

**QUALITY OF SERVICE
STANDARDS**

**ANNUAL PERFORMANCE
REPORT
2016**

**ELECTRICITY TRANSMISSION
AND DISTRIBUTION SECTOR**

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Information
Document

TABLE OF CONTENTS	PAGE
EXECUTIVE SUMMARY	ES1
SECTION 1 INTRODUCTION.....	1
1.1 Purpose of Document.....	1
1.2 Structure of Document	1
SECTION 2 PERFORMANCE REVIEW: GUARANTEED STANDARDS FOR 2016.....	2
2.1 Guaranteed Standards.....	2
GES 1: Response and Restoration Times of Supply.....	2
GES 2: Billing Punctuality (New customers).....	6
GES 3: Reconnection after payment of overdue amounts or agreement.....	7
GES 4: Making and Keeping Appointments.....	8
GES 5: Investigation of Voltage Complaints.....	9
GES 6: Responding to Billing and Payment Queries	10
GES 7: New Connection to Supply	11
GES 8: Payments owed under Guaranteed Standards	12
SECTION 3 COMPENSATORY PAYMENTS.....	13
SECTION 4 PERFORMANCE REVIEW: OVERALL STANDARDS FOR 2016	15
4.1 Overall Standards	15
OES 1: Frequency of Meter Reading.....	15
OES 2: Billing Punctuality.....	17
OES 3: Responding to Meter Problems	17
OES 4: Prior Notice of Planned Outages.....	18
OES 5: Street Lights Maintenance.....	19
OES 6: Response to Customer’s written Complaints/Requests.....	20
OES 7: Notifying customer of receipt of claim under Guaranteed Standard GES 1	21
SECTION 5 SUMMARY AND CONCLUSION	22
5.1 Summary of Performance - Guaranteed Standards.....	22
5.2 Summary of Performance - Overall Standards	23

LIST OF TABLES**PAGE**

Table ES1 - Compliance Rates under the Guaranteed Standards, 2016.....	ES2
Table ES2 - Breaches and Payments Due under the Guaranteed Standards, 2016.....	ES3
Table ES3 - Compliance under Overall Standards, 2016	ES4
Table 1 – No. of Unplanned Outages, 2016.....	2
Table 2 - No. of Unplanned Outages exceeding 10 hours, 2016	3
Table 3 – No. of Customers Restored after 10 hours, 2016.....	5
Table 4 - Response and Restoration Times of Supply, 2016.....	5
Table 5 - Billing Punctuality for Residential Customers, 2016	7
Table 6 - Billing Punctuality for Non-Residential Customers, 2016.....	7
Table 7 - Reconnection after Payment of Overdue Amounts or Agreement, 2016.....	8
Table 8 - Making and Keeping Appointments, 2016.....	9
Table 9 - Correction of Low/High Voltage, 2016.....	10
Table 10 - Responding to Billing and Payment Queries, 2016.....	11
Table 11 - Connection to Supply, 2016	11
Table 12 - Payments owed under Guaranteed Standards, 2016.....	13
Table 13 - Breaches and Minimum Payments Due under the Guaranteed Standards, 2016	14
Table 14 - Breaches, Claims and Payments under the Guaranteed Standards, 2016.....	14
Table 15 - Frequency of Meter Reading, Residential and Commercial, 2016	16
Table 16 - Frequency of Meter Reading, Industrial, 2016.....	16
Table 17 - Billing Punctuality, 2016.....	17
Table 18 - Response to Meter Problems, 2016	18
Table 19 - Notice of Planned Outages, 2016	18
Table 20 - Street Lights Maintenance, 2016.....	19
Table 21 - Highway Lights Maintenance, 2016.....	20
Table 22 - Response to Customer’s written Complaints/Requests, 2016.....	21
Table 23 - Customer Claim Notification, 2016	21
Table 24 - Summary of Compliance – Guaranteed Standards, 2016.....	23
Table 25 - Summary of Compliance – Overall Standards, 2016	24
Table A1 - Guaranteed Standards	25
Table A2 - Overall Standards	26

EXECUTIVE SUMMARY

The Regulated Industries Commission (RIC) is a statutory body established under the Regulated Industries Commission Act No. 26 of 1998. Under Section 6 of the Act, the RIC has the power to prescribe standards of service, monitor compliance, and impose sanctions for non-compliance. In order to fulfil this mandate, the RIC published and implemented the Quality of Service Standards (QSS) for the Electricity Transmission and Distribution Sector.

This is the 2016 Annual Performance Report on the QSS and it presents an analysis of the performance of the Trinidad and Tobago Electricity Commission (T&TEC) with respect to the QSS for the year. The performance for 2016 is compared with that of 2015. The information utilized in this report was supplied by T&TEC via the RIC's QSS reporting system.

Summary of Performance: Guaranteed Standards

Guaranteed Standards are those that set service levels which must be met for each individual customer by the service provider. Under these standards, the utility is required to make compensatory payments to affected customers if it fails to provide the level of service stipulated. There are eight guaranteed standards for T&TEC, and all but the first (GES 1) carry automatic compensatory payments for breaches¹.

There were 5,806 breaches under the Guaranteed Standards during 2016 compared with the 1,588 breaches that occurred in 2015. This significant increase was largely due to the breaches occurring under GES 1 (Response and Restoration Time) increasing from 1,524 in 2015 to 5,726 in 2016. In the months of July and August severe inclement weather resulted in a high number of outages and lengthy response and restoration times. The remainder of breaches accounted for about 1.5% of the total and are distributed as shown in Table ES 1. Generally, compliance rates across all the standards were similar to those that occurred in 2015. A summary of this is presented below in table ES1.

¹A breach occurs when the service provider fails to achieved the stipulated level of performance for a standard.

Table ES1 - Compliance Rates under the Guaranteed Standards, 2016

Code	Service Description	Performance Measure	2016 Compliance Rates (%)	2015 Compliance Rates (%)
GES1	Response and Restoration Time after unplanned (forced) outages on the distribution system.	Time for restoration of supply to affected customers - within 10 hours	99.64	99.90
GES2	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	99.80 98.10	99.96 96.90
GES3	Reconnection After Payment of Overdue Amounts or Agreement on Payment Schedule	Time to restore supply after payment is made - within 24 hours	99.95	99.96
GES4	Making and Keeping Appointments	Where required, appointments will be made on a morning or afternoon basis	100.0	100.0
GES5	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 98.70	99.86 99.50
GES6	Responding to Billing and Payment Queries.	Substantive reply within 15 working days.	100.0	100.0
GES 7	New Connection of Supply	Service drop and meter to be installed within 3 working days.	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	0.0 N/A	0.0 N/A

N/A – Not Applicable

The total number of breaches and payments due under the Guaranteed Standards in 2016 is shown in Table ES2. T&TEC is not yet able to identify the individual customers that are affected by breaches of GES 1 due to current limits of its outage management system. Hence customers are still required to submit claims for breaches under this standard. Since the implementation of the standards in 2004, there were never more than three claims filed in any given year. This year was the first time thirty-three claims were made under GES 1. Thirty-one claims were made by

residential customers and two by a non-residential customer², all of which received compensatory payments. Of the remaining 80 breaches that were eligible for automatic compensation, T&TEC made 35 payments to customers totalling \$2,430. The RIC estimates that at least \$348,376 would have been due in compensatory payments to customers, if all claims were filed/processed for all breaches that occurred in 2016.

Table ES2 - Breaches and Payments Due under the Guaranteed Standards, 2016

Standard	Total Number	Number of Breaches	Minimum Payment Due (\$)
GES 1	1,594,640(affected customers)	5,726	343,560
GES 2	10,820(requests)	22	1100
GES 3	28,727(arrangements/payments)	12	1,416
GES 4	1,103(appointments)	0	0
GES 5	3,671 (voltage complaints)	7	350
GES 6	22,566 (queries)	0	0
GES 7	12,775(requests)	14	700
GES 8	93(payments owed)	25	1,250
TOTAL		5,806	348,376

Summary of Performance: Overall Standards

The overall standards cover areas of service where it is not appropriate or feasible to give individual guarantees, but where the expectation of the stakeholders is that the utility will provide pre-determined minimum levels of service. These standards generally cover the reliability of service affecting a group of customers. Compliance rates for T&TEC's performance under the overall standards in 2016 are presented in table ES3.

² A Commercial Rate B customer from the Eastern Distribution Area made two claims in September.

Table ES3 - Compliance under Overall Standards, 2016

Code	Description	Required Performance Units	2016 Compliance Rate (%)	2015 Compliance Rate (%)
OES1	Frequency of Meter Reading	(a) 90% of industrial meters should be read every month	100.0	100.0
		(b) 90% of residential and commercial meters read according to schedule	100.0	100.0
OES2	Billing Punctuality	98% of all bills to be mailed within ten (10) working days after meter reading or estimation	90.2	100.0
OES3	Responding to Meter Problems	Visit or substantive reply within 10 working days 95% of the time.	99.1	94.7
OES4	Prior Notice of Planned Outages	3 days advance notice of planned outages 100% of the time	92.1	96.9
OES5	Street Lights Maintenance	Street Lights- within 7 working days	29.9	40.5
		Highway Lights – within 14 working days	89.6	88.5
OES6	Response to Customer Queries/Requests (written)	Time to respond after receipt of queries. Initial Response – within 10 working days	96.2	81.7
		Final Position – within 30 working days	54.1	45.9
OES7	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	N/A

T&TEC’s performance under the overall standards was varied, but generally there was no significant improvement. As in previous years, performance under OES 1 (Frequency of Meter Reading), and OES 7 (Notifying Customers of Receipt of Claim under Guaranteed Standard GES 1) achieved full compliance. There was marginal improvement in the performance under OES 3 (Responding to Meter Problems) and OES 6 (Response to Customer Queries/Requests (written)).

However, there was a decline in performance under OES2 (Billing Punctuality), OES 4 (Prior Notice of Unplanned Outages) and OES 5 (Street Lights Maintenance).

SECTION 1 INTRODUCTION

The RIC is responsible for regulating prices, setting service standards and monitoring performance of service providers in the electricity, and water and wastewater sectors. Monitoring quality of service is an important element in the regulatory framework, since it serves to protect the interests of customers in key service areas. The RIC is empowered under Section 6 of its Act to prescribe standards of service for the service providers under its purview, and to impose sanctions for non-compliance. The Quality of Service Standards (QSS) Scheme for the Electricity Transmission and Distribution Sector was implemented on April 7th, 2004. These standards were subsequently revised and the new standards were implemented from April 2010³. This is the Annual Performance Report for 2016 on the QSS for the Electricity Transmission and Distribution Sector. The data used in this report was supplied by T&TEC.

1.1 Purpose of Document

The purpose of this report is to present an analysis of the performance of T&TEC with respect to the QSS over the four quarters of 2016. It is also intended to inform the public and other stakeholders about the performance of T&TEC.

1.2 Structure of Document

The remainder of this document is structured as follows:

- In Section 2, the performance of T&TEC under each of the eight guaranteed standards is presented;
- Section 3 deals with the issue of compensatory payments;
- Section 4 deals with the performance of T&TEC under each of the seven overall standards;
- The summary and conclusion of the report are presented in Section 5; and
- In Appendix 1, tables of the guaranteed and overall standards and the compensatory payment levels for the guaranteed standards are presented.

³ As at the time of publication of this report, the QSS Scheme was further revised and is awaiting publication in the Gazette.

SECTION 2 PERFORMANCE REVIEW: GUARANTEED STANDARDS FOR 2016

2.1 Guaranteed Standards

Guaranteed standards set service levels that must be met for each individual customer by the service provider. Under these standards, the utility is required to make compensatory payments to affected customers if it fails to provide the level of service stipulated.

There are eight guaranteed standards, and the performance of T&TEC in each of these is reviewed below for 2016.

GES 1: Response and Restoration Times of Supply.

This standard was designed to ensure that T&TEC responds promptly to any unplanned outage and restores supply in the shortest time possible. Accordingly, this standard requires that supply be restored to affected customers within 10 hours after an unplanned outage on the distribution system.

There were 8,116 unplanned outages recorded in 2016, which is equivalent to an average of 22 unplanned outages per day across T&TEC’s network. This was an improvement over the average of 24 observed in 2015. Overall, there was a 6.5% reduction in the number of unplanned outages.

Table 1 – No. of Unplanned Outages, 2016

Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	TOTAL (2016)	TOTAL (2015)
North	178	172	148	234	156	234	175	256	212	29	232	232	2,258	2,905
South	166	168	195	148	272	193	215	203	270	249	183	203	2,465	2,735
Tobago	90	76	58	68	50	80	50	63	62	37	35	39	708	1,135
East	74	65	67	67	51	72	59	86	60	54	59	60	774	536
Central	119	98	154	161	185	168	166	175	163	195	153	174	1,911	1,367
TOTAL (2016)	627	579	622	678	714	747	665	783	767	564	662	708	8,116	
TOTAL (2015)	760	521	565	722	673	770	758	817	772	907	704	709		8,682

Unplanned outages occur for various reasons and have a range of durations. There were 94 unplanned outages for which restoration took longer than the stipulated 10 hours. This is a 34% increase over the 70 that occurred in 2015. The distribution of these outages is shown in table 2.

Table 2 - No. of Unplanned Outages exceeding 10 hours, 2016

Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	TOTAL (2016)	TOTAL (2015)
North	0	0	0	1	2	2	8	12	2	0	0	7	34	15
South	0	0	0	1	3	2	7	3	0	0	0	0	16	4
Tobago	0	0	0	0	0	0	0	0	0	0	0	0	0	30
East	1	0	0	1	3	11	7	3	2	5	6	3	42	21
Central	0	0	0	0	0	1	0	0	0	0	0	1	2	0
TOTAL	1	0	0	3	8	16	22	18	4	5	6	11	94	70

Listed below are the reasons provided by T&TEC for the causes of those outages and their frequency in 2016. It should be noted that there may be multiple reasons listed for a specific outage.

- Blown transformer fuses and blown high tension (HT) fuses,
- Tree contact resulting in burst wires and/or blown fuses,
- Reason unknown or not given,
- Fallen trees due to bush fires or inclement weather,
- Burst HT, low voltage (LV) and neutral conductors/wires,
- Defective equipment,
- Vehicular accident
- Feeder trips, and
- Leaning or broken poles.

The most common cause of outages continues to be blown fuses. Some of these were caused by tree contact due to either poor vegetation management or fallen trees caused by bush fires and inclement weather.

Generally, delays in restoration are caused by a combination of events. However, the large spikes that occurred in July and August were largely due to severe inclement weather leading to an unusually large number of trouble reports. This resulted in delays in returning supply to some customers, as the crews not only had to contend with poor weather, but also the large number of jobs. T&TEC supplied the following reasons for the lengthy restoration times.

- High number of trouble reports,
- Remote location, poor access to site, flooding and poor terrain,
- Further service crews required. e.g. Daylight crew, line clearing and tree trimming required,
- Limited crews available,
- Inclement weather,
- Complexity of the job,
- Awaiting appropriate equipment to conduct repairs,
- Transportation issues,
- Security issues or high risk areas, Bee infestation,
- Awaiting Fire Service to clear impassable roads, and
- Unable to contact customer.

The RIC has noted the improvement in the reporting of outages, but T&TEC still needs to standardise the collection and reporting of this information across the Distribution Areas

A breach of GES 1 is an unplanned outage experienced by an individual customer in which the electricity supply to the customer is not restored within 10 hours of the report being received by the T&TEC. Additionally, a second and third breach is registered when the supply is not restored within 22 hours and 34 hours respectively.

Table 3 shows the estimated number of customers affected by outages and the estimated number of customers not restored within the specified time frames of 10 hours, 22 hours and 34 hours, resulting in breaches of GES 1.

Table 3 – No. of Customers Restored after 10 hours, 2016

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL (2016)
No. of affected customers	110,321	84,777	110,923	145,049	125,272	126,183	147,955	175,359	189,040	86,650	126,889	166,222	1,594,640
No. of customers restored after 10 hours (Breach)	76	0	0	142	106	176	1,552	2104	91	78	292	834	5,451
No. of customers restored after 22 hours (Breach)	0	0	0	50	11	0	10	5	7	0	95	31	209
No. of customers restored after 34 hours (Breach)	0	0	0	0	0	0	10	5	0	0	50	1	66
Total No. of Breaches	76	0	0	192	117	176	1,572	2,114	98	78	437	866	5,726
Percentage non-compliance (%)	0.07	0.00	0.00	0.13	0.09	0.14	1.06	1.21	0.05	0.09	0.34	0.52	0.36
Compliance Rate (%)	99.93	100.0	100.0	99.87	99.91	99.99	98.94	98.79	99.95	99.91	99.66	99.48	99.64

The total number of customers affected by outages increased from 1,558,029 in 2015 to 1,594,640 in 2016, and correspondingly, the number of breaches increased by from 1,524 to 5,726. This is represented in table 4. Of the 5,726 breaches experienced by 5,451 customers during 2016, there were 31 claims filed by residential customers and 2 filed by a non-residential⁴ customer, resulting in \$3,060 in compensatory payments.

Table 4 - Response and Restoration Times of Supply, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
Total no. of customer restored after 10 hours (Breaches)	76	485	3,784	1,381	5,726	1,524
No. of affected customer	306,021	396,504	512,354	379,761	1,594,640	1,558,029
Percentage non-compliance (%)	0.02	0.12	0.74	0.36	0.36	0.10
Compliance Rate (%)	99.98	99.88	99.26	99.64	99.64	99.90

⁴ A Commercial Rate B customer from the Eastern Distribution Area made two claims in September.

GES 1 continues to be the standard with the largest number of breaches. This is the only standard where automatic compensation for a breach of the standard is not in effect. The corresponding number of claims by customers has also been very low. Implementation of automatic compensation is dependent on the integration of an Outage Management System (OMS) module of the Advanced Metering Infrastructure (AMI), which will facilitate the identification of the individual customers affected by a breach of the standard. Integration of the OMS module has been significantly delayed by the completion of the Geographic Information System (GIS) mapping exercise of all of T&TEC's equipment inclusive of customers' meters. A pilot implementation project of the OMS module was initiated in the Central Distribution Area during the fourth quarter of 2016. This project will inform the phased implementation of the OMS module throughout T&TEC's Distribution Area offices scheduled to begin by June 2017⁵. The automatic compensation of customers can then be initiated upon successful implementation of the OMS module throughout the entire organization.

GES 2: Billing Punctuality (New customers).

This standard seeks to ensure a prompt and efficient billing process. It requires that the first bill after a new service connection is made, be mailed to residential customers within 60 days, and to non-residential customers within 30 days.

There were 10,766 new residential customers connected to supply, which represented a 6% decrease from 2015. Of these, bills were not mailed to 21 (or 0.2%) of them within the stipulated period. T&TEC was able to maintain their performance under this standard at 99.8% (See table 5). All 21 customers were compensated.

⁵ At the time of publication of this report, the OMS has been fully implemented in the Central Area.

Table 5 - Billing Punctuality for Residential Customers, 2016

Item	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	TOTAL 2016	TOTAL 2015
No. of new Residential customers connected to supply	2,129	2,489	3,235	2,913	10,766	11,433
No. of bills not mailed within 60 days	3	3	15	0	21	5
Percentage Breach (%)	0.1	0.1	0.5	0.0	0.2	0.04
Compliance Rate (%)	99.9	99.9	99.5	100.0	99.8	99.96

There was a 45% decrease in the number of non-residential customers connected to supply. Of the 54 customers, bills were mailed to all except one within the stipulated time, and that customer was compensated. Full compliance was achieved in the first three quarters. Performance during fourth quarter declined, resulting in an overall compliance rate of 98.1% for 2016 (See table 6).

Table 6 - Billing Punctuality for Non-Residential Customers, 2016

Item	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	TOTAL 2016	TOTAL 2015
No. of new Non-Residential customers connected to supply	15	12	9	18	54	98
No. of bills not mailed within 30 days (breach)	0	0	0	1	1	3
Percentage Breach (%)	0.0	0.0	0.0	5.6	1.9	3.1
Compliance Rate (%)	100.0	100.0	100.0	94.4	98.1	96.9

GES 3: Reconnection after payment of overdue amounts or agreement.

T&TEC disconnects customers for the non-payment of arrears. Once these have been settled or an agreement has been reached on a payment schedule. This standard requires that reconnection of supply be completed within 24 hours after either payment of overdue amounts or an agreement is made.

There was a 7% decrease in the number of customers that were disconnected for non-payment of arrears in 2016. Ninety-one percent of the customers who were disconnected, made payments or arrangements. As shown in table 7, twelve customers were not reconnected within 24 hours, resulting in a compliance rate of 99.96%, the same rate achieved in 2015. Ten of these customers were compensated. T&TEC was unable to give a reason for not compensating two customers.

Table 7 - Reconnection after Payment of Overdue Amounts or Agreement, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
Total Disconnections	8,583	7,422	8,437	7,297	31,739	34,017
Customers making payments/arrangements	7,551	6,818	7,575	6,783	28,727	28,093
No. not reconnected within 24 hours	3	1	4	4	12	11
Percentage Breach (%)	0.08	0.01	0.05	0.00	0.04	0.04
Compliance Rate (%)	99.92	99.99	99.95	100.0	99.96	99.96

GES 4: Making and Keeping Appointments.

It is sometimes necessary for T&TEC to make appointments to visit customers' premises. In the event that the appointment made by T&TEC is not kept, it is the customer who experiences the greater inconvenience. The standard requires that notice of inability to keep appointments be given to customers at least 24 hours before the appointment. There is non-compliance with the standard if an appointment is not kept within 1 hour of the specified time.

There were 1,103 appointments made in 2016. Of these, T&TEC cancelled four and gave the requisite 24 hour notice. The remainder were kept within 1 hour of the appointed time. Therefore, full compliance with this standard was achieved for all the quarters of 2016 (See table 8).

Table 8 - Making and Keeping Appointments, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
No. of appointments arranged with customers	206	318	322	257	1,103	1,229
No. of appointments not kept within 1hr of appointed time	0	0	0	0	0	0
No. of appointments cancelled or postponed with 24 hours notice	0	0	0	4	4	17
Percentage Breach (%)	0.0	0.0	0.0	0.0	0.0	0.0
Compliance Rate (%)	100.0	100.0	100.0	100.0	100.0	100.0

GES 5: Investigation of Voltage Complaints

T&TEC is governed by the Electricity Supply Rules under Section 15 of the Electricity (Inspection) Act Chapter 54.72 to supply its customers at specified nominal voltages. Supply voltage shall not vary beyond six percent above or below the nominal supply voltage. Where a customer has reported that his supply is outside the permitted voltage range, T&TEC must visit within 24 hours, where a visit is deemed necessary, and rectify the problem within 15 working days. A breach occurs if the service provider fails to visit or correct the problem within the respective periods specified.

There was a 20% increase in the total number of voltage complaints received in 2016 over what was recorded in 2015. T&TEC determined that 3,012 of the 3,671 complaints received, required a visit and responded to all except one within 24 hours. Under this standard, T&TEC is required to identify which complaints are legitimate voltage complaints after the visit. Of the 3,012 visits, T&TEC reported that 475 of the complaints were in fact legitimate. Six of these were not rectified within 15 working days. Thus, the overall compliance rate for rectification of voltage complaints in 2016 was 98.7%. The performance is summarized in table 9.

Table 9 - Correction of Low/High Voltage, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015*
No. of voltage complaints received	754	953	1,063	901	3,671	3,064
No. of complaints where visit was necessary	744	769	793	806	3,012	2,875
No. of complaints not responded to within 24 hours	1	0	0	0	1	4
Percentage Breach	0.16	0.0	0.0	0.0	0.03	0.14
Compliance Rate	99.84	100.0	100.0	100.0	99.97	99.86
No. of legitimate voltage complaints	99	80	159	137	475	1,547
No. of complaints not rectified within 15 working days	0	1	5	0	6	7
Percentage Breach	0.0	1.3	3.1	0.0	1.3	0.5
Compliance Rate	100.0	98.7	96.9	100.0	98.7	99.5

*Data for 2015 was amended.

GES 6: Responding to Billing and Payment Queries

This standard states that T&TEC must respond to a customer’s billing and payment queries within 15 working days with a substantive response. Failure to do so is considered a breach of the standard.

There were 22,566 billing and payment queries received in 2016. Of these, all were responded to within the specified time frame. Therefore there continued to be full compliance in all four quarters of 2016, as seen in table 10.

Table 10 - Responding to Billing and Payment Queries, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
Number of billing and payment queries	5,496	5,417	6,000	5,683	22,566	22,457
Number not responded to within 15 working days	0	0	0	0	0	0
Percentage Breach (%)	0.0	0.0	0.0	0.0	0.0	0.0
Compliance Rate (%)	100.0	100.0	100.0	100.0	100.0	100.0

GES 7: New Connection to Supply

This standard seeks to focus on the delays in completing the new connections after all necessary paperwork is completed. It states that T&TEC must complete a new connection to supply within 3 working days after submission of all payments and documentation or by a mutually agreed upon date.

There were 12,775 requests for new connections in 2016, which represented a 6% decrease from 2015. Of these, fourteen were not made within the specified time. This resulted in an annual compliance rate of 99.9% (See table 11).

Table 11 - Connection to Supply, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
No. of connection requests	2,862	3,254	3,306	3,353	12,775	13,630
No. of connections not made within 3 working days or by the specified date	0	3	4	7	14	18
Percentage Breach (%)	0.0	0.1	0.1	0.2	0.1	0.1
Compliance Rate (%)	100.0	99.9	99.9	99.8	99.9	99.9

Despite the high compliance rate, customers continued to complain about the inordinate delay between when an application is filed and when the service is finally connected. These problems are to be addressed by the revision of the standard⁶. During 2016, 100 such complaints were

⁶ At the time of publication, the QSS Scheme has been revised and is waiting publication.

referred to the RIC for further action. Investigations revealed that there are some procedural issues to be ratified. The RIC is in discussion with T&TEC to have this addressed.

GES 8: Payments owed under Guaranteed Standards

The Guaranteed Standards Scheme, as described in this section, not only sets prescribed levels of service, but also sets penalties for failure to meet these levels. This standard requires that compensatory payment to the customer's account be made within 30 working days for non-residential customers and 60 days for residential customers, after the claim has been accepted by T&TEC. The standard requires T&TEC to pay \$50 to any customer whose account is not credited within the specified timeframe.

In respect of GES 1 customers must notify the utility that there was a breach and make a claim for the compensatory payment. For the standards, GES 2 to GES 7, T&TEC's systems alert it to breaches that have occurred, and they are required to automatically process and credit payments to customers' accounts. The information on breaches of GES 8 is presented in table 12.

There were 5,726 breaches occurring under GES 1. Out of these 31 claims were made by residential customers and 2 by non-residential customers, all of which were paid within the specified time frames. There were 60 breaches occurring across GES 2 to GES 7 from residential customers. Of these, 26 were not paid within the specified time frame, making them eligible for compensation under GES 8. According to the data submitted, one of these 26 customers was compensated, resulting in a compliance rate of 3.8%. While T&TEC has indicated that all customers are eventually compensated, the RIC has emphasized that this level of performance is unacceptable. It is one of the areas that requires process mapping to ensure that information is readily available for action, that action being prompt payment when there is a breach.

Table 12 - Payments owed under Guaranteed Standards, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
Number of Residential claims not paid within 60 working days	4	5	8	9	26	66
Number of Residential claims further compensated for late or non-payment	1	NMI	0	0	1	1
Percentage Breach (%)	75.0	N/A	100.0	100.0	96.2	98.5
Compliance Rate (%)	25.0	N/A	0.0	0.0	3.8	1.5
Number of Non-Residential claims not paid within 30 working days	0	0	0	0	0	0
Number of Non-Residential claims further compensated for late or non-payment	NMI	NMI	NMI	NMI	NMI	NMI
Percentage Breach (%)	N/A	N/A	N/A	N/A	N/A	N/A
Compliance Rate (%)	N/A	N/A	N/A	N/A	N/A	N/A

NMI – No Measurable Instance

N/A – Not Applicable

SECTION 3 COMPENSATORY PAYMENTS

The QSS for the Electricity Transmission and Distribution Sector is a guaranteed standards scheme that imposes a penalty on the service provider when the specified standards are not met. The level of the compensatory payment is intended to incentivize T&TEC without being unduly punitive. The payment is automatic for all guaranteed standards, except GES 1. Customers are required to submit a claim for this standard, as T&TEC is currently unable to identify individual customers affected by breaches⁷.

In assessing the effectiveness of the guaranteed standards scheme, the number of breaches must be determined, as well as the payments due for these breaches. There were 5,806 breaches occurring across standards GES 1 to GES 8 that were eligible for compensatory payment. The total amount of compensatory payment due was calculated based on the amount specified by the standard. In the cases where the quantum of the payment was different for the different customer

⁷ GES 1 is expected to become automatic in 2018.

category, but the category was not distinguished, the lesser value was used in the computation. Based on the number of breaches, the total payment should have been at least \$348,376. This information is presented in table 13.

Table 13 - Breaches and Minimum Payments Due under the Guaranteed Standards, 2016

Standard	Number of Breaches	Penalty Payment (\$)	Minimum Payment Due (\$)
GES 1	5,726	60	343,560
GES 2	22	50	1,100
GES 3	12	118	1,416
GES 4	0	50	0
GES 5	7	50	350
GES 6	0	50	0
GES 7	14	50	700
GES 8	25	50	1,250
TOTAL	5,806		348,376

T&TEC has reported that 68 compensatory payments were made to customers, totalling \$5,490, which is 1.6% of the entire estimated amount. This information is presented in table 14.

Table 14 - Breaches, Claims and Payments under the Guaranteed Standards, 2016

Standard	Total Number of Breaches	Total Number of Claims Submitted*/Processed	Total Payments made (\$)
GES 1*	5,726	31 (Residential)	1,860
		2 (Non-residential)	1,200
GES 2	22	22	1,100
GES 3	12	10	1,180
GES 4	0	0	0
GES 5	7	3	150
GES 6	0	0	0
GES 7	14	0	0
GES 8	25	0	0
Totals	5,806	68	5,490

*Claims under GES 1 must be submitted by customer before they can be processed, while claims under GES2 –GES 8 are generated automatically.

With respect to the automatic compensation, T&TEC paid \$2,430 (48%) of the \$4,816 due. The systems involved in processing these compensatory payments still need to be revised and improved.

Automatic compensation for GES 1 will commence once the Outage Management System is fully implemented. This is projected to take place in the last quarter of 2017.

SECTION 4 PERFORMANCE REVIEW: OVERALL STANDARDS FOR 2016

4.1 Overall Standards

Overall standards are those which cover areas of service where it is not appropriate or feasible to give individual guarantees, but where the expectation is that the utility will provide pre-determined minimum levels of service. These standards generally relate to the reliability of service affecting a group of customers. There are seven such standards in place for T&TEC.

OES 1: Frequency of Meter Reading.

This standard aims to have all meters read when scheduled. The performance measures are as follows:

- 90% of all residential and commercial meters be read when scheduled, and
- 90% of all industrial meters be read every month.

As at the end of 2016, there were 466,632 residential and commercial meters installed. These meters are scheduled to be read six times per year. T&TEC was able to complete 98% of the 2,769,064 scheduled readings for residential and commercial meters as shown in table 15. This is in full compliance with the performance measure of 90% of the meters being read as scheduled.

Table 15 - Frequency of Meter Reading, Residential and Commercial, 2016

Item	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	TOTAL 2016	TOTAL 2015
No. of residential and commercial meters installed at end of year	459,660	461,766	464,155	466,632	466,632	457,926
No. of scheduled readings for residential and commercial meters	694,204	678,713	705,400	690,747	2,769,064	2,706,575
No. of residential and commercial meters readings completed according to schedule	676,485	666,246	692,831	676,355	2,711,917	2,648,500
Percentage of residential and commercial meters read according to schedule	97 %	98%	98%	98%	98%	98%
Percentage breach (%)	0.0	0.0	0.0	0.0	0.0	0.0
Compliance Rate (%)	100.0	100.0	100.0	100.0	100.0	100.0

Over the last three years there has been a marginal annual increase in the number of industrial meters installed, bringing the number to 3,832 at the end of 2016 (See table 16). Although T&TEC only complied with the standard in the last two quarters of 2016, the annual average performance was that 92% of meters were read. This met the required level of 90%, resulting in 100% compliance for 2016.

Table 16 - Frequency of Meter Reading, Industrial, 2016

Item	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	TOTAL 2016	TOTAL 2015
No of industrial meters at end of period	3,765	3,780	3,805	3,832	3,832	3,730
No. of scheduled readings for industrial meters	11,278	11,323	11,382	11,483	45,466	43,913
No. of actual readings for industrial meters	10,071	9,871	10,993	10,782	41,717	41,275
Percentage of industrial meter readings	89%	87%	97%	94%	92%	94%
Percentage breach (%)	0.0	0.0	0.0	0.0	0.0	0.0
Compliance Rate (%)	98.9	96.7	100.0	100.0	100.0	100.0

OES 2: Billing Punctuality.

T&TEC's customers are billed by cycles in each of its five Distribution Areas. Bills are mailed to the customers in the respective cycles after the meters have been read or estimated according to the schedule. This standard seeks to ensure timely billing and requires that 98% of all bills be mailed to customers within ten working days after meter reading or estimation.

T&TEC managed to mail more than 98% of the bills within the stipulated time frame only during the second quarter. Thus the annual compliance rate under this standard was 90.2% (See table 17).

Table 17 - Billing Punctuality, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
No. of meters read and estimated	686,556	676,117	703,824	687,137	2,753,634	2,689,126
No. of bills not mailed within 10 working days	154,462	2,160	83,691	79,902	320,215	0
No. of bills mailed within 10 working days	532,794	673,957	620,133	607,235	2,433,419	2,689,126
Percentage of bills mailed within 10 working days (%)	79%	99.7%	88%	88%	88%	100
Percentage breach (%)	21.9	0.0	10.1	9.8	9.8	0.0
Compliance Rate (%)	78.1	100.0	89.9	90.2	90.2	100.0

OES 3: Responding to Meter Problems

Overall Standard, OES 3 emphasizes that properly functioning meters are important for accurately registering a customer's consumption. This standard requires that T&TEC responds to customers' meter problems within 10 working days 95% of the time, either by visit or with a substantive response.

There were 1,242 reports of meter problems received in 2016 as shown in table 18. Seventy-three of these were not responded to within 10 working days, resulting in an average compliance of 99.1% for 2016.

Table 18 - Response to Meter Problems, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
No. of meter problems reported	365	262	314	301	1,242	2,140
No. of meters problems not responded to within 10 working days	28	5	21	19	73	217
Percentage responded to within 10 working days (%)	92%	98%	93%	94%	94%	90
Percentage breach (%)	2.8	0.0	1.8	1.4	0.9	5.3
Compliance Rate (%)	97.2	100.0	98.2	98.6	99.1	94.7

OES 4: Prior Notice of Planned Outages.

T&TEC routinely performs maintenance or repair work on the transmission and distribution system, which may involve the interruption of supply. This standard requires T&TEC to give at least three days advance notice of planned outages to customers as a courtesy for the inconveniences that might arise.

There were 1,084 planned outages for the year. Of these, 86 were planned outages for which three days advance notice was not given. T&TEC's performance worsened from 2015, with the average compliance rate decreasing from 96.9% to 92.1% in 2016 (See table 19). However, there were only 7 occasions when the duration of the planned outages exceeded the scheduled time.

Table 19 - Notice of Planned Outages, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
No. of planned outages	256	299	268	261	1,084	1,482
No. of planned outages for which 3 days advance notice was not given	15	23	4	44	86	46
Percentage Breach (%)	5.9	7.7	1.5	16.9	7.9	3.1
Compliance Rate (%)	94.1	92.3	98.5	83.1	92.1	96.9
No. of occasions the duration of planned outage exceeded specified time	0	0	7	0	7	28

OES 5: Street Lights Maintenance

OES 5 requires T&TEC to repair 100% of failed streetlights (except highway lights) under its control, within seven working days after receiving notification. T&TEC is also required to establish a monthly schedule to monitor highway lighting and must repair 100% of failed highway lighting within fourteen days after surveyed or reported failure.

There were 22,031 reports of failed street lights in 2016, of which T&TEC was able to repair 29.9% of them within the specified time frame (See table 20). T&TEC reported having challenges with material quality and human resources, beginning in 2015 and continuing into 2016. This resulted in OES 5 being the standard with the worst performance, far below acceptable/desirable level. The RIC intends to further engage T&TEC in this matter since this performance is directly linked to the safety and overall welfare of the general public.

Table 20 - Street Lights Maintenance, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
No. of failed street lights reported	4,398	5,383	5,937	6,313	22,031	28,531
No. of failed street lights not repaired within 7 working days	2,549	3,807	4,817	4,217	15,444	16,972
Percentage breach (%)	57.9	70.7	81.1	67.7	70.1	59.5
Compliance Rate (%)	42.1	29.3	18.9	32.3	29.9	40.5

There were 50% fewer reports of highway light failures, with the numbers declining from 1,898 in 2015 to 942 in 2016. The annual compliance rate for repairs to highway lights was 89.6% in 2016, in which 98 of these fixtures were not repaired within 14 working days (See table 21).

Table 21 - Highway Lights Maintenance, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
No. of failed highway lights reported	242	296	202	202	942	1,898
No. of failed highway lights not repaired within 14 working days	49	49	0	0	98	219
Percentage breach (%)	20.2	16.6	0.0	0.0	10.4	11.5
Compliance Rate (%)	79.8	83.4	100.0	100.0	89.6	88.5

OES 6: Response to Customer’s written Complaints/Requests

This standard is intended to improve the service provider’s response to customer’s written complaints/requests. Under OES 6, T&TEC is required to:

- (a) Respond to written complaints within 10 working days, and
- (b) Communicate the final position within 30 working days thereafter.

The breaches for each aspect of this standard are shown in table 22. T&TEC received 318 written complaints/requests during 2016, and was unable to respond to 12 of them within 10 working days. This resulted in an annual compliance rate of 96.2%. With respect to having the final position communicated within 30 working days, T&TEC’s performance showed marginal improvement, with the average compliance rate increasing from 45.9% in 2015 to 54.1% in 2016.

Table 22 - Response to Customer's written Complaints/Requests, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
No. of written complaints/requests received	45	90	102	81	318	218
No. of written complaints/requests not responded to within 10 working days (breach)	0	4	1	7	12	40
Percentage Breach (%)	0.0	4.4	1.0	8.6	3.8	18.3
Compliance Rate (%)	100.0	95.6	99.0	91.4	96.2	81.7
No. of written complaints/requests not communicated to with final position within 30 working days (breach)	27	27	62	31	146	118
Percentage Breach (%)	60.0	30.0	59.8	38.3	45.9	54.1
Compliance Rate (%)	40.0	70.0	40.2	61.7	54.1	45.9

OES 7: Notifying customer of receipt of claim under Guaranteed Standard GES 1

This standard requires T&TEC to notify 100% of customers within ten working days of receipt of a claim under guaranteed standard GES 1. There were 33 claims submitted for breaches of GES 1, and all customers were notified.

Table 23 - Customer Claim Notification, 2016

Item	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TOTAL 2016	TOTAL 2015
No. of claims made under GES1	0	6	14	13	33	1
No. of claims not acknowledged within 10 working days	0	0	0	0	0	0
Percentage Breach (%)	0.0	0.0	0.0	0.0	0.0	0.0
Compliance Rate (%)	100.0	100.0	100.0	100.0	100.0	100.0

N/A – Not Applicable

SECTION 5 SUMMARY AND CONCLUSION

5.1 Guaranteed Standards

The Guaranteed Standards Scheme was designed to encourage T&TEC to focus on improving the quality of service delivered in the specified areas. This is broadly comparable to similar schemes used in other jurisdictions. In many areas, T&TEC's performance was maintained at previous levels as evidenced by the compliance rates. However, restoration time worsened, as evidenced by the significant increase in the number of breaches from 1,524 in 2015 to 5,726 in 2016. While there were fewer unplanned outages in 2016, examination of the significant increase in the number of breaches in GES 1 is attributed to severe inclement weather in July and August.

It is also the first time since the implementation of the standards that as many as 33 claims were made under GES 1; all of which received compensatory payments. Of the remaining 80 breaches that were eligible for automatic compensation, T&TEC made 35 payments to customers. The commissioning of the Outage Management System (OMS) module of the Advanced Metering Infrastructure (AMI), will facilitate the identification of all breaches occurring under GES 1, and the automatic compensation to affected customers. As a first step towards this, a pilot project was implemented during the fourth quarter of 2016. The QSS will also address the delays in new connections.

The breaches and compliance rates are shown in table 24.

Table 24 - Summary of Compliance – Guaranteed Standards, 2016

Standard		Total Number of Breaches		Compliance Rates	
		2016	2015	2016	2015
GES 1 – Response and Restoration Times of Supply after unplanned outages on the distribution system		5,726	1,524	99.64	99.90
GES 2 – Billing Punctuality	Residential	21	5	99.80	99.96
	Non- residential	1	3	98.10	96.90
GES 3 – Reconnection after Payment of overdue amount/ agreement		12	11	99.95	99.96
GES 4 – Making and Keeping Appointments		0	0	100.0	100.0
GES 5 – Investigation of Voltage Complaints	Response	1	4	99.97	99.86
	Rectification	6	7	98.7	99.5
GES 6 – Responding to billing and payment queries		0	0	100.0	100.0
GES7- New connection of supply		14	18	99.9	99.9
GES8 – Payments owed under guaranteed standards	Residential	25	1	0.0	0.0
	Non- residential	N/A	N/A	N/A	N/A

N/A – Not Applicable

5.2 Summary of Performance - Overall Standards

Generally, T&TEC’s performance under the overall standards was varied. As occurred in previous years, performance under OES 1 (Frequency of Meter Reading), and OES 7 (Notifying Customers of Receipt of Claim under Guaranteed Standard GES 1) achieved full compliance. There was marginal improvement in the performance under OES 3 (Responding to Meter Problems) and OES 6 (Response to Customer Queries/Requests (written)). However, there was a decline in performance under OES2 (Billing Punctuality), OES 4 (Prior Notice of Unplanned Outages) and 5 (Street Lights Maintenance). The RIC continues to hold discussions with T&TEC with the aim of improving the treatment of written complaints and the street light maintenance programs.

A summary of compliance rates under the overall standards, 2016 is presented in table 25.

Table 25 - Summary of Compliance – Overall Standards, 2016

Standard		Compliance Rates %	
		TOTAL 2016	TOTAL 2015
OES 1 – Frequency of Meter Reading	Industrial	100.0	100.0
	Residential and Commercial	100.0	100.0
OES 2 – Billing Punctuality		90.2	100.0
OES 3 – Responding to meter problems		99.1	94.7
OES 4 – Prior Notice Of Planned Outages		92.1	96.9
OES 5 – Street Lights Maintenance	Street Lights	29.9	40.5
	Highway Lights	89.6	88.5
OES 6 – Response to Customer Queries/ Requests (written)	Initial Response	96.2	81.7
	Final Position	54.1	45.9
OES 7 – Notifying Customer of Receipt of Claim under Guaranteed Standard GES1		100.0	N/A

N/A – Not Applicable

APPENDIX 1

Table A1 presents a description of the Guaranteed Standards, the required performance units, and the compensatory payment levels for each standard.

Table A1 - Guaranteed Standards

Code	Service Description	Performance Measure	Required Performance Units	Payments per Customers *
GES1	Restoration of supply after unplanned outage on the distribution system.	Time for restoration of supply to affected customers	Within 10 hours	\$60 (residential) \$600 (non-residential) For each further 12 hr period \$60 (residential) \$600 (non-residential)
GES2	Billing Punctuality .Time for first bill to be mailed after service connection.	Time for first bill to be mailed after service connection: (a) Residential (b) Non-Residential	60 days 30 days	\$50 for both residential and non-residential
GES3	Reconnection of service after payment of overdue amounts or agreement on payment schedule	Time to restore supply after payment is made (All customers)	Within 24 hours	Refund of reconnection fee for both residential and non-residential
GES4	Making and keeping appointments	Where required, appointments will be made on a morning or afternoon basis	24 hours notice of inability to keep an appointment with customers.	\$50 for both residential and non-residential
GES5	Investigation of Voltage Complaints	Time to visit, correct problem and notify affected customers	Within 24 hours, Correct within 15 working days.	\$50 (residential) \$600 (non-residential)
GES6	Responding to billing and payment queries	Provide a substantive reply	Within 15 working days	\$50 for both residential and non-residential
GES7	New Connection of supply	Service drop and meter to be installed	Within 3 working days	\$50 for both residential and non-residential
GES8	Payments owed under guaranteed standards	Time to credit compensatory payment.	Within 30 working days for non-residential and 60 days for residential.	\$50 for both residential and non-residential

Table A2 presents a description of the Overall Standards and the required performance units for each standard.

Table A2 - Overall Standards

Code	Description	Required Performance Units
OES1	Frequency of meter reading	<ul style="list-style-type: none"> a. 90% of industrial meters should be read every month b. 90% of residential and commercial meters read according to schedule
OES2	Billing punctuality	98% of all bills to be mailed within ten (10) working days after meter reading or estimation
OES3	Responding to meter problems	Visit or substantive reply within 10 working days 95% of the time
OES4	Prior Notice of planned outages	At least 3 days advance notice of planned outages 100% of the time
OES5	Street lights maintenance.	<p>100% of failed street lights with the exception of highway lighting repaired within 7 working days.</p> <p>100% of failed highway lighting repaired within 14 working days.</p>
OES6	Response to customer queries/requests (written)	Substantive response within 10 working days and communicating final position within 30 working days.
OES7	Notifying customers of receipt of claim under guaranteed standard GES1.	100% of customers to be notified of receipt of claim within 10 working days.