the necessary expansion that you have to undertake to provide the level of service that you do?

**Mr. Ramsook:** So, that again is an excellent point you are raising Chair and we have—so under the PSIP there are different categories. You have streetlight expansion, to which the Government would

provide the necessary funds and we will get the appropriate guidance, in terms of streetlight expansion. We also have recreation grounds and parks and that has been an ongoing project. Of course, we also have the maintenance of the parks. But the bigger issue with regard to the Public Sector Investment Programme is the moneys that we are getting for some major projects. So we have been getting some help.

One of the key projects that we are dealing with is that second line from Union to Gandhi. That line is absolutely critical. So that project has already started. The contract has been signed. Work has started, in terms of the construction of that second line. And why it is important is that because at this point in time, we could comfortably get 600 megawatts from the TGU plant. We need to get that additional 120 megawatts onto the grid. So once that second line is constructed, we will be able to get the additional capacity. We have funding, some degree of funding, under PSIP and we will be applying again on the next fiscal period for the additional funding. We know things are difficult and, like anything else, we continue to make every effort with the Ministry and they are very cooperative. We understand the position and we are making every effort together to look at these priority projects, so we do get the assistance. And once we get it we move forward with these projects under the Public Sector Investment Programmes.

Chairman, I am not hearing you. I think you might be muted. Sorry about that.

**Mr. Chairman:** Sorry. With regard to outages, I think it was an oversight on your part. We only got information on the planned outages. And in terms of the unplanned outages and the forced outages, we did not get the information submitted. So, if you could please correct that oversight and provide the Committee with the unplanned outages and forced outages information.

**Mr. Ramsook:** Certainly, Sir. Sorry about that, our apologies.

**Mr. Chairman:** Okay. Now, you did refer to, in terms of one of the challenges going forward for the Commission is the question of Wuhan acquisition of right of ways, and secondly—or maybe you could respond to that first and then we will take up the other aspect.

**Mr. Ramsook:** So that is an issue that we are having, Chairman. So, when we have to do infrastructure construction, you see, ideally when you look at a number of countries, what exists is what you call a power utility corridor. So, they earmark that section of land and so on, to allow infrastructure, power utility infrastructure, to exist. We find ourselves competing, and we understand the situation. But again, we find ourselves competing whenever we have infrastructure that we have to install, you know, we try to acquire the land wherever we can, because what we try to do is avoid construction where individuals could build infrastructure close to the lines, and so on, and then create unsafe situations.

So, in our legislation, we are looking at these right of way access to be able to get some of these right of way access to allow us that flexibility to be able to install the infrastructure on the system.

Now, just to answer your question, as I am supposed to make—so underground infrastructure, we are looking at where we can. It is very expensive. We have encouraged new suppliers to go underground but they shy away from that process. In terms of if they have to pay the cost, they rather go overhead. And to actually convert to underground, we are trying our best but it is difficult when you already have infrastructure already existing, buildings, roads, and so on, to do excavation and to actually install the underground infrastructure, and it is also quite expensive. And given the predicament financially it is an item that we will have to look at as we move forward.

But wherever we can, we have been looking at other versions, like insulated conductors and so on, so that we will avoid cutting the trees. And therefore, we have a number of things in place. In Tobago we have it on the north side. And we have a number of locations even in Trinidad where we are using the insulated conductors.

**Mr. Chairman:** Okay, but in terms of the actual right of way acquisitions, under the T&TEC Act, it allows the Commission the authority to acquire lands accordingly, based on identified right of ways

and those things?

**Mr. Ramsook:** Right, so under the Act, under section 37, it allows me to serve notice to install the infrastructure. But it allows the customer—so I can serve notice under section 37. I can then go on in and install the infrastructure but it does not allow me any right of way or ownership in there. And, therefore, if the customer raises an issue, then under “nuisance” I then have no choice but to look at moving the infrastructure.

So, the right of way access is not really an item that I have granted. So hence the reason why we try to acquire land. So we do apply for money and we would have gotten funding under the PSIP wherever we have the transmission upgrade infrastructure to acquire the land, so that we could have that right of way access where we install our infrastructures, especially on the transmission grid.

**Mr. Chairman:** Okay. Thank you. In terms of legislation, I think, based on your responses to the Committee, you did undertake some work a couple of years ago, in terms of looking at possible changes to the legislation, a T&TEC Act. Could you inform the Committee as to where we are with that, in terms of the response from the line Ministry as well? And how critical is this to the moving forward for the Commission?

**Mr. Ramsook:** So, it is very important, because there are two aspects of the legislation that we would have sent to you. One would be on renewables. A lot of work is ongoing with the Ministry. In fact, up to this morning I had discussions with the Ministry on this aspect of the legislation and items such as the feed-in tariffs, and so on, especially for customers who want to bring renewables on to the grid. So that is well advanced. The information is with the Ministry, and I know it is well advanced. In fact, when I did make the call this morning a meeting was actually going on, on that aspect of things. So I feel that—I do not want to speak for the Ministry, but it may not be too far from moving forward to the next level, so that we could get some sort of approval.

The other set of legislation is sort of localized and that has been submitted to the Ministry and I know a lot of work has gone into that and we expect—I cannot say, in terms of when it would be finally tabled to be approved, but certainly it has been well advanced at the Ministry also.

**Mr. Chairman:** Okay. Maybe if you could indicate to the Committee—I know you did provide the document to the Committee for our consideration but maybe if you could point the Committee, in terms of an order of priority, in terms of what are the necessary pieces of legislation or the changes that you all are looking for, in terms of your strategic planning and your management strategies at this point in time as to what order of priority should be assigned to the whole exercise. We would appreciate that.

**Mr. Ramsook:** Certainly, Sir. So you want me to send it in writing to you.

**Mr. Chairman:** Yeah, thanks.

**Mr. Ramsook:** Certainly. Okay.

**Mr. Chairman:** Right. And to come back to the renewable energy, you mentioned about the 112 megawatts of the solar renewable project that it is at discussion stage and you are hoping, probably over the next year or two to have that much advanced.

But within your response you also made mention of possible wind renewable energy by looking at wind sources, including Tobago as probably one possible source. I think you have identified four major sites in Trinidad as well. Would you care to update the Committee on that aspect?

**Mr. Ramsook:** Right, Mr. Belle who is the operations person will deal with it.

**Mr. Belle:** Yes, good afternoon again. Based on the initial assessment, we had the original 12 sites that we had narrowed down to four. So, what we are doing at this time is we are, one, seeking to get some measurements. We will have to install some measurement meters and stuff, and take measurements over a period of at least one year to get data that we can rely on to say that the information gathered is adequate to make a final decision on, because you have to be very careful

when you are using things like wind technology, and stuff, to make sure that you have enough supporting information to guarantee that the investment will bear fruit.

So we have identified those four spots. We are doing some civil works, soil analysis and stuff, to see what would be required, if we have to install structures to put up the wind meters and stuff, or if we can go with a new technology called LIDAR. So we are currently working with the line Ministry and a consultant to give us some guidance on going there. So that is something that we will be looking at, to see if over the next year, year and a half we can advance the project to such a stage that it can give us the results that will tell us whether it is a go in those four places and if so, how much energy we will be able to get out of plants when installed there. Right?

Because we have to be very careful with it because it is not like we can buy a machine and say we will get enough energy from the wind to provide the power through that machine. It is actually the reverse. We have to get all the measurements to determine what amount of power we will be able to get from any wind turbines that we install there. That would be about 18 months before we can have a final position as to on what exactly we can get from those four locations. So we are at that stage for the measurements.

Right. We also have a wind turbine that was installed a few years ago down in Gasparillo. It is a small one, a 2.5-kilowatt wind turbine. So we have been looking at the type of performance that that one has given and we are using that as a sort of analysis to look at the circuitry and how we would manage the type of knowledge and experience we would require for when we are using these. So the Commission is working on it fully to try to get some positive results.

**Mr. Chairman:** Okay. Thank you very much, Mr. Belle. Actually, the Committee, we commend the initiative of T&TEC in terms of renewable energy. I think the approach is good. Rather than see it as a threat to your operations, you convert it to an opportunity. And really and truly it would be good for the Commission to take the lead role in renewable energy sources for power generation in Trinidad and Tobago.

I just have one final question, and then I would invite members of the Committee, if they have any additional questions and after which we would ask Mr. Ramsook to give his closing remarks.

And my final question is just a brief one. I notice in your responses you keep using the words “economic tariff”. Mr. Ramsook, would you care to elaborate on that for the benefit of the company, when you say “economic tariff”, what really the Commission means?

**Mr. Ramsook:** I will let Mr. Balgobin, he is the expert in this. He lives that every day.

**Mr. Balgobin:** Right. So an economic tariff is a tariff that will enable the Commission the cover all of its costs under efficient operation. There are a number of factors that impact on our costs outside of our control. Seventy per cent of our costs, for example, generation capacity, natural gas, coals, transformers, et cetera, are priced in US dollars and so we are subject to the exchange rate risk associated with that.

The last time T&TEC made a profit was in 2011, when the exchange rate was 6.30:1, and the price of natural gas was 118.18. The price of natural gas escalates by 3 per cent a year. The price that is charged by the independent power producers has a formula, one of the inputs of which is the US consumer price index. So, these are all costs that the Commission has had to absorb over the—these are cost increases that the Commission has had to absorb over the years, with a flat tariff. So an economic tariff is one that recognizes the non-controllable cost drivers that impact on our cost profile and allows us to recover the true cost of operation under efficient conditions. That is as much as I can say.

**Mr. Chairman:** Okay. But would you be putting this across to the RIC for their consideration?

**Mr. Balgobin:** It has to be considered. That is the only way we can cover our operating cost. When you—once you—the true cost of operation has to be met by revenue, or else you are in a situation

where you go back into deficit year after year and absorb the impact of the non-controllable costs.

**Mr. Chairman:** Okay. Thank you. Other members of the Committee, does any member have any final questions you would like to pose to the officials of T&TEC?

**Mr. Hosein:** Just one final question, Chair, if you will permit me.

**Mr. Chairman:** Yes, please do.

**Mr. Hosein:** Now, based on this economic tariff that you have just outlined, in layman's language does it really mean that we are just going to ask the State to give T&TEC a little more money in order to cover its operating expenditure?

**Mr. Ramsook:** So that decision, that is again a good point, will remain with the State and our responsibility is to point out all the different issues, and so on. At this point in time, of course, basically that is what is happening, but we will really be guided by the Ministry of Public Utilities, the line Minister and the Ministry. The issue is we would have outlined the facts and it will really be the State now to give us that final guidance which, as you would note, it has been happening over the years with us, and so on. And we understand the nature of our business and we are subjected to guidance. Of course, we would advocate the facts.

**Mr. Chairman:** Okay. If there are no further questions from members, I would like to invite Mr. Ramsook for brief closing remarks.

**Mr. Ramsook:** So, Chairman and members, I want to say a heartfelt thanks. I know this is—we have given you a lot of information. You have asked for additional information which we will promptly provide. The product we deal with is a very important product for the nation and we recognize that. We are not taking it for granted. As I say, we have a lot of good employees in here. Let me say this and I want to say this in terms of, so the population is clear. The technical capabilities of our employees are extremely high, extremely good.

You know, I joined the organization many years ago and every single day you learn something new. So this is an organization made up of a lot of good people and a lot of highly-technical people. People have left us and they have gone abroad and so on, and they have been absorbed quickly. I know a number of people who are working at Ontario Hydro and a number of institutions. And they grab them up very quickly. So the technical capability of our employees is excellent. And I am saying this on the backdrop of what we provide.

We also are very mindful that we all live here and we know what the conditions that the country is facing are. So we want to continue to pledge and we appreciate—you have a key role in there. History will judge all of us. But we want to make it clear that we will pledge our full support to doing everything within our power to make sure that reliability is maintained to our customers. We beg our customers to forgive us when we do have these lengthy outages. Certainly, we are not happy and we do deal with it so that it does not occur as best as possible.

But we want to thank this Committee because as a team I know you have a mandate, and if you could in any way help us, we would really appreciate it and I am sure this discussion would have been part of that. Tell us where we could improve. Tell us where we have shortcomings also. We have no issues with that. We are all willing to make changes.

So as I said, I just want to officially thank the Committee. I am very grateful for this opportunity. I see it as an opportunity. And Sir and your members, I want to thank you all, I see it as an opportunity, and the population for listening to us and we certainly will continue to strive to do our best to provide the service to the nation. We love all our customers and we certainly do what is necessary. Thank you very much, Sir, to your team and everybody else.

**Mr. Chairman:** Okay. Thank you very much, Mr. Ramsook. Allow me to also extend our appreciation to Mr. Balgobin, your Chief Financial Officer; Mr. Belle, your Chief Technical Officer; Mrs. Cheeseman, your Human Resource Officer; and Mr. Francois, your Chief Operating Officer.

On behalf of the Committee, I would like to also extend our appreciation to the viewing and listening audience for tuning in. And, of course, I would like to extend sincere thanks to all members of the Committee for their participation in this exercise this afternoon.

I must also thank our hardworking secretariat headed by Mr. Johnson Greenidge, for their tremendous input into this enquiry thus far. So, thanks to everyone and I will now declare this meeting adjourned.

**3.54 p.m.:**     *Meeting adjourned.*

# APPENDIX IV

---

## UNREVISED VERBATIM NOTES OF PROCEEDINGS DATED JUNE 24, 2021

**UNREVISED VERBATIM NOTES OF THE EIGHTH MEETING (VIRTUAL) OF THE JOINT SELECT COMMITTEE APPOINTED TO INQUIRE INTO AND REPORT ON LAND AND PHYSICAL INFRASTRUCTURE HELD VIA ZOOM VIDEO CONFERENCE 9.30 A.M. (IN CAMERA) AND THEREAFTER (IN PUBLIC) ON THURSDAY JUNE 24, 2021**

**PRESENT**

Mr. Deoroop Teemal	Chairman
Mr. Nigel de Freitas	Vice-Chairman
Mr. Saddam Hosein	Member
Mr. Kennedy Richards	Member
Mrs. Lisa Morris-Julien	Member
Mr. Symon de Nobriga	Member
Mr. Anil Roberts	Member
Mr. Johnson Greenidge	Secretary
Ms. Renee Batson	Assistant Secretary
<b>Trinidad and Tobago Electricity Commission</b>	
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
<b>Ministry of Public Utilities</b>	
Ms. Nicolette Duke	Permanent Secretary
Ms. Beverly Khan	Deputy Permanent Secretary
Ms. Arlene Collis	Director of Economic Research, Policy and Planning
Ms. Gale Dulal	Electrification Sector Specialist
<b>Regulated Industries Commission</b>	
Mr. Glenn Khan	Executive Director
Mrs. Dawn Callender	Chairman
Ms. Carol Balkaran	Deputy Executive Director
Ms. Nadia John	Legal/Corporate Secretary
Mr. Derrick Phillips	Assistant Executive Director, Technical Operations

**Mr. Chairman:** Okay good morning. Pleasant morning to everyone. I would like to reconvene this Eighth Meeting of the Committee on Land and Physical Infrastructure and to welcome everyone present at this meeting, as well as the viewing and listening audience to this meeting. I would like to advise that the meeting is being broadcast live on the Parliament's Channel 11 and Radio 105.5 FM, as well as Parliament's YouTube Channel, ParView.

I would look to welcome the officials. Today we have three entities present with us here. At the first enquiry meeting we did have officials from the Trinidad and Tobago Electricity Commission and we are glad to welcome those officials back to this second hearing today, and we also have officials



from the Ministry of Public Utilities and the Regulated Industries Commission, or the RIC.

I would like to introduce myself. My name is Deeroop Teemal and I am the Chairman of this committee. And I would like to invite our committee members to introduce yourselves please. We can go in any order.

*[Introductions made]*

**Mr. Chairman:** Right, I think those are all the members present at this particular meeting have introduced themselves. I would begin our meeting by announcing that the purpose of this meeting is to commence the committees' second public hearing pursuant to its enquiry into the management of T&TEC and related recommendations with representatives of T&TEC. For the benefit of everyone, including or listening and viewing audience, I would just like to just remind everyone of the enquiry objectives and these are:

1. To examine the current management strategies of T&TEC.
2. To identify the challenges related to managing power and electricity services in Trinidad and Tobago.
3. To make recommendations to improve the management strategies at the Commission.

I would like to turn to the respective entities and seek the introduction and opening remarks. So, if we can start with T&TEC for introductions, and maybe ask Mr. Ramsook if he can introduce his team first and then get straight into his brief opening remarks, and then we will go to the Ministry of Public Utilities, followed by the Regulated Industries Commission. So Mr. Ramsook.

**Mr. Ramsook:** Good morning, Chairman, and all your members, PS, Ministry of Public Utilities as well as all those who are from the RIC, from the CEO and above. Good morning to all the members of the committee. Again, we are happy to be here today to present ourselves and to your team to assist you with your endeavour to meet your mandate of understanding the workings of the organization and, of course, to advocate possible ideas, solutions, anything that could give us, to assist us here at the Commission.

We again will do our best today, as we did on the last occasion and try to provide all the answers to you and your team, to your questions and we look forward to making a meaningful contribution. So with that, I will pass you on to the rest of the members to introduce themselves at T&TEC as we go along.

*[Introductions made]*

**Mr. Chairman:** Okay, would the other members please introduce yourselves? You can go in any order.

*[Introductions made]*

**Mr. Chairman:** Mr. Curvis Francois, I do not think you came across. Your audio was a bit muted but Mr. Curvis Francois, who is the Chief Operating Officer of the Commission is also with us. Mr. Ramsook, your opening remarks?

**Mr. Ramsook:** Well, Chair I sought of gave it at the beginning.

**Mr. Chairman:** You gave it already, all right.

**Mr. Ramsook:** I took advantage of the situation once I was able to do that.

**Mr. Chairman:** All right, thank you. We go straight to the Ministry of Public Utilities.

**Ms. Duke:** Good morning, Chairman, committee members. I am Nicolette Duke, acting Permanent Secretary of the Ministry of Public Utilities. I will now allow the other members of my team to introduce themselves starting is with the DPS, please.

*[Introductions made]*

**Mr. Chairman:** Thank you. Ms. Duke, would you just like to give your brief opening remarks?

**Ms. Duke:** Yes. Thank you, Chairman. Good morning again Chairman, members, Mr. Ramsook,

General Manager; Chairman of the RIC, thank you for affording the Ministry of Public Utilities the opportunity to join this discussion, as it relates to the management of T&TEC. We at the Ministry, our role is to provide strategic direction, governance and oversight to enable the utility to positively contribute to enhancing the quality of life of the citizens, as well as the country's overall, economic and social development through the provision of reliable electricity services. So we look forward to today's discussions and any recommendations that will enable us to further our efforts along with our key partners to meet this critical need of all citizens. Thank you.

**Mr. Chairman:** Thank you very much, Ms. Duke. We move now to the Regulated Industries Commission.

**Mrs. Callender:** Good morning, Chairman and members. I am Dawn Callender, Chairman of the RIC since August 2019. I would ask the members of my team to introduce themselves. We start with you our Executive Director, then our Deputy Executive Director, our Assistant Executive Director of Technical Services and our Corporate Secretary.

*[Introductions made]*

**Mr. Chairman:** Thank you very much members of the RIC. Mrs. Callender, would you like to make some brief opening remarks?

**Mrs. Callender:** Thank you. Good morning, Chairman and members of the committee again. The General Manager and our colleagues from T&TEC, the acting PS and colleagues at the Ministry of Public Utilities and to wider have viewing and listening public.

The RIC is very pleased to participate in these proceedings on the operations of T&TEC, with whom we work quite closely. Our role is that of the regulator and we understand the importance of these sessions which provide an opportunity to interrogate the inner workings of our essential services.

The RIC is ready and willing to participate in this undertaking and we look forward to receiving the recommendations that would flow therefrom. Thank you.

**Mr. Chairman:** Thank you very much Mrs. Callender. Well, we will get straight into the questions to be posed by members. And I would like to probably start off the batting, as we would say. In terms of the RIC, in response to your question 2(i), you indicated that section 6(1)(j) of the RIC Act requires you to carry out periodic reviews of rating regimes of service providers, and section 48 provides for the review of principles for determining rates and charges to be done every five years.

You further indicated that the last price review for T&TEC was completed in 2006 and it covered the period 01 June, 2006 to 31 May, 2011. We understand from your response to that same question 2(ii), that you have commenced an independent review of T&TEC rates on December 07, 2020, and a price review process is ongoing. I would just like to seek some clarification from you, in terms of why is there a gap, in terms of the price review, regarding T&TEC?

**Mrs. Callender:** So the RIC can carry out reviews every five years, and at the end of the last rate review there were efforts made to conduct another rate review. However, rate reviews require information to be submitted and there are often delays in receiving information and having the full body of the different pieces and variables to conduct a successful rate review.

**Mr. Chairman:** All right. So the gap that I am talking about has come about because of reporting from T&TEC?

**Ms. Callender:** Yes. We have not been able to receive from T&TEC all of the information required to conduct a review.

**Mr. Chairman:** All right. But in a case like that, within the powers of the RIC, is it that you are constrained by receiving this information from T&TEC, or are you allowed certain powers under your Commission so that the gap could be narrowed?

**Ms. Callender:** We are allowed certain powers and certain discretions. But I think we are all aware that a rate review, the results of a rate review, could be sensitive and could impact the lives of our citizens and businesses. So our preference would be to use actual data that we could explain and substantiate. Yes, we can make certain assumptions but there is the theory that you put in uncertain information, that the results would also be uncertain. So that has been the constraint that we have been managing by continuing to work with T&TEC to get to the place where we would get the actual and complete information.

**Mr. Chairman:** Okay, thank you. Member Saddam Hosein, could we go to you?

**Mr. Hosein:** Thank you very much Chair. Good morning Mrs. Callender. With respect to, just following up on some questions asked by the Chairman, when T&TEC submits this information to the RIC, how long after will the required report be generated to determine whether or not there should be a rate review, an increase or a decrease in the rate? I do not suspect it would be a decrease, but an anticipated increase in electricity rates?

**Mrs. Callender:** Okay. So we try not to preempt the answer to the analysis we would do and that is why we refer to it as a rate review. Once we get all of the information or all of the initial information from T&TEC, our estimate is that it will take around 12 months, maybe. Perhaps we can shave off two months. Maybe it may extend by two months as well. But I want to say that a rate review is an iterative process. We get information. We interrogate it. We are going to require, very often, more information from T&TEC. So it really comes down to how quickly that information is provided to us, the quality of the initial submission, but an average. So we are targeting, let us say, a 12-month period to complete the rate view.

**Mr. Hosein:** And when RIC completes its rate review, and let us just, for assuming, let us just say that there is an increase, a recommendation is made for an increase in the electricity rates, how long after will this increase take effect?

**Mrs. Callender:** So, once the RIC—well let me answer you in another way. The RIC is going to put the information we receive through an economic model and we do not simply take the output of that and say there is need for a rate increase. In fact, we will do a number of analyses. We look at different sectors in the community. We would think about whether there is need for a subsidy, who should provide that subsidy, and so on. So at the end of that process, I would say that when that process is ended it may be between one to three months we should see the effect on any rates.

**Mr. Hosein:** So does the RIC have the power, with respect to this economic model, to also—you said they look at circumstances, would you also examine the current economic condition that the country will be in? Because we have been effectively locked down for about 16 months. We do not know how much longer we will be locked down because of the vaccine issue, because there is a lack of vaccines in the country, which is required to reopen the economy. So one year from now, let us just say, we look at the rate review of T&TEC and the country is still not in a proper economic state, will that be taken into account to determine whether or not there should be some level of deferral or even no anticipated increase in terms of electricity rates? Would you be looking at the economic condition of where the country is at? Or will you only be focusing on the economic condition of T&TEC?

**Mrs. Callender:** You know, our role is a balancing role. It is a role that we balance by looking and thinking about the quality of service that our citizens expect, looking at T&TEC's own performance and whether they have the finances to deliver the service, as well as thinking about impact on the consumers. So we would seek to balance all of those factors. I would also say that the RIC's role is to do a review every five years, and the benefit of using an economic model is that at times you can get your same return over a five-year period by doing different types of adjustments.

The other thing, I know that when we speak about these issues sometimes we speak broadly about the entire country. But we do know that there are still businesses and there are still persons who may not have been affected as other persons. So all of those nuances we would like to take in for that.

**Mr. Hosein:** Thank you.

**Mr. de Freitas:** Mr. Chair, if I could just jump in at this point quickly. So I have been listening to the line of questioning coming from MP Hosein and I just wanted to ask in relation to the rate review, so when we spoke to T&TEC, I think in another meeting, we would have been hearing something along the lines of the amount of wattage that Trinidad and Tobago has is not in a deficit state, meaning that the demand for electricity is more than what could be provided. I think what was being stated was that either we are in balance or that we have extra wattage. But added to that, that we expect to come online, the renewable energy, by way of solar installments, two major instalments, to the grid in Trinidad and Tobago. Is that taken into account when the RIC is doing a rate review? Because for me, I am thinking it from the standpoint of demand versus supply, and if demands outstrips supply, then I could understand justification for an increase in relation to rates. Because you have to build out more infrastructure and whatnot.

But all of what I have just said tends to suggest that the justification for an increase seems to be more, based on what I just heard, customer service, quality of service, that kind of stuff. Do you take into account where the infrastructure, in relation to the grid, electricity grid, is going and the fact that that may be financed outside of what T&TEC is required to do?

**Mrs. Callender:** Let me pass you to our ED, who may be able to give you a more detailed answer, in terms of how rate reviews are conducted. ED?

**Mr. Khan:** Thank you, Chair. Specifically answering the question of that member, what you are talking about is the supply of power side, and those arrangements are made with T&TEC through power purchase agreements. That is factored in the rate review, in terms of the cost of power to T&TEC, which is taken as a pass-through. Because you cannot do anything about it. So the cost of power to T&TEC is a pass-through that is considered in the rate review process. The other aspects have to do with T&TEC's operational cost. So it would be things related to transmission and distribution of electricity, not the power side of it. So the rate review considers everything, but in fact T&TEC submits its business plan which outlines its investment over a five-year period and its overall operating cost over a five-year period. Those are the things which we interrogate and we try to get to the efficient cost levels. When we do that, and we use our model and we come out with any numbers, then we look at the other sides, which we are bound to do by the law, which is to consider whether the consumers can afford electricity. So in doing that, we engage the public in consultation and all stakeholders, to get their views, and then we look at the impact on sectors.

So for instance, one of the things that we do, we get information from the CSO in relation to the number of businesses in Trinidad and Tobago, and we look at the impact on each business if the price were to increase by a specific percentage. And we also look at the impact on individuals. So those are the kinds of analysis that we undertake before we come out with what the final price is. And it is based on science and judgment and not necessarily what is in the model alone. I do not know if I have answered you, but if you do not think so you can come back and I will—

**Mr. de Freitas:** No, no. You have answered. And because you have given that process, and thank you very much for that, I understand better now exactly what it entails. Because people can take away just by hearing that the RIC is doing a review, that an increase is coming and it could be taken in a way that it is just the RIC decides: "hey, we paying one of the least amount of money for electricity

in the world, and therefore it is time for review and an increase". What you have just said, basically, does not put it that way, that it is a comprehensive analysis that involves consultation with the public and looking at the effect on the different sectors. So thank you very much for that.

**Mr. Khan:** Okay.

**Mr. Chairman:** Thank you, member de Freitas. Just to build a little bit on the discussion, Mrs. Callender, you gave, I think, it is a 12-month time frame for rate review for T&TEC in particular. Now, does that period of time include the stakeholder consultations that we are hearing?

**Mrs. Callender:** Yes.

**Mr. Chairman:** And it also includes the impact assessment that Mr. Glenn Khan just outlined?

**Mrs. Callender:** Yes, it does. And the 12-month period begins when we receive the initial submission from T&TEC. We are not currently in receipt of that submission, so the 12-month period has not started as yet. But once we get that initial submission, we would interrogate it, look, as I said, to ensure that it is complete and once we have that assurance, we will begin our process and that process should take about six months including all of the analyses, all of the consultations, meeting with various stakeholder groups, including members of the public in Trinidad and in Tobago.

**Mr. Chairman:** Thank you. So Mr. Khan, in terms of your impact assessment, are there different scenarios that you would look at, in terms of various tariff increases and the—

**Mr. Roberts:** Mr. Chairman, perhaps, not to interrupt—Mr. Chairman, Sen. Roberts here, not to interrupt but you are going to another. Are you seeing that my hand has been raised for the last nine minutes?

**Mr. Chairman:** No, no. As I said, I am chairing from my office and I am at a bit of a disadvantage in that regard, so my apologies member Roberts. So I would come to you right after.

**Mr. Roberts:** The topic may be gone and long forgotten. Because the Vice-President of the Senate just jumped in without his hand up. I would like to know if we are following order and structure. I do not want it to turn out like another Standing Finance Committee. Because this was a follow up question to your original question, eight minutes ago.

**Mr. Chairman:** Okay. So I would just remind members if we can just follow the protocol and if you do have a question to ask, you please raise your hands. So, member Roberts, I would come to you afterwards, if we could just finish up on what I was asking Mr. Khan, in terms of your impact assessment. What are the respective scenarios that you would use? Is this over a range of proposed increases? And what you recommend would be the one that would have the—well not necessarily the least impact, because it might be difficult to get a balance of it all. But what are some of the guiding criteria that is used to arrive at conclusions?

**Mr. Khan:** Thank you, Chair. Now, it is important to note that our Act makes it a condition on the RIC to ensure the sustainability of the service provider, T&TEC. So whatever we do and the rates that are finalized, those rates must ensure that T&TEC is in a good financial state. But at the same time, as you were talking about balance, they have to make sure that customers have the ability to pay the rates. So one of the things that we do is that we look at what is a, call it a lifeline tariff if you wish, which is to say we sort of average the amount of electricity a household would require within a month and we tend to use low-income households as the basis. So we look at that and we set that at the lowest possible rate. And anything above that level is when we start escalating the prices based on usage.

So, we look at different scenarios, as you said yes we do, and see what impact there would be generally on users. But we try to keep the increase within a number which has been used by the World Bank, which is that electricity should be less than 10 per cent of the household disposable income. So those are the kinds of things that we look at when we are considering the rates.

10.30 a.m.

**Mr. Chairman:** Okay, thank you, Mr. Khan. Member Roberts the floor is all yours.

**Mr. Roberts:** Thank you, Mr. Chairman. You asked a question about the delay in information and data coming from T&TEC and whether the RIC has the power to demand the information, and if they do, what is that power and why was that power not utilized to get the information so that they could conduct their rate increase? So I am not sure if the member from the RIC understood or got the question clear from me, because I do not believe she answered that question. So I am interested to know, does the RIC have power to demand, summon, or get, force, T&TEC to provide them with the information so that they can conduct their business in a timely fashion? Or are they at the whims and fancies of the management of T&TEC? And I have one more question after. Thank you.

**Mrs. Callender:** The RIC does not have the power to mandate or direct T&TEC to provide information. What the RIC is allowed to do is to make certain assumptions, but of course there should be a limit to how assumptions are used. In other words, if you have a substantial amount of information, I think using, you know, one or two sets of assumptions would be appropriate.

If on the other hand we do not have a submission from T&TEC it would almost be an exercise, if I could use this phrase, “in fiction” in that we would now be making all of the assumptions for all of the inputs. And I think that would be unsatisfactory to all parties.

**Mr. Roberts:** Thank you very much. So I go to Mr. Ramsook. Mr. Ramsook, what was the reason for the delay in providing the data to the RIC? We do not need them making fictional or fantasy assessments. Why was something so critical with regard to income, revenue, expenditure, and the running of T&TEC, where lots of jobs are now at risk, what was the delay in providing the RIC with the requisite data, Mr. Ramsook?

**Mr. Ramsook:** Morning. Morning, members, again. So, the Commission throughout this period would have completed the majority of its business plan. There is one particular item on the business plan that has to be rectified, and that once done will be added to the business plan for its submission to the RIC. That information requires a bit of internal stakeholders’ consultation and that is still on going. So at this point in time that is the situation here at T&TEC.

**Mr. Roberts:** Has this been the process for the last 40 years of T&TEC? And if it has been with stakeholder consultation, why is it delayed? Why is it late? Why is it tardy? And why can the RIC not get their information on time?

**Mr. Ramsook:** So certainly it is not the last 40 years. I mean you would have heard that the last review was in 2006 up to 2012 with the last increase in 2009.

**Mr. Roberts:** Sorry Sir, you did not understand. The process, the process in 2006 involved the same consultation, the same stakeholder. That is what I am speaking about. The process has existed for decades. So why are you late?

**Mr. Ramsook:** Right. So just to mention the process again. So as I indicated, within that period to now of course certain “advocation” would have taken place with regard to what is happening internal to T&TEC in terms of our revenue and our expenditures. Having said that, as I indicated, we have since completed or business plan on the majority of occasions. There is one item that the Commission requires to fully complete the process. That requires interaction from internal stakeholders, and until such time the Commission is unable to move forward with this.

Having said that, I want to just add a point, you know, there is always this whole issue of rate, it is a sensitive issue. It is a sensitive issue as mentioned by the Chairman of the RIC. And therefore, in time I would expect that once we get that detail, the final detail would be submitted to the RIC.

**Mr. Roberts:** Thank you, Sir. You did not answer the question, but I will move on. I hope that you get the information to the RIC quickly. To the members of the RIC, is the RIC an independent

organization and institution?

**Mrs. Callender:** Yes, we are.

**Mr. Roberts:** Okay. So we have heard from the Government of Trinidad and Tobago now that the rates in Trinidad and Tobago are exceedingly low. And their position is that they must be increased because we cannot take advantage of our gas subsidy, and our being born here, and being blessed with natural resources. Does the RIC have to follow this Government's position? Do you take it on board? Or do you formulate your own concepts from your consultation independently?

**Mrs. Callender:** So we will formulate our own positions. We will also do a lot of benchmarking, international benchmark. So, we would look at other jurisdictions, we would look at regional jurisdictions, we would look at international jurisdictions, and actually we look at them from two perspectives. We look at, you know, the type of quality of service standards they have enforced there, the rates and the performance associated with it, we also look to them in terms of how they conduct rate reviews sort of best practices so that we can implement those within our organization.

We know that there is always a lot of discussion about rate reviews, possible rate increases and so on, and—I mean we cannot ignore it because we are members here of the society, and we hear it on the news, but we do not take those statements on any side into account in terms of doing our work. We will use a financial economic model and that would be the basis of starting our analysis.

**Mr. Roberts:** Thank you. Final question. I am glad to hear that, but when you are comparing best practice to other societies, are you considering societies that exist like ours, per capita to be blessed with oil and gas, natural gas coming out of the ground from where we are born? Because comparing us to countries whose economy is based on tourism or manufacturing will not apply specifically to our beloved country and us being born here. So is it that you compare us especially to other gas producing and oil producing nations?

**Mrs. Callender:** So, we will use a number of benchmarks, and using a benchmark is not the same as adopting a benchmark. Any benchmark must really be reviewed in the context of the society and the circumstances within which it is to be utilized. So the benchmarks would be the starting point not the ending point for us.

**Mr. Roberts:** Thank you very much. Thank you, Mr. Chairman.

**Mr. Chairman:** Yeah. Thank you, member Roberts. We go to member Saddam Hosein who has his hand up.

**Mr. Hosein:** Thank you very much Chair for recognizing me. Now, Mr. Ramsook, the last time you all were before us Mr. Balgobin would have indicated that the reason why the business plan was not submitted, it is because you were awaiting the line Ministry to really firm up the natural gas price and everything else was completed in the business plan. Now we have the Ministry of Public Utilities with us I believe, can we have some clarification on this matter with respect to the reason why these discussions were not finished as yet with respect to the natural gas price?

**Mr. Ramsook:** Right, so I expect the Ministry will probably eventually respond, so just to respond in this matter. So that discussion is taking place. I expect to get some sort of response very soon on that last aspect of it. As you quite correctly said, the business plan is completed and the final item of the price of the gas, which is a very—let me make it abundantly clear—which is a very important item that determines what that end value of the rates could be. And therefore, I expect, you know, with my dialogue and so on, that we at T&TEC the review is very important for us. We expect to get some sort of response soon in that particular matter.

**Mr. Hosein:** Mr. Ramsook, this price that you are awaiting confirmation on, is it the price that T&TEC will be purchasing at?

**Mr. Ramsook:** Right. So right now, gas is 1.5882. That is the price we receive gas from the National

Gas Company. That is the cost of gas that we receive from the National Gas Company, 1.5882 per MMBtu. That value determines what the cost of gas is and determines the overall operational cost of T&TEC. When you take into consideration that present cost that value is approximately, well it is \$995 million, close to \$1 billion.

**Mr. Hosein:** No. The question I am asking you is that the price that you have to get confirmation on for the business plan, is it the price that T&TEC will be purchasing at?

**Mr. Ramsook:** That is correct. So therefore—

**Mr. Hosein:** Therefore, and you are purchasing from NGC?

**Mr. Ramsook:** That is correct.

**Mr. Hosein:** So what I am trying to find out is, what is the difficulty and why was there a delay with respect—Trinidad and Tobago Government owns NGC, the Ministry of Public Utilities it “simply have” meetings with NGC to firm up this gas price, I believe your business plan was completed a long while ago. So what I am trying to find out is why is there a delay? What is causing this non-confirmation of the gas price that will be part of the business model? And I do not know if anyone from the Ministry of Public Utilities may be able to answer that because I know that you have done what you had to do on your end, as said by your team on the last occasion. So really, why is there some delay on part of the Ministry to give you feedback?

**Ms. Duke:** Chairman if I may?

**Mr. Chairman:** Yes, sure, Ms. Duke.

**Ms. Duke:** You know the saying, let me ask our DPS to give you response in respect of that, but certainly, this process does not involve the Ministry only. There is a larger committee that addresses this, but I will ask the DPS to share with you.

**Ms. Khan:** So good morning again members.

**Mr. de Freitas:** Good morning.

**Ms. Khan:** And just to follow on to what both Chairman Callender and Mr. Ramsook said, the price of gas that T&TEC purchases its supply in order to generate electricity from NGC is a key factor in the determination of the business plan and in any rate review process.

At the Ministry what we have done is to develop several scenarios as to what this gas price could be. And we have taken into consideration of course the impact on consumers, the different segments of consumers, the ability to pay while balancing that against the utility and its ability to meet operational expenditure, as well as to undertake capital investments in ensuring that the supply of electricity continues to be reliable and of a high quality.

The Ministry has undertaken this analysis using various prices for the natural gas to be bought from NGC, and the matter is now before all the scenarios, and all the implications and impact on the various objectives and elements that I spoke to, is now before the energy subcommittee of the Cabinet. We expect that we will have a decision very shortly on the matter of the preferred price at which NGC will sell the gas to T&TEC to generate electricity in the country.

**Mr. Hosein:** Can you give us—we are looking at timelines, when will all these possible scenarios submitted for the subcommittee of Cabinet to be considered? How long ago?

**Ms. Khan:** Okay, so we did this analysis. It was quite an extensive analysis. We ourselves developed a model, an economic model, and we did look at both the economic impact in terms of T&TEC and the social impact in terms of segments of the country and looking at the standard of living and what would be the different rate increases that will result from the different prices. And we completed that exercise earlier this year. It was quite extensive, and we completed it.

Now we had to make a lot of assumptions in doing our analysis, but it requires very careful deliberation. And of course, you know there are as well implications in terms of the natural gas market



and how do you effectively utilize the resources—the dwindling resources that we have in terms of to have natural gas. But the Ministry of Public Utilities has paid significant emphasis on consumers' ability to pay, especially our residential customers of T&TEC.

**Mr. Hosein:** On the scenario that you would have submitted with respect to the gas price, did you all at all consider whether or not there will be the need for a subsidy? Because you are saying that you are taking into consideration the cost of living and the ability of the customer to pay. Did you all at all consider whether or not at this time subsidies may be required? Because you say that the model was completed earlier this year which was in fact during the pandemic. I would assume it was before the third lockdown March of this year. Did you all examine the need whether or not the Government may have to absorb some of the cost just for people to get by in terms of having a basic utility such as electricity?

**Ms. Khan:** Absolutely. In fact, the issue of subsidizing on the gas price side of the equation was very prominent in most of the scenarios that we looked at. Yes.

**Mr. Hosein:** Chairman, just one last point I want make. I know member de Freitas in fact said that we have one of the lowest electricity rates in the world. I just want to correct that on the record, in terms of RIC—in fact did a report, an annual report I believe, and they found that Suriname in the region has the lowest electricity rates. That is one.

And two, all of the other countries that we may be considered by are not producers of gas that member Roberts correctly identified. So I think those are some of the factors that both the Ministry, the RIC, and also T&TEC should consider. Because at the end of the day, we have to—while we understand where T&TEC is financially, you have to look at the customers who really have to benefit from the service that is being provided by the public utility.

**Mr. Chairman:** Is there any response on that from the RIC on the observation?

**Mrs. Callender:** Yes. I think I could only repeat what I told the other member previously, that looking at benchmarks we really look far and wide. In fact, I would say recently we did some research work here at the RIC, we considered not only regional information, we went as far as Singapore, we looked at what is happening in Europe, we looked at different types of economies and so on. And we will that same methodology when we get the initial output of our financial model. We will look far and wide at different types of environments, different types of economies, and benchmarking always requires not just that you adopt it, but you vary it for your individual circumstances. And that is what we will do.

**Mr. Hosein:** Chair, if I may just respond shortly to that? Chairman Callender, I know that you would have said that you did extensive research with looking at other economies, but when I looked at your last report, you only compared Trinidad and Tobago to Aruba, the Bahamas, Barbados, Belize, Cayman Islands, Jamaica, and Suriname. So I hope probably in the next report that for public consumption that we also get those comparisons with those other economies that you would have outlined, especially those who are also producers of natural gas to see how those countries would have treated with the price of gas and the impact on the rates of electricity?

**Mrs. Callender:** We certainly will.

**Mr. Khan:** Chair, if I may come in here?

**Mrs. Callender:** Sure.

**Mr. Chairman:** Sure, Mr. Khan.

**Mr. Khan:** I just and to point out that when you are doing rate reviews you have to be conscious of the cost to produce the service. Generally, we request the utility to provide a cost-of-service study which gives you an idea of how much it is costing them to supply the service to customers. What we are doing in our analysis is trying to come to the efficient cost of providing that service. So they might

say it cost them 100. What we are trying to determine is what is the efficient cost? Whether that is 75, 60, I just use a round number so do not stick on the number right. So we are trying to figure out what is the efficient cost of providing that service and the benchmarking is to look at similar size utilities to see what cost they have for producing that kind of service. So benchmarking is used in that context to get the level of cost, to look at the number of workers that utilities of the same size have in relation to T&TEC. How many people are in a crew that go out and do repairs in relation to T&TEC.

The benchmarking is about those types of things. But in terms of the price of electricity, it must be based on the cost of service and anything to do with subsidies is strictly falls with the Government, not with the RIC. So those are the kinds of things that you need to note. I will stop there for the moment.

**Mr. Chairman:** Okay, thank you, Mr. Khan. I see member Roberts you have your hand up.

**Mr. Roberts:** Mr. Khan, is the cost of gas to produce electricity not the number one cost over and above the amount of men on a crew, the amount of diesel you put in a truck, is the main factor not impacting the cost of providing electricity, the cost of natural gas?

**Mr. Khan:** Member, I see that you are well informed. It is true.

**Mr. Roberts:** Therefore, Sir, with all due respect, since we blessed with being in this beautiful country that is producing X Mcf of MMBtu of natural gas coming out of our beloved soil, you cannot compare us to St. Vincent that only have gas coming out of volcano, or to Cayman Islands that does not have gas. Our production cost is lower than all of those. So therefore, where I do not think it is fair to say that that is just is statement for the Government. That is why I asked you all if the RIC is independent? And if the RIC is independent, and the number one cost of producing electricity is natural gas, natural gas is found in Trinidad and Tobago and belongs to the citizens who are the customers. Therefore, the RIC must formulate its cost specifically to being a citizen of Trinidad and Tobago. And “ah don’t” want to hear about Jamaica, Virgin Islands, and BVI.

**Mr. Khan:** Member I think you misunderstood somewhat. Earlier I said that the power that T&TEC purchases from the generators is a pass-through in the cost. So what we are looking at in terms of efficiency is T&TEC’s operational cost. So the price of gas is a pass-through. We accept that because T&TEC can do nothing about that. So we are not unconcerned about it, but when we do our analysis we are looking at the operational cost on the T&TEC side, not on the gas side. And as I said a subsidy is the responsibility of Government. The RIC cannot do anything about that.

**Mr. Roberts:** No, no, I accept that totally. But when the Government is making policy and the RIC is independent, and the Government is making claims and statements that we utilize electricity inefficiently in my home, because we get it too cheaply because we have natural gas, I am asking you as the RIC if this policy position of the Government is going to impact your recommendation of pricing as an independent organization?

Now, if the Government passes it onto you and says, “We are going to charge you all X amount, double, triple, for the gas,” there is nothing that the RIC can do. But the Government will pay politically for that, but this is why we need clarification for the population. They are not too sure about this process. While you may be, they are not. So, I am asking you, the Government that exists now has said that we as citizens pay too little for our electricity and therefore we utilize too much. And in order to force us to conserve, they are going to raise the price. Is that—the only way they can raise the price is through the RIC. The RIC is independent. How is there policy position going to impact your rate recommendation?

**Mr. Khan:** Chair, would you want me to respond?

**Mr. Chairman:** Mr. Khan, member Roberts, we had really discussed this aspect. [*Interruption*] Yeah.

All right member Roberts, but could I finish what I was saying?

**Mr. Roberts:** Yeah, but you could let him answer.

**Mr. Chairman:** We have discussed this extensively and I hope we are not badgering, putting the RIC into a position where they are being badgered into answering something that they cannot answer directly at this point in time.

**Mr. Roberts:** Mr. Chairman—

**Mr. de Freitas:** Mr. Chairman, once you get a chance, I just want to make a comment.

**Mr. Roberts:** The point about badgering, I am not badgering at all. I am asking a question that the citizens would not—

**Mrs. Callender:** Can I just maybe just directly just respond? Sen. Roberts, some of the information that you are describing as “policy information”, they are not really policy information. So for example, we can look at the cost of electricity in different locations under different scenarios and the position where Trinidad and Tobago will fall. That is factual information, and that is not a policy decision. I think at the end of the day what we want to ensure is that the service continues to be acceptable, and that we provide a reasonable return are for the service provider. And that is the information that we would use.

The price at which the gas is provided to T&TEC, we are unable to influence that. As a matter of fact, we are going to take the information as given to us from T&TEC and begin our analysis there. And the outcome would be what it is until we then refine it, looking at all of the different economic and other impact assessments that would have been described earlier.

**Mr. Chairman:** Thank you, Mrs. Callender. Before we move to member Morris-Julian who has her hand up, I would allow Mr. Ramsook to make his contribution.

**Mr. Ramsook:** So Chairman, I just want to clarify and point out one issue. So at this point in time if we were to have no subsidy on the gas, the rates would have to be reset at US \$.09 cents per kilowatt hour. So it gives you an idea of the business operation and how the operational cost is taking place. So with zero subsidies you refer to \$.09. I know we spoke about Suriname, and they are also being subsidized at this point in time. So I want to mention two points. So at \$.09, if you look at any jurisdictions with any unsubsidized rates they will start you off at \$.12. So if you use that to guide you in terms of the utility and its operation that would be one factor.

**11.00 a.m.**

One other factor to look at, T&TEC at this point in time is suffering a loss of \$1.1 billion dollars, that we are unable to pay for the gas to the National Gas Company even at the subsidized rates. The subsidized rates is one half of what the value of the gas is on the open market. So at the subsidized rate of US \$1.5882 dollars per MMBtu, T&TEC is still unable to meet its commitment to even pay at that unsubsidized rate. So at this point in time, even to bridge that gap to even pay the unsubsidized rate, right, has created a shortfall of \$1.1 billion dollars annually to T&TEC. So, I just wanted to mention that point.

**Mr. Roberts:** So, thank you, Mr. Chairman, thank you. I know you all would like to mute and so on and control. But I would like to thank Mr. Ramsook for his answer and for the answers, it can show that the population—this is not badgering, the population can now look forward to vast increases in their electricity. This is going to be paying for the citizens and it is not badgering, it is very important. So thank you, Mr. Ramsook, when they remove the subsidy and go up to 9 cents US and 12 cents, we can envisage a doubling or a tripling of our electricity bill and people would like to know that, that is all.

**Mr. Chairman:** Yeah, member Roberts, so thank you, for your contribution and let me assure you, as Chairman of this meeting, I am not muting and I am not controlling any contributions here today.

The floor is wide open, the system we have, your hand is up, you are allowed to make a contribution. But I think in treating with who is appearing before this commission here today, that we also—maybe the way you are asking is probably giving the wrong impression, maybe. But at the same time, these are public servants, they have their substantive jobs and at the same time, I think they should be given the room in terms of having to answer and I am sure that in all of their answers they are trying their best and they are being genuine in their responses. So it is just— [*Crosstalk*] a two way extension of— [*Crosstalk*]

**Mr. Roberts:** I have no problem with the answers being given once— [*Inaudible*] They are giving great answers, they are fantastic so I do not see the problem.

**Mr. Chairman:** And just to reemphasize the point, I am not muting or controlling anybody in this meeting, so we move to member Morris-Julian.

**Mr. Roberts:** Not you, Mr. Chairman.

**Mrs. Morris-Julian:** Thank you, Mr. Chairman, I really appreciate the opportunity to finally speak. Mr. Chairman, I through you, I have a question directed to the RIC. I am extremely interested in your public outreach, that being, I have noticed that many of my constituents do not seem to understand the role of the RIC. And they will come to their MP for me to write to the RIC, on their behalf, believing it is some sort of magic trick that will help them with regard to their bills. So, what I am asking, what is your communications plan? What is your public outreach? Is there anything that you would be doing differently? Because I must admit that T&TEC has improved tremendously with regard to their outreach, especially during this pandemic. So, things are being made easier, especially for our senior citizens but I would like to know about the RIC—because it is an important body and I know people want to know more. Thank you, Mr. Chairman.

**Mr. Hosein:** Just one point to note before RIC answers. Just to be clear, I know this is an inquiry into the management of T&TEC and related recommendations. I do not know this is an inquiry to RIC in terms of how they are going to improve their service. I know this is an inquiry into T&TEC.

**Mrs. Morris-Julian:** Just to clarify through you Chairman, to the member, I know it is not into RIC but RIC works hand in hand with T&TEC, so I am asking about the public outreach, especially in the aspect of T&EC. This is not a criticism, this is just me simply requesting further information. Thank you very much, Chairman.

**Mr. Chairman:** Yeah, member Julian, I would allow the question to the RIC because although member Hosein has expressed his view, I think by extension, it is related and I would kindly request the RIC to respond.

**Mrs. Callender:** Yes, so the RIC uses a number of communication channels to reach to the public, to educate them, to inform them. We do, for example, press advertisements, we do radio advertisements as well. We have information brochures. I think in the member's particular case, we used to do a number of community outreach meetings around the country and we have not been able to do those recently in the face of the pandemic. But as soon as time and circumstances allow, we would return to those. As well, one of the things that we are now incubating is having something online on Facebook, one of the sessions where we can speak and interact with our various publics and take their questions and answer it.

So, that is something that we are still planning now at the moment. And I would also say, when we thought about the rate review, and we wanted to do far more consultations than had been done in the past, for example, we wanted to do two in Tobago, we were going to do not just Port of Spain and San Fernando, we know that there are a number of large population centres in Arima, in Central and so on and that is what we have planned when we get to that stage. But immediately we

will be doing some electronic communication via Facebook and even putting on a seminar on energy efficiency. So, those are all in the works and will come out soon.

**Mr. Chairman:** Okay, thank you, Mrs. Callender. I would just like to go to Mr. Ramsook. Mr. Ramsook in the context of what is being discussed in terms of T&TEC's inability to provide reports on a timely basis, other than the business plan which is holding up your rate review, and as a consequence is denying you increased revenue, the RIC did indicate that in their response to one of our questions, is that their reports—their reporting on standards and their reports are also unduly delayed because of your late submittal of data. Mr. Ramsook, what I am asking in your organizational structure, do you have a dedicated department or dedicated staff that is responsible for providing this timely information to the RIC so that they could produce their reports and do their reviews on time?

**Mr. Ramsook:** Right, that is correct but I would put you on to the Chief Financial Officer, the department falls under him and there is a specific department that is responsible for that aspect of the function.

**Mr. Balgobin:** Good day. So there is a department, a small department in T&TEC that interacts exclusively with the RIC. As far as I am aware, the reporting between the department and the RIC is mostly up to date. I am surprised to note the comment, but I would be happy to probe into the specifics of it.

**Mr. Chairman:** Okay, well, maybe what I can request of the RIC is that you did respond to the question in that way in terms of delays of reports, but maybe if you can provide supplemental information to the Committee, in terms of further details so that is being requested here from T&TEC. Okay?

I would like to go to the Ministry of Public Utilities, Ms. Duke in terms of the relationship with T&TEC and the RIC, in terms of the provision of data, and the information to facilitate rate reviews and also for RIC to generate their standards reporting. Do you all have an intervening role in this process, if it is not being done in a timely manner, or is not being done adequately, is that part of your portfolio in terms of monitoring and intervening accordingly?

**Ms. Duke:** Well, the quality of standards that T&TEC is supposed to report onto the RIC, our customer service units, we also receive complaints and we receive contributions from members of the public. When we do so, we bring these to T&TEC's attention, and T&TEC is asked to respond and to accommodate action within a specific time period. We have those reports that we get from T&TEC and we also make our own assessment of whether T&TEC is in fact meeting the quality of service standards as set out by the RIC. To the point of your question, there is some interaction in terms of looking at whether T&TEC is meeting those standards and whether or not the reports as put out by the RIC, in fact, coincide with the assessment that we do at the Ministry. And in very many cases, we have to say that they do, so there is some interplay in terms of the information that flows to us, and the reports that are produced by the RIC.

**Mr. Chairman:** Okay, thank you, Ms. Duke. Member Hosein.

**Mr. Hosein:** Thank you very much, Chair. Now, I just want to go to another topic, Chair. Recently, we would have seen in the news, affected many persons, a disconnection drive being done by WASA. I want to ask—because this question was raised in the Parliament yesterday during question time, whether or not a similar exercise may be undertaken with respect to T&TEC. I want to ask if whether or not there is any similar exercise with respect to any disconnection drive that may take place with T&TEC and after that, I have a follow up question.

**Mr. Ramsook:** Right. So, as a response to that Sir, T&TEC continues to encourage all of our customers to pay their bills. All of our service centres are fully opened, there are many options that we encourage customers to pay their bills. We also identified to the Ministry that any customers

having difficulties, they can come to us and we will arrange—set up arrangements and so on over this particular period. So, we are making every effort and we are encouraging our customers to pay their bills because you know, given the nature of the business is absolutely necessary that we collect our monies.

**Mr. Hosein:** But you will—if someone does not pay their bill, the disconnection will take place?

**Mr. Ramsook:** Well, I do not want to say yes and I do not want to say no but at this stage as I said, we are encouraging our customers to continue to pay their bills.

**Mr. Hosein:** Because I believe that a question was answered and it was indicated that there will be some level of discussions between the customer and T&TEC with respect to payments of bills. I can tell you in my constituency, Mr. Ramsook, persons who have been unemployed for quite some time, especially those who have been renting, finding it very difficult to pay their bills. So while I understand that you all require persons to pay their bills, we have to also look at what is happening in this pandemic, it is unprecedented. So I just want to—I could follow up, I understand your position, and I think this could be a question more appropriate for the Ministry. The Ministry has something called a Utilities Assistance Programme for persons who may not be able to pay their bills, can the Ministry give an update whether or not this programme would be open wider, one; two, how long does it take for you to process an application to assist a person who may have difficulty with paying their electricity rates?

**Mr. Chairman:** Ms. Duke.

**Ms. Duke:** Thank you, Chairman. Member, this programme is based on a policy that was approved by Cabinet, any contemplation of opening it up wider, and as I said, we are here today to hear recommendations as well, so I hear you loud and clear, of course, will have to be the subject of variation in that policy. I will ask the DPS to get into some of the detail of where we are at now, in terms of the programme and how it is comprised, and what are the precursors to persons making themselves eligible for the programme.

**Ms. Khan:** Okay, thank you, PS. So the Utilities Assistance Programme has several components. As member indicated, there is the opportunity to get a reduction on both your electricity and your T&TEC bill that is one component. And then there are other components related to water tank assistance and solar panel assistance. So that anyone making an income that is below \$5,000 can apply to the Utilities Assistance Programme. There is a form that you have to fill it out and submit to the Ministry. The Ministry has a process whereby we will have to verify the information of course, that is presented to us. And then of course, we do our own assessment and then that person is deemed either eligible or not eligible based on the verification process to be able to access the programme.

In respect of the electricity bill, it is a maximum of \$1,200 per annum that can be accessed. And in respect of WASA, it is the water sector, it is \$200. But in addition to the utility assistance programme, the Ministry also has a rebate system on the cost of your electricity consumption whereby any consumer that is generating a bill that is \$300 and less per billing cycle that they are then eligible to get a 25 per cent rebate on their bill. And out of almost 50 per cent of the residential customers are in fact already benefiting from that facility. So, those two programmes go hand in hand. But as PS Duke indicated, we are also here to receive some of the recommendations of the Committee and we will certainly look at our programmes and the opportunities for facilitating those persons who are in a really dire situation.

**Mr. Hosein:** I just want to—since you are here to take recommendations, as a member of Parliament, I can tell you that we do not have enough engagement with T&TEC in terms of an outreach, so maybe that is something that you all could reach out to the MP offices, because in this

pandemic, most of the persons who have issues come to our offices, especially, with, they cannot pay bills and things like that.

Secondly, how long will it take for this procedure from the stage of submitting my application to making a determination on my application, because you have to understand that the person can in fact, be disconnected from the service based on the length of time it will take to process that application?

Two, I believe you need to open up the criteria in terms of persons who may have been unemployed during this pandemic period, because some persons live without savings, they live paycheck to paycheck, and those are some of the persons we have to take care of.

Also, look at persons who have been renting in terms of they have to pay rent and also foot bill of utilities. So, those are some of the things that you all probably could look at expanding this policy. Because it is so much that our offices—so much resources our offices have, so we really rely on the Ministries to give us some additional assistance to really help the constituents in our area.

**Ms. Khan:** Absolutely. If I may, through you Chair, just to add following on what member indicated. While these programmes have been going on, the Ministry of Public Utilities continues to support those families, especially in times of the pandemic where they need to have an electricity connection. So, we also have two programmes that we continue to implement, the residential electrification programme and we have brought electricity to several households across the country, to facilitate the online learning, we have done our part on that. And then to supplement the Residential Electrification Assistance Programme, we have the electrification programme, which really brings the infrastructure to the household. And then we bring—then we do the wiring of the household. So we have been moving on that end as well, just to add to what you said member, and we will certainly look at your recommendation.

**Mr. Hosein:** The reason I engaged with this line of questioning is because I know with respect to that WASA issue, I mean, the Ministry, it was quite an unfortunate situation with respect to what took place with WASA recently and I do not want something like that to happen with respect to customers who are beneficiaries of electricity supply.

**Mr. Chairman:** Thank you, member.

**Mr. Ramsook:** Chairman, Chairman, T&TEC here, can I make a comment, T&TEC?

**Mr. Chairman:** Yeah, Mr. Ramsook, before you make your comment, if—after you make your comment if you could respond as well to one thing I would like to ask, and that is during this period of the pandemic, in terms of the actual consumption of electricity via consumers, has it placed T&TEC in a negative situation in terms of reduced consumption and as a result of reduced revenue? And in addition to what we are discussing here, when you combine that fact in terms of trying to be as conscientious as possible in terms of your consumers regarding disconnections, what is the position of the Commission in all of this?

**Mr. Ramsook:** Right. Okay, so let me deal first with the issue of opportunities that the customer has to at least have some sort of reduction with their bills. So, we have as the Ministry had identified, we have 210,000 customers, whose bill is \$300 or less, out of 445,000 customers, and they—once their bill is \$300 or less, they receive a reduction of \$75; 25 per cent on that bill. In addition to that, we have been encouraging our customers to collect the LED bulbs, and the LED bulbs do have a significant impact. So far, we had purchased 1.6 million bulbs, 895,000 of those bulbs have been issued. And when we did the analysis, we recognized the customers who are in the lower tiers whose bill is a lot less, that is the bills \$300 or less, only 16 per cent of those customers have collected their bulbs. Just to point out, if you use those bulbs, and we did the calculations, over a two month period, you could end up getting an additional \$15 once you have those four balls installed, depending on

how you consume when in terms of your lighting, you could end up getting an additional reduction of \$15 based on your kilowatt hour consumption would be further reduced to once those balls are installed.

The country also benefits because it means that we will have less generation because those bulbs are more efficient than the incandescent bulbs and therefore, there will be further savings to the organization in terms of gas and gas usage, and so on. So, we want to encourage our customers and as I said, we observed those in the lower tiers have not been collecting those bulbs and so far, only 16 per cent of the bulbs have been issued in that category. So that is one point.

On the issue of the pandemic, certainly Sir, we have been getting in terms of our actual consumption, we have observed a significant reduction in kilowatt hours. And in addition to that, we have observed that a number of customers, in fact, I would say over the last month, I would have signed roughly about 30 applications for reduction in reserved capacity that is impacting on the cost to do business. But certainly once they apply and we do the analysis, a lot of customers are migrating from industrial to commercial, and even lower rates. So, we are seeing that impact arising out of this period, because you know, you have a number of businesses that are not operating. And we did see an increase in the domestic and that is because people are more home. When you do the overall analysis we saw a significant reduction in the kilowatt hour consumption over this last period.

**Mr. Chairman:** Yeah, thank you, Mr. Ramsook, I really hope our listening and viewing audience have heard you very clearly about their—the use of the LED. And it would encourage them to really take advantage of what has been offered, since it would impact significantly on the rates that they have to pay. Member Roberts has had his hands up for a little while so I would like to ask him to take the floor.

**Mr. Roberts:** Thank you, Mr. Chairman. Mr. Ramsook to follow up on MP Saddam Hosein's question. It appears on bill collection, that T&TEC has not received any clear pandemic policy from the Cabinet or the line Ministry of the Government of Trinidad and Tobago to cease and desist on disconnections during this lockdown, shut down and “bruk down” SOE period. Am I correct in understanding that from your answer that you have received no clear guidelines from the Cabinet during this specific lockdown period where people cannot work, to cease and desist from disconnection? And it is left up to T&TEC’s normal policy and discretion.

**Mr. Ramsook:** No Sir, we have received guidelines from the Ministry of Public Utilities and as I have indicated, again, we are encouraging customers to pay their bills. We do not disconnect for a first bill, so after four months, the second bill, right, when we send to customers we do we encourage them. At this point in time, you would have observed that we are conducting our business in the manner where you had no complaints of that nature. So at this stage, again, I say we are encouraging our customers, all our service centres are open, all the avenues to pay your bills are there and we continue to encourage our customers because for the running of the business it is absolutely important that we collect our revenues, because we have a number of commitments. So I just want to repeat that, again, based on what I said before.

**Mr. Roberts:** Sir, I am trying to get clarity. Have you received direction or directive due to this specific pandemic lockdown where people are not working, to cease and desist from disconnections? I am not getting that clear. I am hearing that you will try and it may get a little extension, disconnections may go and you are encourage— [*Technical difficulties*]

**Mr. Ramsook:** So as indicated dialogue has taken place with the Ministry of Public Utilities. We continue to encourage our customers to pay their bills.

**Mr. Roberts:** Thank you Sir, I have gotten an answer from your non answer. Okay. Thank you.



**Mr. Chairman:** Okay, thank you, member Roberts and Mr. Ramsook. I would like to go to the Ministry of Public Utilities, come back to the Ministry of Public Utilities. Ms. Duke, T&TEC has indicated to us that there are certain proposed legislative amendments that have been submitted to the Ministry for your consideration. I am just asking in terms of the status of these proposed legislative amendments, where you are with them.

**Ms. Duke:** Chair, could I ask Mr. Ramsook to provide some specifics?

**Mr. Ramsook:** Right. So that would be things like the feed-in tariffs and all the other issues, in terms of the Act and so on, items that we would have provided to the Ministry and I know work is taking place on that at the Ministry also.

**Ms. Duke:** Alright, because I just wanted to be very clear on where we were going with this, so I can ask Ms. Dulal to speak to the feed-in tariffs please.

**Ms. Dulal:** Okay, so the Ministry of Public Utilities—Good morning Trinidad and Tobago, the Ministry of Public Utilities works with a number of key stakeholders and we are at the end process of the finalization of the revision of the feed-in tariff policy. We are working on an implementation plan at the moment, so that is with respect to the feed-in tariff policy. With respect to any other legislative amendment we are currently at the end process of finalizing what we would like to take to the Cabinet and subsequently the Parliament.

**Mr. Chairman:** Okay, Ms. Dulal, are you looking at amalgamating all the respective items of legislative amendments into one bill or are you treating with the respective items separately? Like you mentioned the feed-in tariff, I know that is one but based on what T&TEC did present to the Committee, there are a couple of others as Mr. Ramsook intimated.

**Ms. Dulal:** Yes, there is. So, we are separating it, we have some we put in quite a bit in one bill and then we are separating some to separate bills because the matters are very different and we are trying to do all—we want to do all together but then we will present it separately according to the matter of criticality in terms of importance.

**Mr. Chairman:** Okay, thank you. Mr. Ramsook, as we are on the aspect of the feed-in tariff, you did respond to the Committee in that the Commission is currently negotiating a PPA with a consortium of three entities, Lightsource BP, Shell and BP to provide energy via two renewable plants. In the whole context of power from renewable resources, what are some of the projected impacts that this would have on your existing power purchase agreements and the take it or pay basis on which these present power purchase agreements are based on?

**Mr. Ramsook:** Well, first of all, once this negotiation is completed, is it expected that once this capacity is available that the Commission will take all from the particular producer. One of the issues that we have to be very mindful of is that the rates that we are looking at is US 4 cents per kilowatt hour. The last time I mentioned, averages even what our present rates in terms of generation, averages about 4.7 cents in that vicinity. And if you “unsubsidized” the gas 5.9 cents. So certainly at four cents you are in a better position in terms of the rate for getting capacity.

So, it would not impact as significantly on the PPA because we want to encourage—when we did the analysis and we looked at that full capacity coming onto the grid, while on the last occasion I mentioned it is non-dispatchable, it will be redound to significant gas savings at the end of the day once we could get that capacity on the grid based on the rates that we are getting the capacity at. So in other words, once that capacity goes on the grid and whenever it is available, because as I indicated, you know, these plants are about 28 per cent efficient because of non-dispatchable, once it is available and you do the kilowatt hour calculations, it would show that that savings on the gas, it would surpass that savings on the gas and create some significant savings once we can get the full capacity on the grid.

**Mr. Chairman:** Okay, thank you.

**Mr. Ramsook:** It will literally pay for itself.

**11.30 a.m.**

**Mr. Chairman:** Okay. Thank you. Member Roberts, I noticed you have your hand up? Member Roberts?

**Mr. Roberts:** No, Sir. No, Sir. My hand is not up. It should come down.

**Mr. Chairman:** All right. Sorry about that. Mr. Hosein? Member Hosein? I am seeing your hand up, member Hosein.

**Mr. Hosein:** Oh, sorry, Chair. Can you hear me now?

**Mr. Chairman:** Yes, we are.

**Mr. Hosein:** I just have three areas of focus, and I just want to take us back to the last meeting and you yourself, Chair, would have raised this issue, with respect to the economic tariffs that T&TEC would have proposed to the Ministry. Can we get some update from the Ministry with respect to this proposed economic tariffs that T&TEC would have suggested? Based on the last indication, it was something in the concept of the Ministry helping T&TEC to absorb some of the operational cost, if I am not mistaken, based on the answer that was given by Mr. Balgobin. So, is this something that the Ministry is, in fact, looking at considering what T&TEC has suggested?

**Ms. Duke:** Chair, I just want to be clear as you said economic tariffs. So, could I ask Mr. Balgobin to just clarify?

**Mr. Chairman:** Mr. Balgobin?

**Mr. Balgobin:** Yeah, good morning. I think this needs to be clarified. An economic tariff is simply a tariff along the lines of what Mr. Khan explained. T&TEC needs to be able to charge a tariff that keeps the utility whole, considering all of its cost—the cost of natural gas, the cost to power generation, the cost of transmission and distribution. That is all there is to it.

**Ms. Duke:** Mr. Chairman—

**Mr. Chairman:** Because, on the other hand—sorry, Ms. Duke—we have heard from the RIC, in terms of how they go about assessing that tariff increase and within their review for rate increase, they also conduct detailed impact assessments as well. So, that factors into the actual increase in rate that is granted. So I think T&TEC has made the point of an economic tariff, as member Hosein rightly reminded us, because there was some discussion, at the last meeting we had with them about the whole concept of economic tariff. But it seems as though that it will be balanced by, you know, the process that the RIC has to go through.

**Ms. Duke:** Yes. So the reason I asked for the clarity, Chairman, is because in the conduct of the scenarios, as the DPS explained earlier, this would also have been taken into consideration. So we would not have looked at it as something separate and apart to the whole process that we would have gone through before we placed our recommendations before the Committee.

**Mr. Hosein:** Thank you. Thank you very much. The reason I asked is because it was something different that was brought up to our attention when the Committee convened, with respect to we needed some clarification. And I know Mr. Balgobin said that he would have been guided by the line Ministry with respect to the economic tariff based on—Mr. Ramsook, sorry—the notes that I have before me.

The other issue I want to focus on, Chair, is that this week in the newspaper, it was reported that at the Union/Gandhi Village area, there were some issues with respect to T&TEC going into private lands and a human barricade had to be formed, which was reported in the press relating to a land acquisition for the construction of some high tension lines in the area. Mr. Ramsook, can you give some clarity with respect to this particular matter? Because what the landowners are suggesting

is that they have not been compensated for their lands and T&TEC is entering into their private property. Can you just bring some clarity to this matter?

**Mr. Chairman:** Mr. Ramsook, are you there?

**Mr. Ramsook:** Sorry, my apologies. I still remained muted. At this stage, while this project would have been in the making for quite some time, the Commission has now reached the stage where it is actually starting the physical work for the construction of what we call the Union/Gandhi 220 KV line. This line is absolutely critical for the country's needs in terms of electricity. We have only one line that leaves the TGU substation and supplies capacity onto the grid—one major line—and that circuit needs urgent maintenance. It is over 10 years old and it needs urgent maintenance. For us to do that, that second line has to be completed urgently. That line that exists, right now, supplies half of the country's load under normal condition and under off peak condition, could reach as far as 75, 70 per cent of the country's load.

Having said that, the work has started in terms of the actual construction of the line. The Commission went through its processes. The Commission would have served section 37 that allows us to go in. We have identified a clear route and we did, in fact, served our section 37 that allows us to start the process. In parallel to that and in separate to that, having said that, we are also having that separate dialogue with each of the residents with regard to any piece of land that we are accessing in terms of its acquisition.

Having said that, we did offer, in the particular case—and I do not want to call names and location—we did offer a value for the particular piece of land. There was a misunderstanding. We have had further dialogue and I want to make it clear, the Commission makes it very clear, we want to offer the fair price for the acquisition of these lands that we are, in fact, accessing. As I said, having said that though, the process of the installation is very clear based on section 37 of the Trinidad and Tobago Electricity Act. But, in parallel to that, we are in discussions and we are offering in the cases where customers present themselves with the documents, payments for the particular piece of land.

We did have some further dialogue. We feel that that particular matter has been resolved. I, myself, got directly involved and, today, as we speak, work is ongoing at that particular location and the Commission expects to maintain its commitment—and I want to make this clear to all the residents who are listening there—to be fair to all the residents and to ensure that we follow the rules, in terms of that discussion, in terms of their compensation and so on for the parcels of land, once they provide the necessary ownership documents and so on.

**Mr. Hosein:** So, basically, we are saying that this matter has been resolved?

**Mr. Ramsook:** The particular matter in question had been resolved. I do not know if others will turn up as we proceed with the job. Right? But as they come up, we will certainly have to deal with them on a case-by-case basis.

**Mr. Hosein:** The last question I have, Mr. Ramsook, is that while you were discussing the issue of the LED bulbs—thank God for technology—someone actually sent me a message on my phone which says that some of the T&TEC outlets—I guess it is the service areas—they are not distributing LED light bulbs and the excuse that we are getting is because of the pandemic, the increased in the number of cases. Do you have any reports of that? Because you have encouraged persons to use the LED bulbs and some of the outlets are not distributing the bulbs because of, I guess, they are using issues with respect to the pandemic in terms of the social distancing and limited interaction.

**Mr. Ramsook:** All right. I would Mr. Francois, who that section falls clearly under, provide a response.

**Mr. Francois:** All right. Good morning, again, everyone. Right. So, we have one or two service centres that we have converted into payment only centres, such as Broadway Service Centre in Port

of Spain. And that one, you know, customers are just going to pay and therefore, the collection will have to take place at other service centres in Port of Spain, such as St. James and Head Office, Corner Park and Frederick Street. So that is the only thing. But yes, we are certainly encouraging customers to come in and collect their LED light bulbs. However, certainly, we do not want to encourage too much congregation, per se, in terms of the pandemic we are currently going through. So, you know, we want customers to come, obviously and, you know, to maintain social distancing and everything. But yes, it is available.

**Mr. Hosein:** How many stations are not distributing the bulbs, Mr. Francois?

**Mr. Francois:** It might be just about a couple of them but certainly, we will—I think Rio Claro and Broadway Service Centre—but everyone else should be distributing bulbs.

**Mr. Hosein:** Thank you.

**Mr. Francois:** Thank you.

**Mr. Chairman:** Thanks, member Hosein. You are okay? You are finished?

**Mr. Hosein:** Yes. Thank you very much, Chair.

**Mr. Chairman:** For the time being. All right. So we go to Member Morris-Julien who has her hand up.

**Mrs. Morris-Julien:** Through you, Chairman, I just want to ask, Mr. Ramsook a question. Mr. Ramsook, in the preamble with the members before, one member pointed out that there was a dip in his electricity and he expected that there would be an outage shortly. He is still online so, clearly, that did not happen, so kudos to you. But what I am concerned about is that there is a sharp increase from outages from 2018 to 2019 by 3,009 and then there is a further increase for 2020 by 1,240. Could you tell me what is the reason for the number of outages, especially now that so many of us depend on our electricity supply for our work purposes and school purposes? Can you clarify, please?

**Mr. Ramsook:** All right. I will put the Chief Technical—

**Mr. Chairman:** Mr. Ramsook, I think member Morris-Julien is referring, I think, in particular, to your unplanned outages.

**Mrs. Morris-Julien:** Yes, planned. Sorry, Chairman. Thank you.

**Mr. Ramsook:** So I would put the Chief Technical Officer one time on the spot. Let him take that responsibility and he has to face the heat. So, Mr. Belle.

**Mr. Belle:** Yes, Good morning. Somehow I am having a bit of a technical problem with my video. I do not think they are hearing me. Hello? Are you all hearing me? Good morning.

**Mr. Chairman:** Yes. Yes, we are hearing you. At least, I am hearing you, quite clear.

**Mr. Belle:** Yes, we have looked at the figures and observed that there has been an increase over the past few years. Right? We would have attributed a bit to some line clearing issues, and we had a delay in the establishment of contracts between 2019 and into 2020. We have since had those contracts enforced late 2020, around September into October, and we are pushing with the drive to do that extensive line clearing, so that we can reduce these outages.

Another part of it is we are looking at using the technology out there to assist in the modernization of the grid. So you will find that we will be depending a bit more on those devices called the auto reclosers and bringing in some additional ones to assist in the reduction of those sustained outages that customers are seeing. So we did see the increase. We have done the analysis, and we are putting some measures in place now to try to reduce those. So we are working on it.

**Mrs. Morris-Julien:** Just to go further, in reference to the planned outages from 2018 to 2020, there was a significant increase in the planned outages. Is there anything being put in place, through you, Chairman, to deal with that in particular? I am not just talking about the trees. I know that, for example, every Sunday for, at least, three months in Arima—sorry Chairman. I think my Internet

connection—[*Technical difficulties*]

**Mr. Chairman:** You are not coming across too clear, member. We are not hearing you that well.

**Mrs. Morris-Julien:** Okay. I am sorted now—to deal with that—is it better now?

**Mr. Chairman:** Yes, we are hearing you better.

**Mrs. Morris-Julien:** Right. There was a slight dip in the electricity, Chair. So I am asking, through you, Chairman, to Mr. Belle, it is of great inconvenience. And while I must applaud T&TEC for always putting the information there so people could make plans accordingly, what is in store for us 2020, 2021 and 2022?

**Mr. Belle:** Right. So as we look forward into the future, you find that one of the measures that we are looking at closely is the increased use of hotline methods to do more work. So, we are looking at increasing the number of hotline codes we have, so that would assist us in reducing the number of outages customers see in carrying out maintenance work. So that is one of the major areas that we are looking at.

**Mrs. Morris-Julien:** But, Chairman, through you again, just one clarification I am seeking. We spoke about the increases but there was also a decrease from 14,000 in 2017 to 12,889 in 2018. So, I am just asking again, you know—I would like to know what happened then? Why can we not make sure that it is happening now? Thank you, Chairman.

**Mr. Belle:** All right. You are coming in a bit broken. So I take it the question you are asking is that we had that reduction between 2017 and 2018, and you want to know what is happening now. Right? As I said, we are going to continue to look at the analysis of the information we have and we are trying to look at those areas that have seen an increase in the outages and designing maintenance activities specifically to those areas.

So we have pulled out, from over the last two to three years, all the data to identify general areas that are seeing frequent outages and we are targeting those to identify the problems. One of it is the trees. The other one we know, we have this issue with the vermin, so we are trying to get some technology that will help us to install different things on the lines to prevent that. And the third one would be the use of that technology with those auto reclosers, whether they be the single phase, which is one we are looking at for the lines that just have one conductor on them to supplement those with the three phase. So we are looking at it and we do intend to get an improvement that you should see by 2022—during 2022. So it is something we are paying close attention to.

**Mr. Chairman:** Thank you, Mr. Belle.

**Mrs. Morris-Julien:** Thank you very much. Chairman, just one last question. I noticed that there was a drive to sort out illegal connections. If I could just get some information. I would like, on behalf of the Committee, some feedback. Are people responding?

**Mr. Ramsook:** Right. So, Mr. Francois, again, that falls under him, so he will give you a feedback.

**Mr. Francois:** Right. So we would have had an amnesty or we do have currently an amnesty programme running, which encourages customers who have an illegal connection to come in and regularize that because it is, for the most part, unsafe and can lead to, you know, serious injury and worse. So, we have offered an amnesty and we have had some traction. We have had roughly 47 customers who would have responded and they would have, you know, come in and organized their installation so that they could regularize their connection and make it, obviously safe, and within the law. So, it is taking some traction.

**Mr. Ramsook:** I just want to add on the aspect of the illegal connection. So we are encouraging customers. We have encouraged customers over this period. You know, you would have had customers who may have either connected themselves from the Commission infrastructure directly and is receiving an electricity supply—an unmetered electricity supply. There are many different

situations that are occurring where the customers are not in compliance with the Commission requirements.

We have gone out there and we have offered this amnesty to encourage the customers to make whatever changes that is necessary and over that particular period, we would have forgone having to bill them for capacity used over that particular period or any period. The RIC allows us to go back over a particular period to retroactively bill customers, hence the reason for the amnesty.

The reality of it is that once we go back into normal conditions, we certainly will be—in terms of our actions, once we identify the location where there is this non-compliance, we will have no choice but to conduct disconnections in those locations and, of course, the relevant customers will have to fund the period at which they were utilizing the supply, because we will use the history, we will ask the questions and so on. So that is why we were encouraging our customers, please, when you steal electricity, when you tamper with the installation, two issues happen. It creates an unsafe situation. That is one. And the second issue is that, given the value that this whole discussion that we are having here today, with regard to rates and so on, right, it impacts on the Commission losing it much needed revenue that it needs to carry out its functions.

So, hence the reason, the Chairman of the Board made it abundantly clear—Mr. Thomas—that we needed to look at this. We needed to encourage the customers to come forward. The first impact on this was to ensure safety and thereafter, of course, to ensure that there is compliance to the Commission requirement. So we, again, take this opportunity, as we saying to everybody, to encourage our customers to come forward, please, and do the corrections. Thereafter, once this—we would be able to really go into a full function again, beyond the pandemic. Certainly, these would be the items we would be looking at very closely.

**Mrs. Morris-Julien:** Through you, Chairman, Mr. Ramsook, I am not sure if I missed it. But how has the response been? Are people responding? Is it couple hundreds, thousands, five, 10? I am just asking for a number, because it would be interesting to know, because we know the impact of the grid itself when people steal electricity.

**Mr. Ramsook:** Right. So, 47 responses were received. I would have to just verify the particular date. But the response has not been as we would have expected. We have an inclination that it is more than that number of customers and, again, while we had the 47 responded, we are encouraging customers, please, who are in this situation, there are forms that they could collect, complete and certainly, you know, we would look at this situation. At this point in time, beyond that, of course, the circumstances will change because, you know, we would have allowed this period, at least, to encourage customers to do what is the right thing.

**Mr. Chairman:** Okay. Thank you, Mr. Ramsook.

**Mrs. Morris-Julien:** Through you, Chairman, I just want to say, Mr. Ramsook, if you ask people to report their neighbours, I am positive the response will be much higher than that. But, Chairman, if you could just move into the new connections and what is the policy and the process, and how long it takes? I am asking on behalf of my constituents.

**Mr. Francois:** All right. So, a new connection can take—well, it depends on what exists, what infrastructure exists, you know, close to the residence or to the structure that is requesting the new connection. So, if it is that all our infrastructure exists, then the process is very quick and the customer can get a connection within a few days, a week, two weeks, you know, that kind of time frame. However, if it is that we have to install a plant, HVs and LVs, then that requires extensive surveys and designs. It may require the customer to pay a couple of contributions and that process can take a much longer period because, you know, once the customer has to pay funds, then that will certainly lengthen the time. Right? So it can go into months. So, based on what exist, what plant exists, it can

go from days to weeks to months. Thank you.

**Mr. Chairman:** Member Morris-Julien?

**Mrs. Morris-Julien:** Thank you very much, Chairman. That will be all for me.

**Mr. Chairman:** All right. Thank you. Well, we are at that point in time that we need to wrap up this hearing and I am sure there are other questions that the Committee may want answered, but this will be done in writing to the respective entities that are represented here. On a positive note—to end on a positive note, what I noticed from the response we received from the RIC, in particular, when they were asked to describe T&TEC's performance under the guaranteed standards—because under the RIC Act, the RIC developed guaranteed standards scheme for the quality of service that T&TEC provides to its customers. And then also under the T&TEC overall standards, that the Commission has performed quite well under both the guaranteed standards and the overall standards.

There is just one aspect, Mr. Ramsook, that I think to bring to your attention because you scored highly in all of the standards that the RIC had provided. It was the question of street lighting, and it seems as though the Commission has some homework to do in that area.

**Mr. Ramsook:** Yes. That is correct, Sir. But I want to say this. What is affecting us, you know, we would have doubled the number of street lights that have now in the country. And, of course, given our financial situation, we are making every effort, in terms of our resources, to actually meet the commitment of doing the repairs and so on. So we are making all the efforts and certainly, that is one of it we are not happy with yet. There are two items we are clear T&TEC—we need to look at closely: street lighting and we did do a bit of work on our call centre. So those are the two. I quite agree with you. I know there is a bit of unhappiness in terms of our response and certainly, we continue to make every effort with regard to that.

**12.00 noon**

**Mr. Chairman:** Well, thank you, Mr. Ramsook. So, we will close up and, as part of the closing-up procedure, I would invite closing comments from the chief representatives of the entities here and, maybe, Mr. Ramsook, we will start with you, for your brief closing comments.

**Mr. Ramsook:** So, again, Chairman, T&TEC is very grateful for this opportunity. Again, it remains a learning experience. It is an excellent forum, because rates are a very sensitive issue. We, again, appeal to your Committee. We are in a situation where we, certainly, do need an increase in rates. I know that the value of that increase will be determined, at the end of the day, based on all the ingredients that has to go in there, based on these discussions. Having said that though, we took note of all the comments, in terms of the outages and in terms of, you know, our planned outages, and all the other comments that actually took place at the meeting and, certainly, the Commission will continue to make all its effort. We thank our customers for their patience with us, and we would make every effort to continue to improve on the reliability of supply, as we move forward to make this whole thing a better play. Thanks a lot, Sir.

**Mr. Chairman:** Thank you very much, Mr. Ramsook. Could we go to Ms. Duke from the Ministry of Public Utilities?

**Ms. Duke:** Thank you, Chairman. So the Ministry would like to thank the Committee and the other agencies here today for this discourse and, especially, for the recommendations that came forth from the members, and we look forward to continuing to work with all our partners and stakeholders as we consistently try to provide a reliable electricity service. Thank you.

**Mr. Chairman:** Thank you very much, Ms. Duke and thanks very much to your representatives. We go to the Chairman of the RIC, Mrs. Callender, for brief closing remarks. Mrs. Callender?

**Mrs. Callender:** I am trying to unmute myself. Thank you very much, Chairman. The RIC wishes to thank the Committee and the stakeholders for the opportunity to participate and contribute to

improving T&TEC's performance. From our perspective, we await the T&TEC's business plan to begin any analysis and considerations of a rate review which, as we said, would take an average of 12 months from the date that the information is received, and this timetable includes national consultations in Trinidad and Tobago and with all our stakeholders—business chambers and so on.

Any information that is submitted by T&TEC will be subjected to a rigorous review to provide a reasonable return on their efficient operations. Our work will not be done in a vacuum. We will use a substantial amount of comparative data and modify it to suit the needs of Trinidad and Tobago. Our end goal being affordable rates, high-equality service to the various sectors of the country.

We have noted the comments on communication, and we will continue, to outreach to members of the public—some via traditional means, some via electronic means—and, in particular, we look forward to resuming the face-to-face community outreach when such is possible.

Any information that we have promised or required of us further, we will submit promptly, and we thank the Committee, again, for this invitation and for the experience. Thank you.

**Mr. Chairman:** Thank you very much, Mrs. Callender. I would like to, in closing, let me thank all the representatives from the respective entities. I think it is good we had such a good representation and meaningful representation from the respective bodies. I contributed significantly to what we have achieved here today. So, thank you very much, to all the representatives. The names are—it is a bit long to call out, so if you would just accept my general thanks to all representatives and, of course, to our viewing and listening public for tuning in to this live broadcast. And, of course, last but, not least, would be the members of the Committee. Thank you members very much for your participation and your engagement of the representatives of the various entities. And, in closing, I must thank our hard-working and efficient Secretariat to this Committee, headed by Mr. Johnson Greenidge. So, thanks everyone, until next time.

**Members:** You are welcome.

**12.03 p.m.:** *Meeting adjourned.*



# APPENDIX V

---

## T&TEC'S RESPONSIBILITIES

**T&TEC's Responsibilities as mandated by Act Chapter 54:70**

- 1.359. In the Act, "Minister" means Minister with responsibility for the T&TEC. In this regard, T&TEC is mandated by the Act in the following sections:
1. Section 7 – to remit certified copies of the Meetings of its Members to the Minister;
  2. Section 8 (1) – to seek the approval of the Minister to declare the remuneration and allowances of persons co-opted to attend meetings of Members;
  3. Section 31 - For the purposes of subsection (1), the Commission may with the consent of the Minister:
    - a. participate in the formation of companies or firms which propose to engage in the generation of energy;
    - b. hold shares or be a partner, and exercise the rights of a shareholder or partner, in companies or firms engaged in the generation of energy;
    - c. purchase energy from an approved generator of electricity;
    - d. grant loans to an approved generator of electricity;
    - e. subject to sections 21, 31A, 32 and 33 enter into contracts of guarantee, surety or indemnity, create charges, liens, encumbrances, or other forms of security interest over its property and assets and give any other undertaking in relation to its property and assets;
  4. 31 (3C) - The Commission may, with the approval of the Minister, by Order declare a body corporate or firm to be an approved generator of electricity;
  5. 34 A. - The Commission may, with the approval of the Minister, by Order transfer and vest in [an] approved generator of electricity any of its property, assets, rights, powers and obligations;
  6. Section 50. - The Commission, may with the consent of the Minister, give and continue to give a supply of energy to certain lamps (Street Lights) in such quantities as the Local Authority may from time to time require to be supplied;
  7. Section 51 - The price to be charged by the Commission, and to be paid to them, for all energy supplied to the public lamps, shall be payable by the Minister in accordance with the rates as determined by the Regulated Industries Commission pursuant to the Regulated Industries Commission Act; and

8. Section 67. (1) - A licence may extend to authorising the licensee to lay, place or carry on, under or over State land, to the extent and in the manner specified in the licence, such electric supply lines and to erect and maintain in or upon such land such posts and other apparatus as may in the opinion of the President be necessary or proper for the purposes of the licensed installation, and such authority may be given or added to at any time during the currency of the licence by endorsement thereon under the hand of the Minister.

# APPENDIX VI

---

## T&TEC'S INCURRED DEBT SITUATION

**TRINIDAD AND TOBAGO ELECTRICITY COMMISSION  
INFORMATION REQUESTED FOR THE JOINT SELECT COMMITTEE ON T&TEC OPERATIONS  
2015-2020**

		2015	2016	2017	2018	2019	2020 (unaudited)
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
4 (i)	Government subsidies	375,539	430,560	501,745	1615,640	252,382	525,003
4 (ii)	Operations costs	3664,120	3841,310	3718,172	3879,717	3627,050	4364,782
4 (iii)	Capital expenditure	347,255	374,193	468,248	323,264	264,394	246,631
4 (iv)	Salaries and Wages Expense	984,996	1105,483	1320,929	984,704	983,932	1031,396
4 (v)	Revenue received by Commission by type of revenue including other revenue						
	Light and Power	3002,206	2982,032	2973,485	2989,615	3084,329	3098,180
	Rental of transformers, dwellings and poles	73,954	74,383	117,943	94,673	97,055	99,631
	Sundries	13,047	19,222	12,483	9,136	18,744	15,287
	Contracting work	4,045	55,317	2,708	3,546	3,130	25,615
	Meter and secondary connections and disconnections	9,850	9,157	8,375	9,615	11,756	4,561
	Term deposit income	932	2,465	4,608	4,326	10,913	8,519
	Interest on loan to subsidiary	9,101	9,048	9,588	9,895	8,970	8,195
	Dividend Income from Subsidiary	26,621	55,065	88,275	107,953	61,830	58,940
	Total	3139,755	3206,689	3217,465	3228,758	3296,727	3318,928
40 (i)	amounts owed to suppliers;	1930,472	2685,947	3810,485	507,241	1770,946	2653,060
40 (ii)	amounts owed to contractors;	3,920	11,468	24,222	3,171	6,148	4,757
40 (iii)	loan debt servicing;	449,180	457,012	482,773	384,924	305,852	573,303
40 (iv)	all debts owed by the Government on behalf of T&TEC; and	None					
40 (v)	All debts incurred by T&TEC.						
	H5BC	253,291	221,035	177,090	133,505	89,011	44,584
	1.6B - Bridging (TGU Arrears)	1612,590	1612,590	1612,590	-	-	-
	1.6B - Bond (TGU Arrears)	-	-	-	1550,011	1419,886	1283,949
	NGC (2012)	736,372	462,670	154,452	-	-	-
	NGC (2018)	-	-	-	3562,466	3779,754	3730,538
	\$500M Bond	231,095	189,077	147,060	105,043	63,026	21,009
	Total	2833,348	2485,372	2091,192	5351,025	5351,677	5080,080
41	Provide the total value and a comprehensive breakdown of the debts owed to T&TEC?						
	Light & Power (Private)	338,860	400,561	494,463	341,784	402,304	502,252
	Light & Power (Public)	274,922	331,960	455,210	789,149	1111,241	1199,727
	Sundry receivables	76,697	71,298	93,936	60,537	101,674	105,950
	Prepayments and accrued income	15,972	15,649	45,020	53,269	28,393	16,144
	Total	706,451	819,468	1088,629	1244,739	1643,612	1824,073

Source: T&TEC's submission dated March 29, 2021

# APPENDIX VII

---

## PROJECTED SAVINGS/REVENUE FROM T&TEC'S THE TWELVE (12) POINT OPERATIONAL PLAN

T&TEC's twelve (12) point Operational Plan and Projected Revenues

Initiative	Projected Revenue
Major control over the dispatch of each generation machine which has resulted in significant gas savings	Improvement of the dispatch regime will result in a projected gas savings of TTD 5 million annually.
Signing of the contract to construct the second 220 kV double circuit line from Union Estate to Gandhi Vlg. to bring the full dispatch of power from TGU onto the national grid which can result in significant gas savings	The construction of the second 220 kV double circuit line is projected to result in a gas savings of TTD 4.5 million per month or TTD 30 million annually.
Adjustments made to major contracting costs (2018).	Major contracting revenue fluctuates from year to year. Adjustment to costing of jobs generates an additional \$0.5 million per year in net income.
Increase in transformer rental rates for commercial and industrial usage (2017)	Annual revenue from transformer rental has increased from \$1.6 million to \$3.0 million, an increase of \$1.4 million annually.
The Commission now receives an administrative charge for the processing of Generator License Applications (2018).	Revenue from admin charge for processing of Generator Licenses is \$0.640 million annually.
Renegotiation of <u>two (2) expired pole rental agreements</u>	<p>There are two pole rental agreements being negotiated (VAT exclusive):</p> <ol style="list-style-type: none"> <li>1. TSTT             <ol style="list-style-type: none"> <li>a. Current revenue – TT\$ 21.13M annually (114,329 poles x TT\$15.40 per pole)</li> <li>b. Renegotiated contract revenue – TT\$32.38M annually (116,920 x TT\$23.08 per pole)</li> </ol> </li> </ol>

	<p>c. <b><u>Net Increase in revenue = TTS11.25 M annually</u></b></p> <p><b>2. Flow Communications</b></p> <p>a. Current revenue – TT\$22.05M annually (88,975 poles x TT\$20.65 per pole)</p> <p>b. Renegotiated contract revenue – TT\$24.64M annually (88,975 poles x TT\$23.08 per pole)</p> <p>c. <b><u>Net Increase in revenue = TTS2.59M annually</u></b></p>
<p>Ensure compliance with the statutory requirements for all industrial <u>high-voltage</u> customers to get their annual inspection completed and the relevant payments to T&amp;TEC is made.</p>	<p><b>TTS3,290,112.00 annually</b> through active compliance through disconnection of supply for non-compliant customers.</p>
<p>Lease of Commission’s dark fibre to interested users</p>	<p>TT\$1.5M annually contingent on GreenDot Limited entering into a lease agreement with the Commission for the lease of approximately 350km of a single Commission’s existing ‘dark’ fibre based on rate comparable to that of existing License Agreement</p>
<p>Rental of space on the Commission’s poles for advertising pennants</p>	<p><b>Projected TTS5.3M annually</b> through rental of space for advertising entities to install pennant brackets and pennants on approximately 2,300 poles (within city centres)</p>



<p>Rental of space on the Commission's poles for Licensees' communication antennae</p>	<p><b>Projected TTS\$0.25M annually</b> - contingent on Commission acquiring and installing communication antennae and availing same for lease to interested entities.</p>
<p>Introducing solar installations in customers' homes</p>	<p><b>US\$1.5M savings on Natural Gas expenditure</b> - contingent on Commission acquiring and installing Solar PV panels in 43,000 customers' homes over a 15-year period. During daytime period, customers' energy will be sourced from the Solar PV panels; all other times, customers' energy will continue to be sourced from T&amp;TEC's grid. Assuming no net loss in revenue to the Commission from these customers, project will realise the Commission benefitting from Natural Gas savings of approximately 24 MMBtu per customer per year.</p>
<p>Introduction of e-billing to reduce administrative costs from using less paper and mail services</p>	<p>Each e-bill saves the Commission \$1.50; with 110,000 customers receiving e-bills (mostly residential) at 6 bills per year, the annual saving is <b>approximately \$1 million.</b></p>

*Source: T&TEC's additional information dated May 26, 2021*

# APPENDIX VIII

---

## T&TEC'S DEBT COLLECTION POLICY

**TRINIDAD AND TOBAGO ELECTRICITY COMMISSION**



**GENERAL INSTRUCTION NO: FA04/0806**

**(THIS REVISED INSTRUCTION SUPERSEDES INSTRUCTION NO: A07)**

**DEBT COLLECTION – LIGHT AND POWER AND  
SUNDRY DEBTORS**

**1.0 OBJECTIVE**

To ensure that the collection of all arrears of light and power and sundry debts are pursued and resolved in a timely and efficient manner.

**2.0 PROCEDURE**

Where normal efforts to collect debts fail, the Commercial Manager will arrange for them to be referred to one of the Commission's approved Debt Collection Agencies listed below. Alternatively the Commercial Manager may recommend to the AGM-Finance through the AGM-Administration that steps be taken to have the amount written off.

A V Knowles & Co Ltd.  
50 Woodford St. Newtown  
Port Of Spain

Credit Chex Ltd  
Gallus & Wrightson Rd.  
Port Of Spain

Debts not resolved using the above agencies, and not recommended for write-off, will be referred for legal action to be taken either by the Debt Collector's legal representatives or the Commission's Legal Department.

  
**Indarjit Singh**  
**GENERAL MANAGER**

# APPENDIX IX

---

## T&TEC'S AGED RECEIVABLES

**AGED RECEIVABLES BY SECTOR AND AREA REPORT AS AT 2021-04-30**  
*Residential, Commercial, Industrial, Pole Rental and Unmetered Supply Accounts*

Sector	Area	30 Days and Under (\$)	31 to 60 Days (\$)	61 to 120 Days (\$)	Greater than 120 Days (\$)	Arrears (\$)	Total Outstanding (\$)
Private	North	34,447,035	5,634,119	4,542,452	11,945,034	17,654,876	56,568,640
	South	31,437,051	4,893,921	2,437,479	3,891,429	7,913,073	42,659,880
	Tobago	5,009,099	1,515,099	1,268,567	6,356,475	8,271,582	14,149,240
	East	28,956,337	6,952,447	4,426,866	5,028,256	12,335,388	45,363,906
	Central	25,038,993	15,277,340	7,257,562	16,469,637	36,153,480	64,043,533
	<b>Total</b>	<b>124,888,514</b>	<b>34,272,927</b>	<b>19,932,926</b>	<b>43,690,832</b>	<b>82,328,399</b>	<b>222,785,199</b>
Public	North	22,460,470	13,176,593	27,077,583	220,382,639	259,434,939	283,097,284
	South	25,909,957	24,739,334	33,340,030	348,923,205	405,667,394	432,912,527
	Tobago	4,031,450	3,671,025	6,203,972	52,244,950	61,370,674	66,151,398
	East	17,289,859	13,393,460	26,392,198	309,654,212	348,088,459	366,729,729
	Central	8,687,039	5,664,670	11,528,838	105,600,675	122,590,905	131,481,221
	<b>Total</b>	<b>78,378,775</b>	<b>60,645,082</b>	<b>104,542,621</b>	<b>1,036,805,681</b>	<b>1,197,152,371</b>	<b>1,280,372,159</b>
Total	North	56,907,505	18,810,712	31,620,035	232,327,673	277,089,815	339,665,925
	South	57,347,007	29,633,255	35,777,509	352,814,635	413,580,467	475,572,407
	Tobago	9,040,549	5,186,124	7,472,540	58,601,425	69,642,255	80,300,638
	East	46,246,196	20,345,907	30,819,064	314,682,468	360,423,847	412,093,634
	Central	33,726,032	20,942,010	18,786,400	122,070,312	158,744,386	195,524,754
<b>Grand Total</b>		<b>203,267,289</b>	<b>94,918,008</b>	<b>124,475,547</b>	<b>1,080,496,513</b>	<b>1,279,480,770</b>	<b>1,503,157,358</b>

- Arrears are calculated as the greater than 60-day debt for Residential and Commercial accounts and the greater than 30-day debt for all other accounts.

**AGED RECEIVABLES BY SECTOR AND AREA REPORT AS AT 2021-04-30**  
 Residential, Commercial and Industrial Accounts *Only*

Sector	Area	30 Days and Under (\$)	31 to 60 Days (\$)	61 to 120 Days (\$)	Greater than 120 Days (\$)	Arrears (\$)	Total Outstanding (\$)
Private	North	28,140,878	5,632,423	4,537,972	11,757,662	17,461,329	50,068,936
	South	29,565,002	4,224,501	2,036,346	1,814,392	4,765,484	37,640,242
	Tobago	4,711,544	1,220,409	1,120,462	1,613,094	3,085,405	8,665,508
	East	27,419,810	6,706,433	4,344,425	4,933,006	11,911,683	43,403,674
	Central	23,715,290	15,168,124	7,257,083	16,403,792	35,977,939	62,544,289
	<b>Total</b>	<b>113,552,523</b>	<b>32,951,890</b>	<b>19,296,290</b>	<b>36,521,946</b>	<b>73,201,840</b>	<b>202,322,649</b>
Public	North	15,829,312	11,147,693	23,163,921	192,378,199	225,487,938	242,519,126
	South	17,291,050	18,489,682	25,178,984	265,905,307	308,238,798	326,865,023
	Tobago	3,149,939	3,220,748	5,365,920	51,318,314	59,155,708	63,054,921
	East	12,565,423	10,804,164	21,213,995	274,515,106	305,181,854	319,098,687
	Central	5,028,287	3,782,410	7,985,282	80,273,954	91,838,370	97,069,934
	<b>Total</b>	<b>53,864,011</b>	<b>47,444,698</b>	<b>82,908,103</b>	<b>864,390,880</b>	<b>989,902,668</b>	<b>1,048,607,692</b>
Total	North	43,970,190	16,780,116	27,701,894	204,135,862	242,949,266	292,588,062
	South	46,856,051	22,714,183	27,215,331	267,719,700	313,004,282	364,505,265
	Tobago	7,861,483	4,441,157	6,486,383	52,931,407	62,241,113	71,720,430
	East	39,985,232	17,510,597	25,558,420	279,448,112	317,093,537	362,502,362
	Central	28,743,578	18,950,534	15,242,366	96,677,746	127,816,309	159,614,223
<b>Grand Total</b>		<b>167,416,535</b>	<b>80,396,587</b>	<b>102,204,393</b>	<b>900,912,827</b>	<b>1,063,104,508</b>	<b>1,250,930,341</b>

- Arrears are calculated as the greater than 60-day debt for Residential and Commercial accounts and the greater than 30-day debt for Industrial accounts.

# APPENDIX X

---

## T&TEC'S RISK MANAGEMENT POLICY

APPENDIX 4

TRINIDAD AND TOBAGO ELECTRICITY COMMISSION

ENTERPRISE RISK MANAGEMENT POLICY

1.0 INTRODUCTION

All organisations are exposed to risks. "Risk" can be defined as the effect of uncertainty on objectives. An effect is a deviation from the expected and can be positive, negative or both and can address, create or result in opportunities and threats.

Enterprise Risk Management (ERM) is an integrated approach to proactively manage risks which can potentially affect the achievement of the organisation's objectives. Managing risk is a key governance and management function and is an integral part of all of the Commission's processes and operations. ERM is a systematic, structured, inclusive, consultative, timely and iterative process responsive to external and internal changes. All employees are actively and directly involved in the Commission's risk management processes and operations.

2.0 PURPOSE

- 2.1 To ensure that all current and future risk exposure to the Commission are identified, assessed, mitigated and managed.
- 2.2 To promote an enterprise wide approach by integrating risk management processes into business strategy, project management, organizational processes, decision making, audit and compliance and general governance functions
- 2.3 To provide appropriate, consistent and transparent ownership and accountability for risk mitigation
- 2.4 To enable the design and implementation of treatment plans and controls that are resourced effectively to mitigate risks and are structured to promote the effective realisation of objectives
- 2.5 To recognise that the timely and accurate monitoring, review, communication and reporting of risk is critical to providing mechanisms for effective management of risk occurrences and consequences
- 2.6 To govern overall, the Commission's risk management activities in support of the achievement of corporate objectives, to protect stakeholders and the entities' assets, and ensure financial sustainability.

3.0 SCOPE

This policy applies to all personnel for which the Commission is responsible: management; employees; contractors; customers; and visitors to the facilities under the Commission's purview. Detailed risk management procedures already exist to cover

specific aspects of the Commission's operations including, but not limited to: health, safety and the environment; substance abuse; and procurement.

### 3.1 Principles of Risk Management

In order to fulfil the objectives of the policy and to lay a strong foundation for the development of an integrated risk management framework, the policy outlines the following guiding principles of risk management:

- All business decisions will be made with the prior information and acceptance of risks involved
- The risk management policy will help in the enhancement and protection of business value from uncertainties, consequent losses and unutilised opportunities.
- All employees aid in the process of risk identification and monitoring and shall be made aware of risks in their respective domains and their mitigation measures
- The risk mitigation measures adopted by the Commission shall be effective in the long term and to the extent possible, be embedded in the business processes of the Commission
- Risk appetite /tolerance levels will be regularly reviewed and may be adjusted by changes in relevant factors including the company's objectives, strategies or resources
- The occurrence, progress and status of all risks will be promptly reported and appropriate actions will be taken thereof.

### 3.2 ERM Framework

The ERM framework refers to a set of components that provide the foundation for designing, implementing, monitoring, reviewing and continually improving risk management throughout the Commission. The framework adopted by the Commission is based on the "Risk Management – Guidelines" developed by the International Organization for Standardization (ISO 31000:2008 Second Edition)

### 4.0 RISK GOVERNANCE

This governance structure embodies rules, practices and processes by which the Commission is directed and controlled, and also outlines the accountability levels for ERM within the Commission as follows:

#### 4.1 Board of Directors

- Understand the Commission's risk philosophy and concur with its risk appetite
- Know the extent to which management has established effective enterprise risk management processes of the organization
- Review the entity's portfolio of risk and consider it against the entity's risk appetite.
- Be apprised of the most significant risks and whether management is responding accordingly

#### 4.2 Risk and Audit Committee



- approve the risk management framework, methodologies, overall policies and roles/responsibilities
- verify risks are being managed within organisation's overall risk appetite
- address escalated risk issues

#### 4.3 **General Manager and Senior Executives**

- Leading the setting of strategic objectives for the Commission
- Inspire and foster cultural change in support of ERM as a value and best practice for the Commission
- Lead management discussions with the Board regarding institutional strategy and risk philosophy
- Review and approve recommendations for the ERM department ( taking into consideration accompanying independent assessment from Board members) regarding the development and implementation of the ERM program, ERM policy, institutional risk philosophy, institutional risk or opportunities with sufficient impact on the Commission's strategic objectives to warrant development of risk response plans, and proposed response plans for these risks
- Approve the risk ratings of all risks
- Review ERM progress reports as required
- Ensure all risks are satisfactorily addressed.

#### 4.4 **Risk Oversight Committee**

- drive establishment of risk management culture
- validate most significant risks, assign risk owners to these risks, approve action plans and resource allocation for monitoring/controlling of these risks
- review risk exposure at the corporate level and escalate risks in excess of approved risk tolerance levels to Board Sub-committees

#### 4.5 **Heads of Department**

- Demonstrate full commitment to ERM as a value and best practice
- Support the GM and Senior Executives, Risk and Audit Committee, ERM department in creating the appropriate internal environment and institutional culture for ERM
- Through a continuous assessment process, periodically identify risk and opportunities that may affect the achievement of department / Commission's objectives
- As responsible officials, assess and manage institutional and emerging risks under the oversight of the Board
- Assess and manage unit level risk within department level plans, budgets and resource
- prepare and update the risk matrix
- propose strategies to mitigate risks
- populate risk reporting templates
- monitor remediation of risks
- Include a discussion of risks and opportunities relevant to the mission of the department or the Commission as well as the status of any response to such risks or opportunities, in their annual workplan and budget submission

#### 4.6 **Internal Audit**

- Provide assurance to the Board and the GM on the effectiveness of the key risk management process, including the evaluation, reporting and management of key controls to mitigate identified risks

- Consult and advise on identifying and responding to risks and on the effectiveness of the risk assessment process
- conduct risk based audits

4.7 **ERM Department**

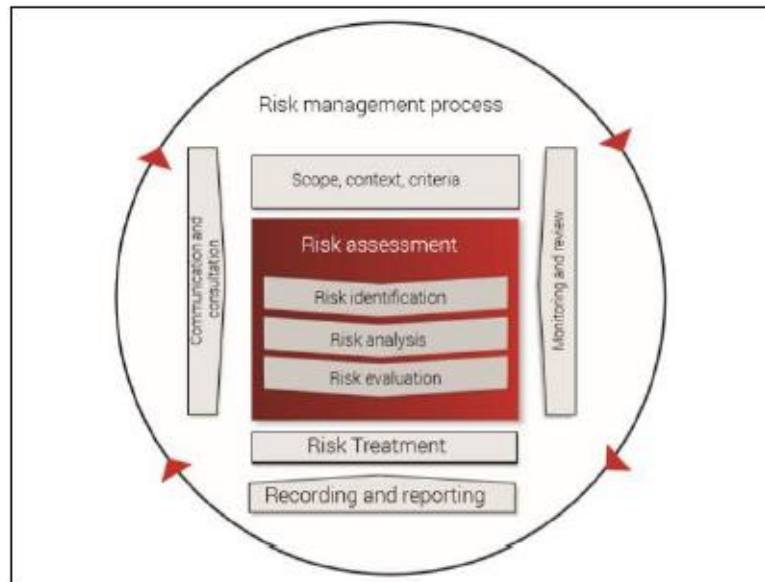
- Provide ERM guidance/technical support to the Management and Staff
- Work with HR to develop and deliver ERM training and educational material for all audiences and to conduct risk assessment workshops and interviews
- Create and support the use of tools and processes to identify, analyse, evaluate, respond to and report on risks and ensure the consistent implementation of the ERM program across the Commission
- Assist in the development of risk response plans and advise risk owners
- Manage the Commission's risk register

5.0 **ERM PROCESSES AND GUIDELINES**

T&TEC shall factor risk management into all aspects of its operations including strategic planning, performance management, audit assurance, business continuity planning and project management.

The ERM processes and guidelines provide supporting information to Management aimed at ensuring that risks are actively identified, analysed, evaluated and treated in the pursuit of the Commission's objectives.

Against this background, the key process constituents of the ERM are:



Details of the risk management processes are available in the Commission's ERM Framework.

6.0 **RISK REGISTER**

6.1 A risk register shall be maintained and detail *inter alia*:

- description of risk
- risk reference number ( Departmental and Commission)
- the probability of the risk occurring
- the severity should the event actually occur
- Risk rating of risk
- mitigation plan (actions and timelines taken in advance to eliminate or reduce the probability and / or severity of the event)
- the accountable official responsible person

6.2 The reason for the removal of any risk from the risk register must be clearly documented.

7.0 **REPORTING**

7.1.1 The Commission shall present to the Board/Sub Committee timely and appropriate reports on its risk management activities and its risk profile as is appropriate to ensure good governance.

7.1.2 The Commission shall present to the Board/Sub Committee bi-monthly reports on the status of implementation of treatment plans to address all "very high" risks.

7.1.3 Relevant reports should be submitted to the Senior Executives, Risk Oversight Committee and the ERM Department in a determined, timely manner to ensure the effective functioning of the ERM process.

8.0 **RISK APPETITE**

The Commission shall clearly articulate its risk appetite. Risk Appetite is the amount of risk that the Commission is willing to pursue or retain in pursuit of its objectives. In other words, the Commission will take risks which do not result in a breach of its risk appetite.

Risk appetite shall form an integral part of the risk management framework to demonstrate common understanding of same and to consistently measure and treat risk.

The Commission's risk appetite statements will be articulated under three key parameters:

- (i) Financial and commercial parameters which provide the threshold in terms of:
  - impact on annual budgeted revenue
  - impact on annual budgeted profit / loss
  - impact on budgeted cost / cost of completion in the case of projects in the construction stage
  - aged debtors
- (ii) Reliability and availability parameters which provide the threshold for:
  - CAIDI (Customer Average Interruption Duration Index) hours
  - SAIDI (System Average Interruption Duration Index) hours
  - SAIFI (System Average Interruption Frequency Index) %
  - ASAI (Average Service Availability Index) %
  - Number of outages greater than 10 hours
  - Spinning reserve
- (iii) Reputation parameters with respect to specific stakeholders:
  - Government of the Republic of Trinidad and Tobago (Ministries / Departments / Organizations)
  - key customers
  - key vendors
  - employees
  - media/general public
- (iv) Other qualitative parameters regarding
  - environment, health and safety
  - business disruption / project delays
  - legal issues
  - position with regulator

**9.0 REFERENCES AND RELATED DOCUMENTS**

Reference/ Statutory References	ISO 31000 Risk Management – Guidelines
Associated Policies	T&TEC's ERM Framework T&TEC's General Instructions
Attachments	Risk Likelihood Assessment Table Risk Impact Assessment Table

	Risk Rating Matrix
--	--------------------

10.0 APPENDICES

Risk Likelihood Assessment Table

Rating	Descriptor	Parameters
1	Low	≥ 50% chance of strategic objective /action being achieved very / surprised if risk event were to occur
2	Moderate	26-49% chance of strategic objective /action being achieved risk event approaching a toss up
3	High	5 -25% chance of strategic objective /action being achieved surprised if risk event did <b>NOT</b> occur
4	Very High	<5% chance of strategic objective /action being achieved very surprised if risk event did <b>NOT</b> occur

Risk Impact Assessment Table

Rating	Descriptor	Parameters
1	Low	Almost no/insignificant financial impact No/minimal HSE impact Not likely to adversely impact /minimal adverse impact to T&TEC's strategic objectives Negligible change/minor negative effect in customer satisfaction or relationship No/minor media coverage of event
2	Moderate	Notable financial impact Moderate HSE impact moderate adverse impact to T&TEC's strategic objectives moderate customer dissatisfaction or strain on customer relationship some media coverage of event
3	High	Material financial impact Serious HSE impact serious adverse impact to T&TEC's strategic objectives significant customer dissatisfaction and loss of customer relationship national media coverage of event
4	Very High	Threatens T&TEC's solvency severe HSE impact severe adverse impact to T&TEC's strategic objectives majority of customers lost persistent national and international media coverage of event

Risk Rating Matrix

**RISK RATING**

1-3 Low Risk			Severity (Risk Impact)			
4-6 Moderate Risk			Low (L)	Moderate (M)	High (H)	Very High (VH)
8-11 High Risk						
12 and Above Very High Risk			1	2	3	4
Probability (Risk Likelihood)	Very High (VH)	4	4	8	12	16
	High (H)	3	3	6	9	12
	Moderate (M)	2	2	4	6	8
	Low (L)	1	1	2	3	4

# APPENDIX XI

---

THE MEASURES USED BY THE RIC  
TO INFORM, EDUCATE AND  
CONSULT WITH THE PUBLIC, ON  
THE PRICE REVIEW PROCESS FOR  
T&TEC



**Measures either currently being used or will be used by the RIC to inform, educate and consult with the public, over the Price Review Process for T&TEC**

**(A) Inform**

- ***Print Advertisements*** – As mentioned above, advertisements are currently being placed in the print media (mainly the three daily newspapers) to notify the public on the release of various consultative documents and to highlight the RIC’s consultation process. Appropriate notifications will also be placed to alert the public about the release of the Draft Determination and Final Determination for T&TEC. Advertisements will also be placed in the daily newspapers to notify the public of the dates, times, and further details for the Public and National Consultation exercises.
- ***Radio Advertisements*** – Advertisements will be placed on Radio to notify the public of the dates, times, and further details for the Public and National Consultation exercises on the RIC’s Draft Determination.
- ***Press Releases*** – These are to be issued to all media, print and electronic, to update, inform, and engage the public on matters related to the Price Reviews.
- ***Press Conferences*** – The RIC will host press conferences, as appropriate, for the Price Review for T&TEC, to announce the publication of its Draft Determination and Final Determination on rates.

**(B) Educate**

- ***Information Brochures*** – An information brochure is being compiled to explain rate setting. It will be distributed online as well as via printed copies.
- ***RIC Newsletter*** – The RIC will use its Quarterly Newsletter to educate and inform the public of key elements of the Price Reviews through informative articles and snippets.

- ***Appropriate Animation short feature/s*** – the RIC will incorporate animation as a way to expand its reach. One of the videos will focus on how members of the public can conserve electricity and reduce costs.
- ***Media Appearances*** – Key representatives of the RIC will be booked to appear on the local television morning talk show programs (e.g. The Morning Brew on CNC3 and Morning Edition on TV6) as well as radio morning talk show programs. The RIC representatives will provide information to the public on the role and functions of the RIC and explain matters arising from the Price Reviews.

**(A) Inform**

- ***Print Advertisements*** – As mentioned above, advertisements are currently being placed in the print media (mainly the three daily newspapers) to notify the public on the release of various consultative documents and to highlight the RIC’s consultation process. Appropriate notifications will also be placed to alert the public about the release of the Draft Determination and Final Determination for T&TEC. Advertisements will also be placed in the daily newspapers to notify the public of the dates, times, and further details for the Public and National Consultation exercises.
- ***Radio Advertisements*** – Advertisements will be placed on Radio to notify the public of the dates, times, and further details for the Public and National Consultation exercises on the RIC’s Draft Determination.
- ***Press Releases*** – These are to be issued to all media, print and electronic, to update, inform, and engage the public on matters related to the Price Reviews.
- ***Press Conferences*** – The RIC will host press conferences, as appropriate, for the Price Review for T&TEC, to announce the publication of its Draft Determination and Final Determination on rates.

**(B) Educate**

- **Information Brochures** – An information brochure is being compiled to explain rate setting. It will be distributed online as well as via printed copies.
- **RIC Newsletter** – The RIC will use its Quarterly Newsletter to educate and inform the public of key elements of the Price Reviews through informative articles and snippets.
- **Appropriate Animation short feature/s** – the RIC will incorporate animation as a way to expand its reach. One of the videos will focus on how members of the public can conserve electricity and reduce costs.
- **Media Appearances** – Key representatives of the RIC will be booked to appear on the local television morning talk show programs (e.g. The Morning Brew on CNC3 and Morning Edition on TV6) as well as radio morning talk show programs. The RIC representatives will provide information to the public on the role and functions of the RIC and explain matters arising from the Price Reviews.
- **RIC Website** – The RIC’s website is a key tool for the presentation of information to the public as it relates to the Price Reviews. There is a designated area on the RIC’s website where the public can access information on consultative documents, upcoming public and national consultations, etc. All material for public information will be made available on the RIC’s website.
- **Social Media** – The RIC’s Facebook, Twitter, Instagram, and LinkedIn accounts are being used to share all information related to the Price Review to the public. The public can utilise the RIC’s Social media accounts to post comments etc. as this affords the RIC the opportunity to respond to comments, questions, and views in a timely manner.

**(C) Consult**

- **Regional Public Consultations** – Regional Public Consultations will be hosted across Trinidad and Tobago for the T&TEC Price Review. They will be scheduled to take place in North, East,

Central and South Trinidad, and in Tobago. These consultations will be designed as stakeholder workshops and will be interactive sessions at a community level. They are expected to take place after the release of the Draft Determination, to better inform and stimulate discussion on the Price Review. The hosting of these public consultations will be contingent on the latest Government-issued COVID-19 Public Health Guidelines, especially as it relates to public gatherings and appropriate social distancing, however, they can be hosted virtually, if necessary.

- ***National Consultations*** – National Consultation exercise is expected to take place in Port of Spain, San Fernando, and Tobago, and would target the public-at-large. This would seek to inform as well as solicit public views and comments on the T&TEC Draft Determination as well as address any questions and concerns from participants. The National Consultations may be hosted online if the RIC is unable to host them physically owing to Public Health Guidelines. The RIC is also exploring the option and feasibility of having this consultation broadcast live on social media and television and would invite persons to comment via text or WhatsApp.
- ***Focus Groups and In-depth Interviews with Stakeholder Groups***– This will incorporate meetings and interviews with other regulatory professionals, public sector partners, business groups, private sector stakeholders, independent advisors, panels/committees, etc. as appropriate.

# APPENDIX XII

---

## LIST OF ALL AREAS/INTERFACES/RINGS AND STUDIES

Areas/Interfaces/Rings and the last studies by T&TEC:

- 1) Lower City Ring – February 2021
- 2) North East Ring – November 2020
- 3) Inner West Ring – April 2020
- 4) Wrightson Road – Gateway Interface – October 2017
- 5) North Area – July 2015
- 6) North Area – July 2014
- 7) North Area – March 2013
- 8) South Area – April 2011
- 9) Tobago Area – January 2018
- 10) Far East Ring – November 2020
- 11) Trincity Ring – February 2014
- 12) Far East Ring – July 2011
- 13) Central Residential 66 kV Ring – February 2019
- 14) Central Industrial 66 kV Ring – July 2014
- 15) Brechin Castle – Point Lisas 132 kV Interface – June 2014
- 16) System – June 2016

# APPENDIX XIII

---

## PROPERTY TRANSFERRED TO THE POWER GENERATION COMPANY OF TRINIDAD AND TOBAGO (POWERGEN)

## **Appendix 2**

Please see below details of the property/assets and rights transferred to approved generator of electricity the Power Generation Company Trinidad and Tobago.

It should be noted that same was transferred pursuant to a Shared Rights Deed dated 19<sup>th</sup> day of December, 1996 registered as 24826 of 1996 between the Trinidad and Tobago Electricity Commission and the Power Generation Company of Trinidad and Tobago (PowerGen).

### **Commission's Properties divested in Power Generation Company Trinidad and Tobago**

- The Commission's Concourse Block Building Site
- The Commission Concourse Block Building
- The Commission's Port of Spain Distribution Section South Site
- The Commission's Port of Spain Gas Station
- The Commission's Port of Spain Distribution Section North Site
- The Commission's Fuel Tank Site
- The Commission's Port Authority Lands
- The Commission's Penal R.P.O. Lands
- The Commission's Penal North Leasehold Lands
- The Commission's Penal Car Park Site
- The Commission's Penal South Leasehold

### **Rights granted to the Power Generation Company Trinidad and Tobago from the Commission**

- A right of way and drainage on over through under and along that portion of the Commission's Concourse Block Building Site
- An easement over under and along the Commission's Port of Spain Distribution Section South Site
- An easement over under and along the Commission's Port of Spain Distribution Section North Site
- An easement over under and along the Commission's Port Authority Lands
- An easement over under and along the Commission's Penal North Leasehold Lands
- A right of way over and along the Commission's Penal R.P.O. Lands adjoining and abutting the lake owned by PowerGen situate on PowerGen's Penal R.P.O. Lands
- A right of drainage on under and along the Commission's Penal North Leasehold Lands
- A right of way over and along the Commission's Penal North Leasehold Lands



- A right of access to and the use of the Commission's Penal Car Park Site Leasehold Lands
- An easement, under and along the Commission's Penal North Leasehold Lands
- A right of way over and along the roads situate on the Commission's Penal South Leasehold Lands
- A right of way over and along the Commission's Penal South Leasehold Lands adjoining and abutting the lake owned by PowerGen situate on the PowerGen's Penal South Leasehold Lands
- An easement over and along the Commission's Penal R.P.O. Lands for PowerGen's Overhead Cables
- An easement under and along the Commission's Penal R.P.O.Lands
- An easement over and along the Commission's Penal South Leasehold Lands
- Rights and easements over the under and along the Commission's Penal R.P.O. Lands
- Rights and easements over under and along the Commission's Penal North Leasehold Lands

# APPENDIX XIV

---

## AREAS PRONE TO UNPLANNED OUTAGES

**Areas Prone to Unplanned Outages**

NORTH	<ul style="list-style-type: none"> <li>• Beetham – (Sea Lots 12kV)</li> <li>• Hololo Mountain Road (Knightsbridge 12kV) – Cascade</li> <li>• Jorapo Drive (La Pastora 12kV) – Santa Cruz</li> </ul>
SOUTH	<ul style="list-style-type: none"> <li>• Buen Intento Road (Princes Town 12kV) - Princes Town</li> <li>• Cottage Road (Papourie 12kV) - Barrackpore</li> <li>• Icacos Village (Cap de Ville 12kV) - Cedros</li> <li>• Cedar Grove Road (Mafeking 12kV) - Mayaro</li> </ul>
EAST	<ul style="list-style-type: none"> <li>• Four Roads Tamana (Guaico 12kV) – Guaico, Sangre Grande</li> <li>• Blanchisseuse (Blanchisseuse 12kV) – Blanchisseuse</li> <li>• Little Caura Rd (Cumuto 12kV) – Cumuto</li> <li>• Guaico Tamana Rd (Cunapo 12kV) – Cunapo, Sangre Grande</li> </ul>
CENTRAL	<ul style="list-style-type: none"> <li>• Sou Sou Lands (Edinburgh 12kV), Carlsen Field</li> <li>• Flanagin Town (Edinburgh 12kV) Brasso</li> <li>• Mamoral #2 (Edinburgh 12kV), Caparo</li> </ul>
TOBAGO	<ul style="list-style-type: none"> <li>• Arnos Vale Road (Arnos Vale 12kV) – Les Coteaux</li> <li>• Miss Mills Trace (Northside 12kV) – Englishman’s Bay</li> <li>• Cow Farm Road (Upper Windward 12kV) – Goldsborough</li> </ul>

# APPENDIX XV

---

## PLANS FOR UPGRADES TO PREVENT OUTAGES IN TOBAGO

## **Plans for system upgrade works in Tobago**

### ***Transmission Upgrade Works:***

- a. Increase the ampacity of the Milford-Scarborough and Milford-Courland 33kV circuits to allow for a single line-out contingency on the Milford/Scarborough/Courland 33kV SubTransmission ring
- b. Replace porcelain disc insulators on the Milford-Courland 33kV overhead line
- c. Replacement of aged 33kV circuit breakers at the Courland and Scarborough substations

### ***Upgrade Works as it pertains to Distribution:***

- b. Upgrade of the Golden Grove and Bon Accord 12kV feeders at Milford substation; and establishment of an additional 12kV feeder out of the Cove substation to allow for load transfer to mitigate the effects of a single line-out contingency on the Milford/Scarborough/Courland 33kV Sub-Transmission ring
- c. Upgrade of the 12kV switchboards at the Scarborough and Courland Bay substations
- d. Installation of additional Three-Phase Autoreclosers and Single Pole Tripping (SPT) Reclosers to improve the distribution system reliability
- e. Installation of fully-insulated overhead conductors in heavily vegetated areas to mitigate the impact of tree contact
- f. Installation of line hoses, insulator covers, and lightning arrestor covers to mitigate outages due to animal contact
- g. Research into the use of non-metallic poles and cross-arms to mitigate outages caused by animal contact with energised conductors with the added benefit of longer life of the overhead line infrastructure.

#### 1.1. The details are as follows:

- Thermal Upgrade of Milford Bay/Scarborough 33kV circuit – Survey of circuit completed. Information being collated to run studies. Estimated completion date: November 2021.

- Increasing the amperage of the of Milford Bay/Courland Bay 33kV overhead line circuit by December 2021 – outages at 33kv level will be assisted.
- Replacing significant lengths of overhead conductors that traverses the forest with insulated conductors that will be strung along the main road. – 89% completed. Sections 21, 22 & 23 incomplete. Mainly cable works outstanding. Estimated completion date: April 2022.
- Second transformer was installed at the Studley Park 33kV Substation. Completed in February 2021.
- Upgrade of 33/12kV Transformer #1 @ Courland Bay 33kV Substation – upgrade of 6/8MVA, 33/12kV Transformer to 12.5/16MVA, 33/12kV Transformer. Completed in August 2020.
- Increased focus on line clearing by assigning external resources.
- Installation of line hoses of similar technology to reduce outages due to animals is currently ongoing.

# APPENDIX XVI

---

## T&TEC'S OVERALL STANDARDS

Details of T&TEC's Overall Standards

Standard	Description	Required Performance Units	Compliance Rate (%)				
			2019	2018	2017	2016	2015
OES 1	Frequency of Meter Reading	(c) 90% of industrial meters should be read every month	100.0	100.0	100.0	100.0	100.0
		(d) 90% of residential and commercial meters read according to schedule	100.0	100.0	100.0	100.0	100.0
OES 2	Billing Punctuality	98% of all bills to be mailed within ten (10) working days after meter reading or estimation	100.0	97.6	94.4	90.2	100.0
OES 3	Responding to Meter Problems	Visit or substantive reply within 10 working days 95% of the time.	97.6	100.0	96.8	99.1	94.7
OES 4	Prior Notice of Planned Outages	3 days advance notice of planned outages 100% of the time	96.8	96.2	90.9	92.1	96.9
OES 5	Street Lights Maintenance	Street Lights- within 7 working days	53.9	49.5	21.3	29.9	40.5
		Highway Lights – within 14 working days	73.3	72.4	57.0	89.6	88.5
OES 6	Response to Customer Queries/Requests (written)	Time to respond after receipt of queries. Initial Response – within 10 working days	99.0	85.8	96.7	96.2	81.7
		Final Position – within 30 working days	97.1	94.8	65.6	54.1	45.9
OES 7	Notifying Customers of Receipt of Claim under Guaranteed Standard GES 1	100% of customers to be notified of receipt of claim within 10 working days.	100.0	100.0	100.0	100.0	N/A



# APPENDIX XVII

---

## SUMMARY OF T&TEC'S CHALLENGES AND ACTIONS

**Appendix 1**

**Summary of T&TEC's Challenges and Actions**

<b>Item No.</b>	<b>Challenges</b>	<b>Actions</b>
<b>Technical</b>		
1	Acquiring Right of Ways to construct new Transmission and Sub transmission circuits.	T&TEC is currently working with MPU and the Commissioner of State Lands.
2	Vegetation Management	T&TEC is working to ensure all Distribution Areas institute the necessary tree trimming contracts to facilitate better vegetation management
<b>Financial</b>		
3	Foreign Exchange (USD): The Independent Power Producers' Power Purchase Agreements are denominated primarily in US\$).	Correspondence is submitted to the Ministry of Finance periodically appraising the Ministry of T&TEC's need for forex to pay the IPPs.
4	Financial constraints: T&TEC has limited resources to execute Capital projects, upgrade/replace to ageing infrastructure	T&TEC developed its Business Plan 2021 -2025 to submit to the RIC to conduct the Rate Review. This should result in a tariff increase.
<b>Human Resources</b>		
5	Financial constraints have prevented T&TEC in settling outstanding salary negotiations for the various bargaining units.	T&TEC developed its Business Plan 2021 -2025 to submit to the RIC to conduct the Rate Review. This should result in a tariff increase.
6	Employees adapting to the changing business environment and performing their duties with the productivity and efficiency that are required to meet the changing demands of the customer.	T&TEC has been increasing employee awareness on the changing business environment and the Commission's expectations through ongoing communication. Further, T&TEC is embarking on a job rotation initiative to enhance skill sets towards employee development and increased productivity.
<b>Operations</b>		
7	The increasing crime rate has resulted in an increasing number of 'Hot-Spot' areas throughout the country. This creates a hindrance for the Commission in the execution of its respective operations.	T&TEC makes arrangements with the national Police to provide additional security for its employees. There is an additional cost associated with Security Services to perform works in such communities.
8	The Transmission Department is in need of a new building for the employees and the large transmission equipment.	The Ministry is working with the Commissioner of State Lands to locate a suitable site for the Transmission Department.

*Source: Ministry of Public Utilities Submission dated April 07, 2021*

# APPENDIX XVIII

---

## LEGISLATIVE REVIEW POLICY JUSTIFICATION DOCUMENTS

**TRINIDAD AND TOBAGO ELECTRICITY  
COMMISSION**

**LEGISLATIVE REVIEW POLICY  
JUSTIFICATION DOCUMENT**

**AMENDMENTS TO THE TOBAGO  
ELECTRICITY COMMISSION ACT CHAP.**

**54:70**

# INTRODUCTION

The Trinidad and Tobago Electricity Commission (T&TEC) is responsible for the design, construction, operation and maintenance of this country's electrical transmission and distribution network. The primary directive of T&TEC is to provide safe and reliable electrical power to residences, businesses and industries and lighting of street, recreational parks and public spaces. The Commission considers that this primary directive must be undertaken in accordance with the policy guidelines/within the policy framework set by the Ministry of Public Utilities.

During the process of policy development the Commission was therefore guided by the following principles:

- (a) The realization of long term sustainability of the provision of the utility services without compromising other national objectives:
  - (i) Efficient and Sustainable Use of Resources – that is the sustainable use of resources to fund the operation, maintenance and future development and investment in the electricity sector so that the Commission continues to improve and expand its services to meet the demands of consumers within the framework of environmental and other competing national interest;
  - (ii) Financial Sustainability – that is ensuring that there is sufficient revenue from the provision of the Commission's service to the user, with the Capital Contributions/other revenue and direct contributions from the government to cover the efficient costs of service delivery;
  - (iii) Environmental Sustainability – that is undertaking works in a manner that does not result in unabated damage to the environment as well as ensuring that any potential or actual environmental damage is mitigated or treated; and
  - (iv) Social Sustainability - helping to increase access to the service and providing mechanisms to consult with the community on pertinent aspects of service delivery.
  
- (b) Greater access to electricity by the entire population — with particular emphasis being placed on disadvantaged communities.

As a result the Commission has set the following strategic targets:

- (a) To ensure that the Commission is modern, customer oriented and technologically enabled to provide effective; cost efficient services to all citizens;

- (b) To practice prudent financial management with a view to becoming financially viable;
- (c) To ensure the production, acquisition and delivery of bulk power requirements; and
- (d) To ensure the illumination of public spaces.

With these goals in mind the Commission has identified several broad areas for policy and legislative developments as follows:

- i. The introduction of renewable sources of energy;
- ii. The review and expansion of the penal provisions;
- iii. The expansion of the provisions treating with installation of works;
- iv. Pricing/Rates and the Role of RIC;
- v. Strengthening of Corporate Governance and Financial Management; and
- vi. Electrification powers of the entity

## PART I

### SHORT TITLE AND DESCRIPTION

#### Situational Analysis

The Commission considers that the definitions in the Act require updating. These updates are needed to remove unused terms, to remove irrelevant portions of terms, to re-define terms so that they are broad enough to allow the Commission the strategic flexibility that it requires and to include new definitions of terms not previously defined. In particular as the national discussion relative to renewable/alternative energy generation has broadened and as the government has signalled its intention to encourage the use of renewable/alternate energy generation, the Commission must ensure that it is well placed and fully authorised to engage in/interact with this form of generation.

#### Problem Identification

Approved  
Generator of  
Electricity or  
renewable  
sources

The definition of "approved generator" does not include persons/entities generating electrical energy using renewable/alternate as well as any other alternative source deemed suitable by the Commission. Additionally, the current definition does not contemplate that an individual not a body corporate or firm, could be an approved generator.

Electric Energy

The definition of "electrical energy" in the Act is currently restricted to electrical energy produced by 'mechanical or chemical means'. Having regard to the fact that renewable/alternative energy is a live, one the Commission is concerned that it must be granted some level of control over electrical energy generated by renewable as well as any other alternative source deemed suitable by the Commission insofar as that energy impacts the Commission's grid.

Message

This definition requires updating. As far as the Commission is aware neither radio telegraphy nor radio telephony is still used in Trinidad and Tobago and indeed it appears that the infrastructure, poles, lines, etc. that support this form of communication have been removed.

Occupier

It is suggested that "occupier" be defined. This would enable T&TEC to fulfil its mandate to improve and expand the

provision of its services for all citizens inclusive of squatters on State Land.

**Power** This term is used four times in the Act. In three of the four sections S38 (f), S48 (1) and S60 it is used to refer to electrical power in keeping with the current definition but in one section S70, it is used to refer to mechanical power. This usage is not in keeping with the current definition.

**Subsidiary** The Commission recommends the inclusion of a definition of this term. The Commission has built certain capacity and contemplates the creation of subsidiaries to monetize these assets.

**Telegraphic Line** This definition is not used in the Act and should be removed.

**Transformer** This definition needs to be improved. The word transformer is included in the definition.

**Underground System** The Act does not currently include a definition of underground system. The Commission has in the past, particularly in Port of Spain and certain private developments, undertaken/worked with underground electrical systems and other electrical infrastructure.

**Works** The Commission considers that the inclusion of certain words to wit:

- Waterworks;
- Wells;
- Dams;
- Pipelines etc.

in this definition is anachronistic. Their inclusion harkens back to a time when the Commission used water as a means to generate electricity. Since the Commission does not currently use hydro-electric generation nor are there plans to include this in the long term, the Commission recommends removal of these words.

### **Possible Solutions**

**Approved Generator of Electricity**

The definition of "Approved Generator of Electricity" ought to be expanded to include renewable source generators as well as any other alternative source generator deemed suitable by the



Commission, as the existing definition does not specifically contemplate this development. The Commission also recommends that this definition be expanded to include electrical energy generated by all renewable sources as well as any other alternative source deemed suitable by the Commission – whether these are generated from dispatchable or non-dispatchable sources. Further, the Commission recommends inclusion of the word ‘person’ in the definition of approved generator so that it should read “means a person, body corporate ...”

Electric Energy

The definition of “electrical energy” in the Act should be amended to include electrical energy generated from renewable sources as well as any other alternative source deemed suitable by the Commission.

Message

Update this definition by removing references to radio telegraphy and radio-telephony and include references to fax and email.

Occupier

This term should be defined to ensure that all persons that the Commission has been mandated to supply by Cabinet Minute are included. For example, squatters in occupation of State Lands for over five years.

Power

This term needs to be re-defined to resolve the inconsistency in its current usage throughout the Act. The new definition should include reference to both electric and mechanical power.

Subsidiary

Having regard to the matter set out in Part VI hereunder the Commission recommends the use of a definition in the Act similar to the one included in the TT PC Act Chap 47:02.

“subsidiary” means a company incorporated under the Companies Act in which Trinidad and Tobago Post—

- (a) has a majority of voting rights;
- (b) is a member of the company and can appoint or dismiss the majority of the Directors; or
- (c) is a member of the company and controls, alone or in agreement with others, a majority of the voting rights in that company.

Telegraphic Line

Remove this definition.

Transformer

The Commission recommends re-wording the definition as follows:

“means a static device for transforming energy”

Underground System

Include a definition for Underground System which includes inter alia the burying of electric lines and cables and other electrical infrastructure.

Works

Remove the words waterworks, wells, dams, pipe-lines from the definition.

**PART II**  
**ESTABLISHMENT AND CONSTITUTION OF THE ELECTRICITY**  
**COMMISSION**

**Situational Analysis**

The Commission is of the opinion that every public body should be headed by an effective Board which is collectively responsible for strategic management and oversight of the organisation. Additionally, the Commission considers that in light of the impending implementation of the Public Procurement and Disposal of Public Property Act No. 1 of 2015 as amended as well as international best practices relative to transparency and accountability in public procurement it is prudent to ensure that moving forward its corporate governance structures are sufficiently robust to comply with the requirements established by Act 1 of 2015 as amended and international best practice.

In the circumstances the following suggestions are intended to ensure the strength of these structures.

**Problem Identification**

**Current Provisions that Require Amendment**

<b>SECTION</b>	<b>ISSUE</b>	<b>DISCUSSION</b>
Section 5	Office which gives the Commission Policy Directives	<p>The Commission is of the view that the Minister with the responsibility for guiding the Commission is best placed to issue it with policy directions. A change in this section would bring the Commission in line with other entities such as:</p> <ul style="list-style-type: none"><li>▪ <b>PTSC - Chap 48:02 - s9 -</b> <i>In the exercise of its functions, powers and duties under this Act or any other written law, the Corporation shall act in accordance with any special or general direction given to it by the Minister.</i></li><li>▪ <b>TT Post - Chap 47:02 - s17 -</b> <i>With the exception of those</i></li></ul>

**SECTION****ISSUE****DISCUSSION**

*matters referred to in section 9(1), the Minister may give directions, in writing, to the Board on matters of broad public policy and the Board shall give effect to that policy.*

- **WASA- Chap 54:40 - s10 -**  
*In the exercise and performance of its functions, powers and duties under this or any other written law the Authority shall act in accordance with any special or general directions of the Government, given to it by the Minister; but subject to this section, the Authority shall, when exercising and performing its functions, powers and duties, be subject to the control or direction of no other person or authority.*
- **HDC - Chap 33:03 - s12 -**  
*The Minister may give to the Board directions in writing of a specific or general nature to be followed in the performance of its functions or the exercise of its powers under this Act, with which the Board shall comply.*

**SECTION**

Section 10(1)

**ISSUE**Appointment of  
Certain Staff**DISCUSSION**

The Commission considers that the power to appoint certain staff to wit: Accountant, such engineers, electricians, operators, desk clerks, assistant inspectors and other office servants as are necessary for the due and efficient operation of the Commission should be vested in/lie with the General Manager.

Section 10(3)

The  
Requirement the  
Staff May Need  
to Give Security

The Commission considers this provision anachronistic. A consideration of recently drafted legislation, in particular the Trinidad and Tobago Postal Corporation Act Chap

**SECTION****ISSUE****DISCUSSION**

47:02 reveals that no power to request an officer to give security is included in that Act.

**Not in the Act at Present****SECTION****ISSUE****DISCUSSION**

The Appointment of Member of the Commission from Tobago

While the Commission acknowledges that in the past the practice has developed to include at least one Member of the Commission from Tobago the Commission considers it advisable that this appointment be removed from the realm of discretion and be made mandatory as has been done in other legislation.

- **TT Post - Chap 47:02 - s11(3)** - *At least one member of the Board shall be a person who is appointed by the President after consultation with the Chief Secretary of the Tobago House of Assembly.*
- **HDC - Chap 33:03 - s7(3)** - *At least one member of the Board shall be appointed by the President after consultation with the Chief Secretary of the Tobago House of Assembly.*

**Declaration of Interest**

Here too the Commission has noted the inclusion in other pieces of legislation of provisions relative to this issue. The Commission considers it only prudent to include such a provision having regard to the thrust toward transparency, accountability and good corporate governance in public procurement as set out in the Public Procurement and Disposal of Public Property Act No. 1 of 2015 as amended. Examples of legislation in which the provision has been included are as follows:

- **PTSC Ch 48:02 - S12**  
*(1) A member who is in any way, whether directly or indirectly interested in a contract or proposed contract with the Corporation, shall declare the nature of his interest at the*

**SECTION**

**ISSUE**

**DISCUSSION**

*first meeting of the Corporation at which it is practicable for him to do so.*

*(2) A member shall not take part in any deliberation or decision of the Corporation with respect to any contract or proposed contract with the Corporation in which he is in any way interested, whether directly or indirectly.*

*(3) This section shall not apply to—*

*(a) an interest in a contract or other matter which a member may have as one of a group of persons making use of any road transport facilities provided on charter by the Corporation; or*

*(b) to an interest in any matter relating to the terms on which the right to participate in any service provided by the Corporation is offered to the public.*

*(4) For the purposes of this section, a person—*

*(a) who, or any nominee of whom, is a shareholder or partner in a company or other body of persons (other than a statutory authority); or*

*(b) who is an employee thereof, shall be treated as having indirectly a pecuniary interest in a contract or other matter, if such company or such other body of persons is a party to the contract or proposed contract or has a pecuniary interest in such other matter under consideration.*

*(5) Nothing in subsection (4) shall apply to any person who, but for the said subsection (4), would not fall to be treated as having indirectly a pecuniary interest in a contract or other matter, if the total value of his shareholding or other interest does not exceed such amount of the total nominal value of the issued share capital of the company or body as the Standing Orders of the Corporation provides.*

*(6) A person who fails to comply with the provisions of this section is liable on summary conviction to a fine of seven*

SÈCTION

ISSUE

DISCUSSION

*hundred and fifty dollars unless he proves that he did not know that a contract, proposed contract or other matter in which he had a pecuniary interest was the subject of consideration at the meeting.*

▪ **TT Post Chap 47:02 – S14**

*(1) Every Board member shall give in writing—*

*(a) notice to the Board of all direct or indirect pecuniary interests that he has or acquires in any business or in any body corporate carrying on any business with Trinidad and Tobago Post in the exercise of its functions; and Managing Director. Relationship of Managing Director to Board.*

*(b) an undertaking that he will not engage, directly or indirectly, in any business or professional activity which would conflict with the functions of Trinidad and Tobago Post.*

*(2) A member who has a direct or indirect pecuniary interest in a matter being considered or about to be considered by the Board shall, as soon as possible after the relevant facts come to his knowledge, disclose the nature of his interest before the Board's deliberation on the matter.*

*(3) A disclosure under subsection (1) shall be recorded in the minutes of the meeting of the Board and after such disclosure the member shall not—*

*(a) be present during any deliberation of the Board with respect to that matter; or*

*(b) take part in any decision of the Board with respect to that matter.*

▪ **WASA Ch 54:40 – S13**

*(1) A Commissioner who is in any way, whether directly or indirectly, interested in a contract or proposed contract with the Authority, or any other matter whatsoever in which the Authority is concerned, shall declare the nature of his interest at the first*

SECTION

ISSUE

DISCUSSION

*meeting of the Authority at which it is practicable for him to do so.*

*(2) A Commissioner shall not take part in any deliberation or decision of the Authority with respect to any contract or proposed contract with the Authority or any other matter whatsoever with which the Authority is concerned, in which he has any pecuniary interest, whether directly or indirectly.*

*(3) This section shall not apply to—*

*(a) an interest in a contract or other matter which a Commissioner may have—*

*(i) as a consumer of water for domestic purposes provided by the Authority; or*

*(ii) as a ratepayer in respect of sewerage facilities provided by it; or*

*(b) to an interest in any matter relating to the terms on which the right to participate in any service provided by the Authority, is offered to the public.*

*(4) For the purposes of this section, a person—*

*(a) who, or any nominee of whom, is a shareholder or partner in a company or other body of persons (other than a statutory authority); or*

*(b) who is an employee thereof, shall be treated as having indirectly a pecuniary interest in a contract or other matter, if such company or such other body of persons is a party to the contract or proposed contract or has a pecuniary interest in such other matter under consideration.*

*(5) Nothing in subsection (4) shall apply to any person who, but for the said subsection (4), would not fall to be treated as having indirectly a pecuniary interest in a contract or other matter, if the total value of his shareholding or other interest does not exceed such amount of the total nominal value of the issued share capital of the company or body*



**SECTION**

**ISSUE**

**DISCUSSION**

*as the Standing Orders of the Authority provides.*

*(6) Any person who fails to comply with the provisions of this section is liable on summary conviction to a fine of seven hundred and fifty dollars, unless he proves that he did not know that a contract, proposed contract or other matter in which he had a pecuniary interest was the subject of consideration at the meeting.*

▪ **HDC Ch 33:03**      **- S9 -**

*(1) The Managing Director and every member of the Board shall give in writing—*

*(a) notice to the Board of all direct or indirect pecuniary interests that they have or acquired in any business or in any body corporate carrying on any business with the Corporation in the exercise of its functions; and*

*(b) an undertaking that they will not engage, directly or indirectly, in any business or professional activity which would conflict with the performance of their duties to the Corporation as Managing Director or Board member as the case may be with the functions of the Corporation.*

*(2) A member of the Board who has a direct or indirect pecuniary interest in a matter being considered or about to be considered by the Board shall—*

*(a) as soon as possible after the relevant facts come to his knowledge, disclose the nature of his interest before the Board deliberates on the matter; and*

*(b) shall not solicit the support of any other member of the Board or any officer or any member of staff of the Corporation to obtain an advantage over any other person in the matter being considered.*

*(3) Disclosure by a member of the Board under subsection (1), shall be recorded in the minutes*

**SECTION****ISSUE****DISCUSSION**

*of the meeting of the Board and after such disclosure the member shall not—*

*(a) be present during any deliberation of the Board with respect to that matter; or Business of the Board. Second Schedule. Disclosure of interest of Managing Director and Board Members.*

*(b) take part in any decision of the Board with respect to that matter.*

**Possible Solutions****SECTION****ISSUE****DISCUSSION**

Section 4(4)

Procedure for  
Resignation of  
Committee Members

Resignation to the Chairman, Minister, President. The Commission recommends that members who wish to resign ought to be compelled to submit their resignation to the Chairman for onward submission to the Minister with responsibility for the Commission thence to the President.

Section 5

Office which gives the  
Commission Policy  
Directives

The Commission recommends that this section be amended to indicate that the Committee's policy direction shall come from the Minister with responsibility for the Commission in writing.

Section 10(1)

Appointment of  
Certain Staff

The Commission considers that this issue could be resolved by either:

- (1) Removing reference to the Commission's power to retain the positions listed; or
- (2) Creating a section to specifically vest in the General Manager the power of retaining persons for the listed positions.

Section 10(3)

The Requirement the  
Staff May Need to Give  
Security

The Commission recommends the removal of this provision.

**Not in the Act at Present**

<b>SECTION</b>	<b>ISSUE</b>	<b>DISCUSSION</b>
	Appointment of a Member of the Commission from Tobago	The Commission recommends the inclusion in the Act of a provision that mandates the appointment of at least one Member of the Commission from Tobago after consultation with the Chief Secretary of THA.
	Declaration of Interest	The Commission recommends the inclusion in the Act of a provision which mandates Members of the Commission to declare any direct or indirect pecuniary interest in any organisation carrying out business with the Commission. Additionally such Members should be compelled not only to disclose the interest but to recuse themselves from decisions relative to that pecuniary interest and to restrain from influencing other Members of the Commission on any decision relative to that pecuniary interest.

**PART V**  
**FINANCIAL PROVISIONS**

**Situational Analysis**

The Commission's mandate as established both by government directives and strategic planning in furtherance of those directives, is inter alia to ensure that it becomes a financially viable, self-sustaining organisation. In light of this mandate the Commission considers it prudent at this time to maintain those provisions that control/fetter the organisation's borrowings. We therefore recommend that those provisions remain intact. The Commission does however wish to see the modernisation of certain other provisions as set out hereunder.

**Problem Identification**

<b>SECTION</b>	<b>ISSUE</b>	<b>DISCUSSION</b>
Section 23(1)(b) –	Current Inclusion of the words Provident Fund	The Commission has completed its administration of this fund and considers it imprudent that it continue to be included amongst the list of items to which its revenue could be applied.
Section 24	Current Inclusion of “President” rather than “Minister of Finance”	<p>The Commission considers that the authority best placed to assess the suitability of securities for its investment is the Ministry of Finance. This amendment will bring the Commission's Act in line with other state entities as follows:</p> <ul style="list-style-type: none"> <li>• <b>PTSC – Chap 48:02, s26</b> <i>Funds of the Corporation not immediately required to be expended in the meeting of any obligations or the discharge of any functions of the Corporation may be invested from time to time in securities approved by the Minister of Finance for investment by the Corporation.</i></li> <li>• <b>WASA – Chap 54:40, s30</b> <i>Funds of the Authority not immediately required to be expended in the meeting of any obligations or the discharge of any</i></li> </ul>

SECTION

ISSUE

DISCUSSION

*functions of the Authority may be invested from time to time in securities approved by the Minister for investment by the Authority.*

(Note that both HDC & Postal Corp. invest in manner consistent with sound business practice with no recourse to the Ministry. I think this leaves officers exposed.)

• **HDC - Chap 33:03 S24**

*Any balance of the Fund after defraying any expenditure referred to in section 23 may be— (a) applied to the creation of reserve fund to finance future expansion of capital works and improvement of services of the Corporation; or (b) invested in any manner that is consistent with sound business practice.*

• **TTPC - Chap 47:02 – S27**

*Any balance of the Fund after the defrayments referred to in section 26 may be— (a) applied to the creation of reserve funds to finance future expansion of capital works and improvement of services of Trinidad and Tobago Post and shall not go into the Consolidated Fund; or (b) invested in any manner that is consistent with sound commercial practice.*

Section 26(5) –

Inclusion of “President” rather than “Minister”

The current procedure for the submission of the required reports is submission to the Ministries for onward submission to Cabinet and thence to Parliament. The Commission would like to ensure that the Act be adjusted to reflect the current procedure which we note again appears to be aligned to the

**SECTION**

**ISSUE**

**DISCUSSION**

procedure set out in several other pieces of legislation.

- **PTSC – Chap 48:02, s28(3)**

*After the end of each financial year of the Corporation, the Corporation shall, as soon as the accounts of the Corporation have been audited, cause a copy of the statement of account to be transmitted to the Minister of Finance, together with a copy of any report made by the Auditor General on that statement or on the accounts of the Corporation.*

- **TT Post – Chap 47:02, s 24**

(1) The Board shall, within *three months* of the end of each financial year, *submit an annual report to the Minister in respect of Trinidad and Tobago Post and its subsidiaries.*

(3) *The Minister shall lay the annual report in Parliament within twenty-eight days of his receipt of the report and if Parliament is not then in session, within twenty-eight days after the commencement of its next session*

## Possible Solutions

<b>SECTION</b>	<b>ISSUE</b>	<b>DISCUSSIONS</b>
Section 23(1)(b)	Removal of the words Provident Fund	The Commission recommends that the words “Provident Fund” be removed from the provision.
Section 24	Change ‘President’ to “Minister of Finance”	<p>The Commission recommends that the word ‘President’ be removed from this provision and be replaced with the words ‘Minister of Finance’.</p> <p>Alternatively the provision could be re-worded to indicate that the Commission ought to invest the funds in a manner consistent with sound business practice that is without recourse to the Ministry of Finance or President.</p>
Section 26(5)	Change the word “President” to “Minister”.	The Commission recommends that the word ‘President’ be removed from this provision and be replaced with the word ‘Minister’.

## PART VI

### DUTIES AND POWERS OF THE COMMISSION

#### Situational Analysis

The Commission considers that it is well placed to expand into certain areas of business not strictly/tangentially related to its core business. As the Commission has worked to improve its ability to deliver efficiently and effectively in its core business it has built competencies in key areas such as dark fibre deployment, IT programme development training etc. whereby the skills and assets developed in this regard skills it is now well placed to monetize.

The Commission wishes to see a broadening of its duties and powers in a manner that while preserving its core business – currently electricity supply/distribution and generation – allows it to fully monetize its skills and assets.

Further a framework for the development of a Renewable Energy Policy for Trinidad and Tobago has been developed and in 2010, Cabinet approved this Policy Framework. One of the policy documents emanating from this framework is the Feed-In Tariff Policy for Trinidad and Tobago. This policy inter alia supports the notion of incentivising the use of renewable as well as any other alternative energy source deemed suitable by the Commission for the production of electricity and mandates the Commission to encourage/facilitate the use of these sources. In order to do so the Act must make provision for the interconnection of these power producers to the grid as well as for the mechanism to invoice them.

#### Problem Identification

##### **SECTION**

Section 31 –

##### **ISSUE**

Widening of Power to use Assets only in Connection with Performance of its Duties or with a View to Making the Best use of its Assets.

##### **DISCUSSION**

The Commission is of the view that provision should be included to allow the Commission to engage in any business activity through which it can utilize any of its assets (existing or to be acquired) in any way it deems prudent and necessary to generate revenue. Further the Commission is of the opinion that this ought to include powers to establish subsidiary businesses as required to fully exploit these assets.

For instance, the following ventures represent a non-exhaustive listing of business ventures that the Commission may wish to pursue.

**I.T. Programme Creation** – The Commission has created several very useful/marketable I.S. solutions in the course of increasing the efficiency of for example, customer service interfaces. The Commission believes



SECTION

ISSUE

DISCUSSION

that these products are very marketable. Further, the Commission wishes to monetize its in-house I.S. skill sets either in customizing already existing I.S. solutions or creating new ones.

**Signage Boards** – The Commission is considering purchasing several electronic billboards for the purpose of fulfilling its public education duties. The Commission wishes to monetize time not used for public education.

**Training** - Currently the Commission undertakes/assists in training personnel not only in Trinidad but across the Caribbean Region. The Commission considers it prudent to capitalize on this resource i.e. our ability to train others.

**Dark Fibre** – The Commission has purchased and is using dark fibre for its operators. While the Commission does not intend to pursue data sharing /telecommunications opportunities which compete with other government entities it intends to monetize the additional/unused fibre strands.

This expansion in the Commission’s powers is akin to the powers set out in:

• **HDC – Chap 33:03, s13(2)(i) – (k)**

*Without limiting the generality of subsection (1), the Corporation may –*

...

*(i) form and participate in the formation, subscribe for and purchase of shares, debentures and other securities of companies;*

*(j) subscribe for and purchase shares, debentures, and other securities of companies, the business of which relates to the functions of the Corporation as identified in section 13;*

**SECTION**

**ISSUE**

**DISCUSSION**

*(k) participate in partnerships, trusts, unincorporated joint ventures and other arrangements for the carrying out or sharing of profits from the carrying out of the services provided under this Act;*

**• TT Post Chap 47:02 – S18**

*Where Trinidad and Tobago Post or a subsidiary proposes to—*

*(a) form or participate in the formation of a company;*

*(b) participate in a company, partnership, trust, unincorporated joint venture or other arrangement for the sharing of profits;*

Section 34(4)

Limitation of Commission’s Compulsory Acquisition to Section 3, 4 & 5

The Commission has received advice indicating that its powers relative to compulsory acquisition are limited to the conduct of section investigations. In respect of all other stages of the process the Commission must act through the Commissioner of State Lands. The Commission is wary of the lengthy delays that may be occasioned when this process is engaged as set out in the Act.

Section 37 (1) (a)

Specify a Precise Period of Notice

The Act is silent on the specific period of notice required in this sub-section.

Section 37 (1) (b)

Inclusion of Transmission Type Infrastructure such as Pylons and Towers

The infrastructure that is included currently appears to be specific to distribution type infrastructure only. The Commission is of the opinion that for the avoidance of doubt, certain types of transmission type infrastructure ought to be specifically described in the section

**Not Currently in the Act**

Powers of the Commission to connect producers of renewable energy to the national grid - Open Access and an Interconnection Guarantee

A change in the definition of electrical energy is required. See page 6. The amendment of this definition will create the framework required to grant the Commission the power to interact with and set ground rules for persons who produce this type of power.

**SECTION****ISSUE****DISCUSSION**

Having regard to the current definition of Electrical Energy the Commission does not currently have the exclusive right to generate or supply electrical energy created from renewable sources or any other alternative source deemed suitable by the Commission. Instead Open Access is required that is, the creation of a right, subject of course to certain specified conditions, in all citizens/persons to interconnect with the grid at any location in Trinidad and Tobago. The Commission is cognizant that there are cost issues, quality issues and reliability issues relative to interconnection but is of the opinion that these can be managed by the application of conditions.

Feed in Tariff and Net  
Billing/Net Metering

The Commission is of the opinion that if it is to fulfill its mandate of encouraging the generation of electricity using renewable sources as well as any other alternative source deemed suitable by the Commission then the acquisition of relatively costly infrastructure for the generation of electrical energy from these sources must be properly incentivized. Further in order to do so in a sensible manner the Commission proposes the creation of bands/categories of producers. The focus of this energy-supply policy is to support the development of new renewable source power generation or generation using any alternative source deemed suitable by the Commission by setting the right price to drive this type of energy deployment. The Act does not currently make provision for the Commission to pay these producers of electricity for the energy that they supply to the grid.

**Possible Solutions**

<b>SECTION</b>	<b>ISSUE</b>	<b>DISCUSSION</b>
Section 31	Section 31- Widen Drafting of s31(2)(g)	This provision ought to be widened to allow the Commission to form subsidiaries to properly monetize its assets.
Section 34(4)	Expansion of Commission's Compulsory Acquisition Powers to Section 3	The Commission recommends that its power to undertake the process of compulsory acquisition is widened to include the ability to undertake section four and five of the Land acquisition without recourse to the Commissioner of State Lands.
Section 37 (1) (a)	Failure to Specify a Precise Period of Notice	The Commission recommends that a fixed period of two weeks be implemented save and except in instances of emergency when a period of forty-eight hours should suffice.
Section 37 (1) (a)	Failure to Include Transmission type infrastructure such as pylons and towers	The Commission recommends the inclusion in this section of terms such as: <ul style="list-style-type: none"> <li>• Pylons;</li> <li>• Towers etc.</li> </ul>

**Not Currently in the Act**

<b>ISSUE</b>	<b>DISCUSSION</b>
Powers of the Commission to connect producers of renewable energy to the national grid - Open Access and an Interconnection Guarantee	The Commission considers that the open access as a policy mechanism will guarantee non-discriminatory access to the distribution and transmission grid network and will reduce problems associated with interconnectivity, helping to provide a foundation for a competitive electric power market. Further "Open Access" must make provision to allow connection to the grid for electricity generated from approved renewable generators. Open access implies they can generate
Feed in Tariff and Net Billing/Net Metering	The Commission recommends that the Act make provision to allow: <ol style="list-style-type: none"> <li>1. The Commission to pay renewable source generators as well as generators using any other alternative source</li> </ol>

deemed suitable by the Commission at a rate to be for energy *supplied* to the grid;

2. The Commission to disaggregate these generators into groups to be determined by the Commission to aid in the determination of eligibility for FIT payments and FIT rate to be paid;
3. The Commission to categorize generation (based on the use of a variety of sources of renewable and/or alternative energy). One suggested categorisation is into Dispatchable sources (that can be turned on and off on demand) and Non-Dispatchable sources (from an intermittent source).

**PART VII**  
**SUPPLY OF ELECTRICAL ENERGY**

**Situational Analysis**

Access to electricity is one of the main drivers of national development and sources for improvement in the quality of life of citizens. As such, T&TEC has a mandate to improve and expand as necessary the provision of its services. The Commission is therefore mindful to ensure that its legislative mandate is sufficiently flexible and robust to allow the Commission to:

1. Use, implement or maximize new technologies;
2. Facilitate the widest possible access of the country's citizenry; and
3. Ensure that the Commission becomes financially/economically viable and self-sustaining

In this regard the Commission is concerned to ensure that the Act is amended with a view to precisely indentifying relevant procedures and broadening the Commission's access to new technology.

**Problem Identification**

**SECTION**

Section 42 (1)(c)

**ISSUE**

Procedure for Appeal from Decision of Local Authority

**DISCUSSION**

The Act currently mandates that appeals relative to decisions of the local authority lie with the President. The Commission is of the view that this appeal process is untenable having regard to the fact that the matters to be determined and the issues surrounding them may not be within the intimate knowledge of the President.

Section 42(2) –

Definition of the Word 'Plan'

The Commission is of the view that the current definition of 'Plan' is too prescriptive and does not

SECTION	ISSUE	DISCUSSION
Section 48	Exclusion of Safety Considerations Connected with the Supply of Electricity	<p>allow for the use of new technology.</p> <p>The Commission is of the view that its legislative mandate to supply electricity to owners and occupiers ought to include a consideration of safety issues, so that the Commission ought not to be compelled to supply in instances where safety is compromised.</p>
Sections 53 & 25	Pricing/Rates – The Role of the RIC	<p>RIC’s role relative to T&amp;TEC is set in section 6(1) (h) to (j) of the RIC Act Chap 54:73 as:</p> <ul style="list-style-type: none"> <li>▪ Establish the principles and methodologies by which service providers determine rates for services;</li> <li>▪ Monitor rates charged by service providers to ensure compliance with the principles established under paragraph (h);</li> <li>▪ carry out periodic reviews of the rating regimes of service providers</li> </ul> <p>Further in accordance with section 47 of the RIC Act, T&amp;TEC shall not demand or receive a rate greater than –</p> <p>“(a) the maximum rates permitted –</p> <p>(i) Under the principles established by Regulations</p>

**SECTION**

**ISSUE**

**DISCUSSION**

made under this Act; or  
(ii) By a licence or  
(b) any other rate determined by the Commission in accordance with this Act.”

Section 53 of the T&TEC Act provides that the Commission may prescribe a tariff of prices to be paid by consumers for energy supplied to them by the Commission. Further, section 25 of the T&TEC Act provides that the prices to be charged by the Commission for the supply of energy and services are to be in accordance with such tariffs as fixed under section 53.

The RIC’s role contained above is therefore not given statutory force within the T&TEC Act and the powers contained in sections 53 and 25 are consistent with the role of the RIC. This inconsistency is the result of collateral amendments not being made to the T&TEC Act upon the coming into force of the RIC Act. Since this is a cause of much conflict in the sector.

Section 57

Grant of Permission to Persons to Connect or Disconnect Meters from Electric Lines

The Commission considers that this practice is unsafe and would prefer that the section be re-worded to remove this permission. Allowing a consumer to undertake these



**SECTION****ISSUE****DISCUSSION**

Section 59

Inclusion of the  
Duty of Customer to  
Pay an Average Rate

works is not only unsafe but could present an opportunity for consumers to tamper with meters in a manner that could affect their accuracy.

Resolution of the matters may be at times protracted. During this period of dispute the Commission is constrained to continue supply while receiving payment for only a portion of the energy supplied.

Section 60

Inclusion of Power  
to Undertake Net  
Billing/Net  
Metering

The Act does not permit the Commission to use metering to ascertain the amount of energy generated by a customer/supplied by a customer to the grid. In order for the Commission to assist the government by incentivizing the use of renewable sources of generating electric energy as well as any other alternative source of generation deemed suitable by the Commission, the Commission must be empowered to measure a consumer's supply to the grid.

## Possible Solutions

<b>SECTION</b>	<b>ISSUE</b>	<b>DISCUSSION</b>
Section 42 (1) (c) –	Procedure for Appeal from Decision of Local Authority	<p>The Commission is of the opinion that the following approaches may be plausible:</p> <ol style="list-style-type: none"><li>1. Constitute an adhoc tribunal comprising the Minister with responsibility for Local Government, the Line Minister with responsibility for the Commission and a third Minister possibly the Minister of Finance to determine these appeals.</li><li>2. Submit the matter for mediation at the appropriate Dispute Resolution Centre.</li></ol>
Section 42 (2) -	Procedure for Appeal from Decisions of the Local Authority	Re-define the word ‘plan’ in a broader manner.
Section 53 & 25	Pricing, Rates & the Role of the RIC	<p>It is recommended that:</p> <ul style="list-style-type: none"><li>▪ the Act be amended to properly reflect the role of the RIC in rate determination;</li><li>▪ the collateral amendment of the RIC Act be undertaken to set out the framework for rate determination and review.</li></ul>

## SECTION

## ISSUE

## DISCUSSION

Section 57

Removal of the Grant of Permission to Persons to Connect or Disconnect Meters from Electric lines

The Commission recommends the removal of the phrase *“unless he has given the Commission not less than forty-eight hours’ notice in writing of his intention to do so, and”*

Section 59

Inclusion of the Duty of Customer to Pay an Average Rate

The Commission recommends the inclusion of an obligation to pay an “average consumption” bill in as much the same way as set out in s52 (1) as follows:

*“... a consumer may be charged on the basis of his average monthly consumption during the previous six months...”*

Section 60

Inclusion of Power to Undertake Net Billing/Net Metering

The Commission recommends the inclusion of language which will allow the Commission to enter into net billing/metering arrangements with suppliers of renewable energy as well as any other alternative source deemed suitable by the Commission. One possible amendment is the inclusion at s60 of the following:

*“..as they may deserve for the purpose of ascertaining or regulating the amount of energy supplied to the consumer, the amount of energy supplied by the customer to grid, or the number of hours...”*

## PART VIII

### LICENCES FOR INSTALLATIONS

#### Situational Analysis

The Commission considers that this Part needs to be amended to allow for the categorization of licences to the following. This is in keeping with the Government of Trinidad and Tobago's goal of sustainable development and the recognition that renewable energy combined with energy efficiency is an important strategy for the promotion of sustainable development of the nation.

#### Problem Identification

Lack of Categorization of the Type of renewable energy generation source or any other alternative energy generation source deemed suitable.

The Act does not currently make provision for the categorization of generation (based on the use of a variety of sources of renewable as well as any other alternative source deemed suitable by the Commission). The Commission is of the opinion that this is important as different levels of incentivization may be required since the start-up cost of generation may differ depending on the category of generation.

Lack of Categorization of the Type of renewable energy generation source or any other alternative energy generation source deemed suitable.

The Act does not currently make provision for the categorization of generation (based on the amount of electrical energy generated by renewable sources of any other alternative source deemed suitable by the Commission energy generated). The Commission is of the opinion that this is important as different level of incentivization may be required since the start-up cost of generation may differ depending on the size of the generation installation.

#### Possible Solutions

Lack of Categorization of the Type of renewable energy generation source or any other alternative energy generation source deemed suitable.

The Commission recommends that Act make provision for the categorization of generation (based on the use of a variety of sources of renewable energy). The suggested categorisation is:

- Dispatchable sources (that can be turned on and off on demand e.g. hydro-energy) and

- Non-Dispatchable sources (from an intermittent source e.g. solar or wind).

Lack of Categorization of the Type of renewable energy generation source or any other alternative energy generation source deemed suitable.

The Commission recommends that producers of electric energy who use renewable as well as any other alternative source deemed suitable by the Commission, be categorized into groups to be determined by the Commission to aid in the determination of eligibility for FIT payments and FIT rate to be paid.

**PART IX**  
**INJURIOUS ACTS, OFFENCES AND PENALTIES**

**Situational Analysis**

The penal provisions contained in Part IX of the Act require attention. The Commission is of the view that the existing provisions are inadequate and that fines and penalties should be increased. The Commission considers that until such time as legislation is passed to allow for the automatic fluctuation of civil penalties to keep in step with inflation, then the periodic adjustment of civil penalties will always be required.

**Problem Identification**

Penal Provisions	Consideration must be given to the current quantum of the penalties in the Act. For example, section 75(1) which states that the fine for meter tampering is one thousand dollars (\$1000.00) and section 71 which sets a fine of three hundred dollars (\$300.00) for cutting electric lines. The effect of these inordinately low fines is the loss of the deterrent force of the sections and loss of potential revenue for the Commission. In addition, the amounts in no way reflect the revenue lost or cost incurred when infractions/these offences are committed against the Commission.
Theft of Wiring	The Commission has considered the prevalence of the theft of wiring and other electrical apparatus from various sites not physically secured by the Commission.
Potential damage to lines by projectiles	The suspension of articles on electrical lines has become common practice and poses potential damage to wiring and the supply of electricity.
Unlawful entry in or on premises or enclosure where electrical apparatus/equipment situated	Where persons enter upon premises or enclosures where electrical equipment is stored, there is risk of personal injury. While the Commission recognises that it is within its remit to restrict unlawful entry onto sites where its apparatus/materials are stored, it is also important to impose penalties on those persons who breach those sites and/or enter such premises. Further it is important to limit the Commission's exposure to

liability for personal injury where such trespasser is injured.

Tampering with electrical or supply installation resulting in danger to human life or damage to property

Again, as a result of the risk of personal injury and exposure to liability it ought to be an offence for persons to wilfully tamper with or adjust any electrical or supply installation or any part thereof so as to cause danger to human life or damage to property. The responsibility to rectify the damage to property ought to be placed on the person committing the offence and the Commission must be excluded from liability for any resulting personal injury. (see s.83 of the Electricity Act Chap 89A)(Singapore). This offence attracts five years imprisonment.

Cyber Security

Cyber security is critical for both guaranteeing privacy of consumers and protection of sensitive data. Vulnerable ICT systems result in reliability issues, and can allow the widespread release of private customer information and usage data. In relation to the Commission, there is the potential for Cyber-attacks on critical energy infrastructure. This can manifest itself for instance in:

- (i) Meter hacking where meter memory could be modified to reduce the electricity use reports by the meter, which enabled electricity theft; or
- (ii) Power generator attack which can cause nationwide blackouts which of course can have far reaching effects.

### **Possible Solution**

Penal Provisions

The Commission therefore recommends a review of all the penalties in the Act.

Theft of Wiring

The Commission recommends penalising the wilful removal of any electrical plant or electrical cable used in the distribution or transmission of electricity belonging to or under the management or control of the Commission. Further the Commission recommends attaching a penalty of no less than twenty thousand

dollars (\$20,000.00) or to imprisonment for a term or to imprisonment for a term not less than 2 years or to both (s.85 Electricity Act Chap 89A)(Singapore).

Potential Damage to Lines by Projectiles

It is proposed therefore that an amendment be made making it an offence to wilfully throw an object towards an electric line or associated equipment where;

- (a) The electric line or associated equipment is likely to be damaged; or
- (b) The supply of electricity is likely to be interrupted.

This ought not to attract a penalty of less than ten thousand dollars (\$10,000.00) (see s.229 of the Electricity Act 1994 Queensland)

Unlawful Entry in or on Premises or Enclosure Where Electrical Apparatus/ equipment situated

The Commission recommends the creation of an offence and the imposition of a penalty of \$10,000.00 for every such offence.

Tampering with Electrical or Supply Installation Resulting in Danger to Human Life or Damage to Property

The Commission recommends that the responsibility to rectify the damage to property ought to be placed on the person committing the offence and the Commission must be excluded from liability for any resulting personal injury. (see s.83 of the Electricity Act Chap 89A)(Singapore).

Cyber Security

The Commission recommends the creation of an offence and the imposition of a penalty of Twenty-Nine Thousand Dollars (\$29,000.00) for every such offence.



## PART X

### MISCELLANEOUS PROVISIONS

#### Situational Analysis

The Commission considers that having regard to the growth in the population between 1965 when the Act was first promulgated and today, certain timeframes in the Act must be reviewed and adjusted to allow the Commission to consistently meet the target timeframes set.

#### Problem Identification

##### **SECTION**

Section 91(1)

##### **ISSUE**

Increase the period of notice required for tree trimming cutting or felling

##### **DISCUSSION**

Upon receipt of these notices the Commission is required to visit the location to ensure that it is not unsafe for a member of the public to conduct the stated works. Having regard to the size of the population and other works that are under the purview of the Commission, it is felt that a longer period of notice is required.

#### Possible Solution

##### **SECTION**

Section 91(1)

##### **ISSUE**

Increase the period of notice required for tree trimming, cutting or felling of trees

##### **DISCUSSION**

The Commission recommends that the period of notice in the Act to be extended from twenty-four hours (24hrs) to forty-eight (48) hours.

## COLLATERAL AMENDMENTS

The Commission recommends that as a result of the amendments set out above, as well as the need to ensure that neither the Commission nor its 'sister agencies' are stymied by irrelevant or out of date provisions, the following collateral amendments be undertaken.

### **RIC Act**

To the RIC Act granting the RIC the power to determine the methodology for setting rates and the power to set rates to be paid by the Commission to eligible renewable as well as any other alternative source deemed suitable by the Commission energy generators.

### **Electricity (Inspection) (Overhead Lines Rules)**

The Commission is of the opinion that these rules ought to be amended. The rules are based on the BS137 of 1941 and other British Codes. These are outdated and have been replaced in Britain. In any event the Commission currently complies with the ANSI standards and the National Electrical Safety Code amongst others. Moreover since codes are generally updated/revised every five years in an attempt to keep in step with technological improvements, it may be that we do not wish to capture any one code in statute but that we choose instead to define a process by which codes are to be considered and adopted.

#### RIC Act s48

Whilst it indicates that the Commission shall review rates every five years or according to licence, it doesn't include a timeline on implementation. Timelines should be included in s48 to:

- (1) Indicate that the determination of new rates must conclude within six (6) months of the end of the foregoing period for which a price determination was completed.
- (2) Rates be made effective by no later than eight (8) months of the end of the foregoing period for which a price determination was completed.



**TRINIDAD AND TOBAGO ELECTRICITY  
COMMISSION**

**LEGISLATIVE REVIEW POLICY  
JUSTIFICATION DOCUMENT**

**INCORPORATION OF BYE-LAWS IN THE ACT  
CHAP. 54:70**

**PART 1**

**SAFETY**

**Situational Analysis**

The Commission's mandate is inter alia to provide safe and reliable electrical power to its customers. In accordance with this mandate the Commission finds it necessary to improve existing provisions found in the Commission's Act Chapter 54:70, thereby including laws to aid in the prevention of dangerous situations and imposing liability for same, to ensure the absolute safety of its customers.

**Problem Identification**

**Current Provisions that Require Amendment**

<b>SECTION</b>	<b>ISSUE</b>	<b>DISCUSSION</b>
Section 76	Line Clearing	The Commission is of the view that the provision is insufficient in addressing ways to establish persons liability prior to actual physical damage to infrastructure. This is evident in cases where customers cut/plant fruit bearing trees near electric lines, that may result in trees falling/growing onto the lines, the provision does not adequately address liability that can be incurred.
Section 76	Projectiles in Contact with Lines	The Commission considers that the prevalence of projectiles encountering the lines have become commonplace and poses potential threat to the wiring and electricity supply. These objects include but are not limited to kites, balloons, drones, and more frequently the suspension of articles. The

SECTION	ISSUE	DISCUSSION
		<p><i>The consumer or owner of the premises shall at all times provide and maintain safe and convenient</i></p>
		<p><i>access to a high voltage enclosure such as to be direct to that part of the enclosure into which the high voltage supply is led.</i></p>
	<p>Breaking Building Codes</p>	<p>Customers have carried out the unsafe practice of building near the Commission's lines. The Commission is of the view that current provisions do not address this issue which is hazardous and can disrupt the electricity supply if in contact with electrical lines.</p>

**Possible Solutions**

**Line Clearing**

The Commission recommends that where the proper procedure regarding cutting/placement of trees, is not adhered to, the Commission can issue a writ thereby warning persons to abstain from executing these unsafe practices before any damage may occur. This is in accordance with the safety regulations mandate of the Commission.

**Projectiles in Contact with Lines**

The Commission recommends that it be made an offence to wilfully throw an object towards an electric line/ haul objects in close range with electric lines/ suspend objects on lines or associated equipment that can possibly:

- 1) Cause damage to lines;
- 2) Disrupt the electricity supply.

## PART 2

### COMMERCIAL

#### Situational Analysis

The Commission has a mandate to improve and expand as necessary the provision of its services to its consumers. This ensures customer satisfaction, which is one of the primary goals of the Commission. The Commission is therefore mindful to ensure that its legislative mandate is adequate in incorporating the necessary provisions regarding service to customers, agreements, method of service and liabilities. Thus, the Commission would aim to amend the Act to include as bye-laws, these necessary provisions.

#### Problem Identification-

##### Disputing Accounts

The Commission is of the view that specific provisions, regarding account disputes with customers, should be incorporated. This is evident in cases where customers may withhold payments due to the ongoing dispute, which may lead to financial losses. The Commission therefore agrees that the aim should be to incorporate a relevant provision in alignment with other entities such as:

- **Botswana Power Corporation (Electricity) Bye-laws - s23(5) –**  
*A consumer's decision to dispute an account shall not entitle him to defer payment beyond the due date.*
- **Greater Johannesburg Metropolitan Council (Standardization of Bye-laws)**

*consumption of electricity which the applicant is in the council's opinion likely to use during any two consecutive months.*

**Termination of a Consumer's Agreement**

The Commission is of the view that a provision regarding the process for termination of a consumer's agreement ought to be established. At present the Act contains no specific provisions regarding this issue, which may lead to financial issues. This would place the Commission in line with other entities such as:

- **Greater Johannesburg**

- Metropolitan Council**

- (Standardization of Electricity**

- Bye-laws) - s6 (1) –**

- ...Any consumer's agreement may be terminated by the consumer, or any duly authorised representative of the consumer, or by the council on giving seven days, notice in writing, calculated from the date of delivery or receipt of such notice by or on behalf of the consumer: Provided that, if such notice purports to terminate a consumers agreement on a Saturday, Sunday or public holiday, such termination shall only take effect on the following day,, which is not a Saturday, Sunday or public holiday. (2) After a consumer's agreement has been*



# APPENDIX XIX

---

## THE ORDER OF PRIORITY OF AMENDMENTS TO T&TEC'S ACT

### **The Order of Priority of the Necessary Amendments in the T&TEC Act**

1. Definition of “Approved Generator”;
2. Definition of “Electrical Energy”;
3. To allow the Commission to connect producers of renewable energy to the national grid;
4. To include Feed in Tariff and Net Billing/Net Metering;
5. To allow for categorisation of generation based on the use of a variety of sources of renewables as well as any other alternative source deemed suitable by the Commission;
6. Section 60 – inclusion of power to undertake new billing/net metering;
7. Section 34(4) – expansion of the Commission’s Compulsory acquisition powers;
8. Section 37(1)(a) – to specify a specific notice period;
9. Section 37(1)(a) – to include transmission type infrastructure;
10. Section 31 – to allow the Commission to form subsidiaries to monetise its assets;
11. Review of all penal provisions in the Act;
12. Section 57 – removal of grant of permission to persons to disconnect meters from electric lines;
13. Section 5 – the office which gives the Commission Policy directives;
14. Section 23(1)(b) – removal of the works “Provident Fund”;
15. Section 24 – change “President” to “Minister of Finance”;
16. Section 26(5) – change “President” to “Minister”;
17. Section 42(1)(c) – procedure for appeal from the decision of the Local Authority;
18. Section 10(1) – appointment of certain staff;
19. Section 10(3) – the requirement that staff may need to give security;
20. To allow for appointment of a Member of the Commission from Tobago;
21. To allow for declaration of interest;
22. Section 91(1) – extend the period of notice required for tree trimming, cutting or felling of trees;
23. Section 4 (4) – procedure for resignation of Committee Members;
24. Section 53 and 25 – pricing rates and role of the RIC; and
25. Definition of “message”, “occupier”, “power”, “subsidiary”, “telegraphic line”, “transformer”, “underground system” and “works”.

# APPENDIX XX

---

## MEASURES TO PREPARE FOR THE IMPACT OF CLIMATE CHANGE

## The measures envisaged to prepare for the impact of climate change

No.	Impact of Climate Change	Measures Required to be taken by T&TEC
1.	<p>Increased air temperatures which can result in:</p> <ul style="list-style-type: none"> <li>a) the reduced current carrying capacity of the conductors; and</li> <li>b) increased losses in transformers.</li> </ul>	<p>The Commission would have to:</p> <ul style="list-style-type: none"> <li>a) utilise conductors with higher thermal capability; and</li> <li>b) implement more effective cooling on transformers.</li> </ul>
2.	<p>Increased precipitation and sea level rises:</p> <ul style="list-style-type: none"> <li>a) resulting in flooding of underground infrastructure; and</li> <li>b) damaged tower foundation due to erosion.</li> </ul>	<p>This would require:</p> <ul style="list-style-type: none"> <li>a) improve flood protection for equipment at ground level. e.g pad mount transformer plinths would have to be raised to create greater height.</li> <li>b) having to raise height of the concrete foundation for the structures.</li> </ul>
3.	<p>More frequent hurricanes and high winds which can damaged tower and pole lines.</p>	<p>Would require the commission to use updated Standards for designing new circuits</p>
4.	<p>Flooded roadways</p>	<p>Deploying the use of an amphibious vehicle to assist the restoration efforts in areas inundated with water as well as the use of trucks (4 x 4) vehicles with a degree of height clearance that facilitates the safe traversing of flooded roadways</p>