

PUBLIC UTILITIES REGULATORY COMMISSION



CUSTOMER EXPECTATION OF UTILITY TARIFFS

SURVEY REPORT

June 2022

HIGHLIGHTS OF KEY FINDINGS

- 47% of Respondents are willing to pay more for utility services on the basis of improved quality of service, while 14% are prepared to pay a little bit more with improvements in their level of incomes and improvements in the general standard of living and a reduction in the cost of living.
- Over 60% of Respondents do not expect an increase in tariffs. However, if the economy improves or salaries are increased, they would welcome an increase.
- Averagely, residential customer respondents request a 21% reduction in their monthly expenditure on electricity tariffs.
- Averagely, residential customer respondents would welcome a 26% increase in their water tariffs.

Table of Contents	
HIGHLIGHTS OF KEY FINDINGS	1
Table of Contents.....	0
List of Figures	1
List of Tables	1
1.0 Introduction	2
2.0 Objective	2
3.0 Scope and Methodology	3
3.1 <i>Scope of Study</i>	3
3.2 <i>Sampling and Data Collection</i>	3
4.0 Findings	4
4.1 <i>Customer Category</i>	4
4.2 <i>Average Monthly Income of Respondents</i>	4
4.3 <i>Customer Access to Utility Services</i>	5
4.3.1 <i>Consumers Electricity Services Provider</i>	5
4.4 <i>Service Quality</i>	5
4.4.1 <i>Consumer Appraisal of Electricity Services</i>	6
4.4.2 <i>Consumer Appraisal of Water Services</i>	6
4.5 <i>Utility Pricing</i>	7
4.5.1 <i>Electricity</i>	8
4.5.2 <i>Water</i>	10
4.6 <i>Customer Expectation on Utility Tariffs</i>	12
4.6.1 <i>Customer Expectation of Utility Price Change</i>	12
4.6.2 <i>Customer Willingness to Pay more for Utilities</i>	13
4.6.3 <i>Amount Customers Are Willing to Pay for Utility Service Provision</i>	14
5.0 Recommendations	15

List of Figures

Figure 1: Customer Class of Respondents	4
Figure 2: Average Household Incomes of Respondents	5
Figure 3: Respondents' Power Supply Utility	5
Figure 4: Average Monthly Electricity Consumption (in kWh)	8
Figure 5: Word Cloud on Respondents Average Monthly Expenditure on Electricity .	9
Figure 6: Customer Justifications on Commensurability of Electricity Tariffs.....	10
Figure 7: Average Monthly Expenditure on Water	11
Figure 8: Word Cloud on Consumers' Average Monthly Expenditure on Water	11
Figure 9: Customer Justification on Commensurability of Water Tariffs	12
Figure 10: Consumer Expectation of Price Change.....	13
Figure 11: Respondents Willingness to Pay for Quality Utility Service	13
Figure 12: Customer Rating of Utility Tariffs	14
Figure 13: Residential Customers Preferred Monthly Charges for Electricity/Water Services	14

List of Tables

Table 1: Consumer Appraisal of Service Quality - Electricity	6
Table 2: Consumer Appraisal of Service Quality - Water	7
Table 3: Cost of Electricity to Customers.....	9
Table 4: Cost of Water to Customers.....	11
Table 5: Conditions for Tariff Increment.....	15

1.0 Introduction

Sections 3(b), 3(c) and 3(d) of the Public Utilities Regulatory Commission (PURC) Act, Act 538 of 1997 indicates that, the Commission is to examine and approve rates chargeable for the provision of utility services; protect the interest of consumers and providers of utility services and to monitor standards of performance for the provision of services.

Section 11(b) of Act 538 also states that a public utility licensed or authorized under a law to provide utility service shall make reasonable effort that is necessary to provide to the public, a service that is safe, adequate, efficient, reasonable and non-discriminatory.

PURC, being the economic regulator of the electricity and water sectors in Ghana, received proposals from utility service providers in March, 2022, for review of their tariffs. These proposals sought to make a case for an examination and approval of rates chargeable by the regulated utilities for the provision of services as stated in Section 3(b) of the PURC Act.

The Commission in its quest to fulfil sections 3(c), 3(d) and 11(b) of the Act tasked its Research Department to undertake a survey of consumers in general and utility service providers in particular to ascertain the reasonableness or otherwise of rates requested by the utility service providers.

This report is grounded on validated field data and first-hand information as provided by respondents in a survey across the country. The Commission deployed structured questionnaires (online and manually) to sample the views of as many respondents as possible on their perceptions and expectations of a tariff adjustment.

Results of this survey, have been discussed in the Findings Section of this report. Nothing in this report represents the views, opinions or thoughts of the Commission, but a succinct reportage of the views, perceptions and expectations of the general consuming public with respect to the proposals submitted to the Commission by Utility Service Providers.

2.0 Objective

The aim of this survey is to gauge consumers' perceptions and experiences with water and electricity utilities as well as their expectations on utility tariffs with respect to submitted proposals of the regulated utilities.

The study seeks to provide the Commission with information, which influences customer expectations and gives the ability to evaluate the quality of service provided by regulated utilities. Additionally, it will aid the Commission to ascertain the value and quality of services provided to meet the needs and expectations of customers.

Findings from this survey will assist the Commission in focusing on needed investments of the utilities, which will help to enhance customer satisfaction, loyalty and branding of the utility companies.

3.0 Scope and Methodology

3.1 Scope of Study

This study was designed as a nationwide survey of all customers of electricity and water utility services in Ghana. The survey was conducted over a period of ten days, between May 11 and May 20, 2022. The survey comprised customers of the Electricity Company of Ghana, Northern Electricity Distribution Company, and the Ghana Water Company Limited across all 16 regions of Ghana.

The study is therefore limited to customers of the regulated utilities and not applicable to noncustomers who resort to other alternative forms of services in satisfying their electricity and water needs. The study is also limited to customers' experiences with utility services over the past two years only.

Customer's access, use and level of satisfaction of the services provided by the utilities over the past two years formed part of the focus of the study. Additionally, the extent to which customers rate current utility prices, as well as their expectations of the imminent tariff reviews were significantly highlighted and assessed in the study.

3.2 Sampling and Data Collection

A total of 851 customers across all 16 regions were conveniently and randomly sampled for this survey. Female and male respondents were asymmetrically represented.

Data used for this study was mainly primary data obtained from various customer classes of utilities over a period of ten days. The instrument for data collection was a semi-structured questionnaire, which was well-designed to obtain data from respondents. The questionnaire had a mix of open-ended and closed-ended questions. The closed-ended questions elicited specific and structured qualitative responses, while the open-ended questions gave an added qualitative feel to the instrument.

The questionnaire was divided into six sections. The first part comprised obtaining demographic information of respondents. The second section captured data on respondents' access and use of electricity and water services. The next two sections assessed the level of satisfaction of customers by rating the quality of the various services offered by both the electricity and water utilities respectively. Section five elicited responses on the fairness or otherwise of current utility prices paid by customers, while the final section provided respondents the opportunity to express their expectations and willingness to pay for any adjustments in utility tariffs.

Two main approaches were adopted for data collection using both convenience and random sampling methods. These were mainly through

- i. the use of electronic data collection technologies, by deploying online, the data collection instrument as a link on the PURC website and on the various social media platforms (Facebook, Twitter, LinkedIn) of the Commission.
- ii. Manual data collection through the distribution of printed copies of the questionnaire to some random respondents complemented the online data collection method.

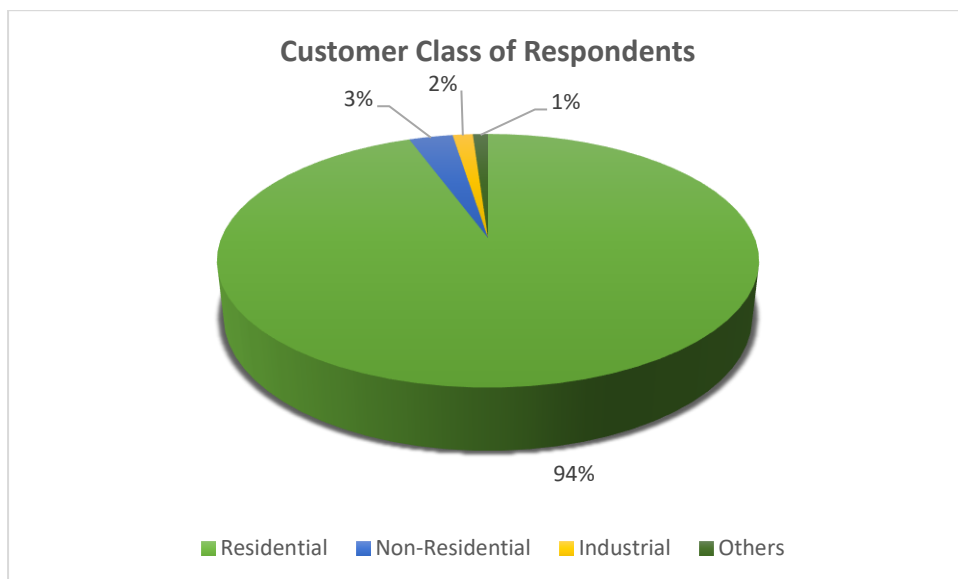
These two approaches were critical to ensuring access of a wider range of respondents to the survey, while improving the accuracy, speed and timeliness with which data was collected. As a result, respondents across all 16 regions of the country, including major stakeholders, classified as residential customers, non-residential customers, and industrial customers participated in the survey.

4.0 Findings

4.1 Customer Category

The survey sought to determine the customer class of respondents. As represented in Figure 1, majority of respondents were residential customers representing approximately 94% of the total population of the survey.

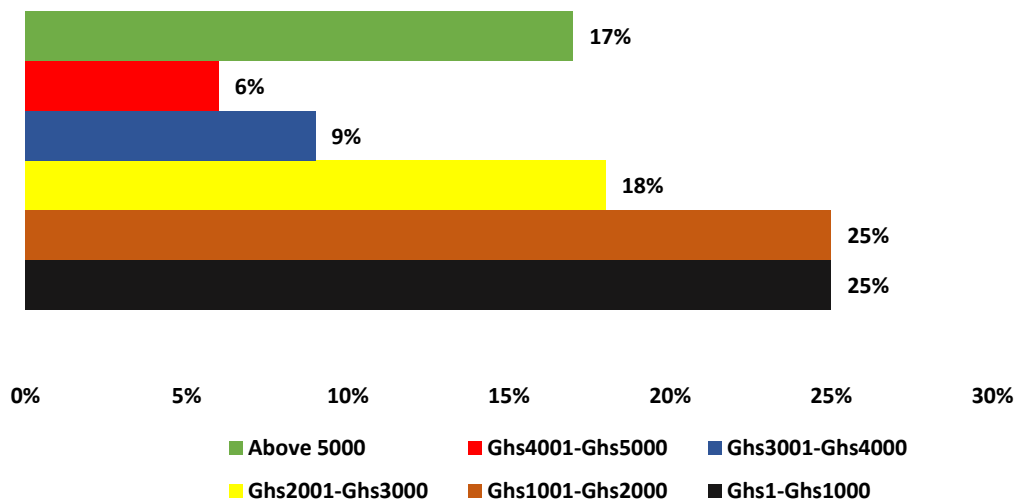
Figure 1: Customer Class of Respondents



4.2 Average Monthly Income of Respondents

Figure 2 presents the average monthly income of respondents of the survey. Out of the 851 respondents surveyed, only 17% earn incomes above Ghs5000 a month. Majority of respondents, comprising 25% earn monthly incomes of less than Ghs1000. The mean monthly income of respondents is however **Ghs2,484.3**.

Figure 2: Average Household Incomes of Respondents



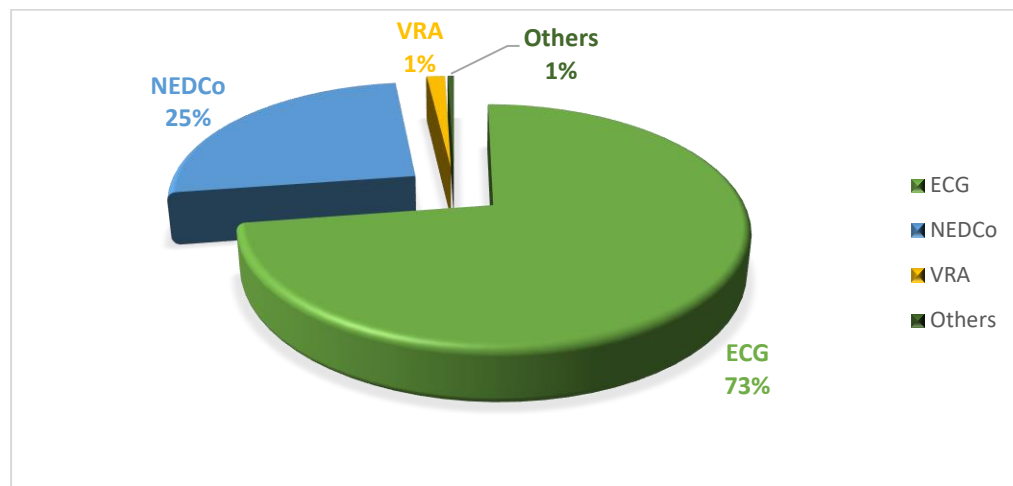
4.3 Customer Access to Utility Services

This section describes respondents’ access to the various utility services under consideration in this study (water and electricity).

4.3.1 Consumers Electricity Services Provider

Consumers obtain their power supply from different electricity utility providers including ECG, NEDCo, EPCL, and VRA. From Figure 3 below, ECG is the electricity service provider for most respondents (73%), followed by NEDCO (25%).

Figure 3: Respondents’ Power Supply Utility



4.4 Service Quality

This section of the report highlights the views of consumers, based on their experiences with the various utility companies over the past two years. In this section, consumers

provided their appraisal of the quality of services rendered by the power and water utility service providers (ECG, NEDCo and GWCL).

4.4.1 Consumer Appraisal of Electricity Services

Nine (9) key indicators were rated on a 5 Likert scale of 1 to 5, (where 1 is very poor, 2 is bad, 3 is unchanged, 4 is improved and 5 is good) with respect to customer appraisal of the quality of service provided by the utilities (see Table 1).

Table 1: Consumer Appraisal of Service Quality - Electricity

Electricity Service Criteria	Very Poor	Bad	Unchanged	Good	Improved
Billing System	21.5%	26.8%	23.1%	22.5%	6.1%
Complaint Response Time	31.2%	30.6%	18.5%	16.4%	3.3%
Complaint Resolution Procedure	26.7%	32.4%	23.0%	14.0%	3.8%
Accessibility of Service Provider	17.1%	28.1%	21.6%	28.9%	4.3%
Service Provider's Ability to Understand Customer Needs	21.6%	31.1%	24.7%	19.7%	2.9%
Availability of Power Supply	15.9%	23.6%	24.0%	30.2%	6.2%
Reliability of Power Supply	19.9%	27.5%	24.0%	22.9%	5.7%
Responsiveness to Customer Issues	18.2%	28.4%	27.5%	21.5%	4.4%
Flexibility in Bill Payment	18.2%	22.1%	27.0%	25.1%	7.5%

With respect to the billing system, only 6.1% of respondents rated the system as improved, whereas majority of respondents (26.8%) rated the system as bad. Similarly, only a few (3.3%) respondents rated the time of response to customer complaints as improved, whereas the majority (31.2%) indicated this has been very poor. The complaints resolution process has also been bad as indicated by 32.4% of respondents. In all, flexibility in bill payment, accessibility of service provider and availability of power supply were the best in terms of comparative rating.

4.4.2 Consumer Appraisal of Water Services

With respect to water service provision, ten (10) indicators were adopted for customers appraisal over the past two years as indicated in Table 2 below. A paltry 5.1% of respondents indicated an improvement in the billing system over the last two years, while majority of respondents (29.2%) indicated that, the system has remained the same over the period under consideration. Reliability of water supply and complaint response time had the worst customer rating among the ten (10) indicators for water supply. On the other hand, flexibility in bill payment had the best rating out of the 10 indicators for water supply.

Table 2: Consumer Appraisal of Service Quality - Water

Water Service Criteria	Very Poor	Bad	Unchanged	Good	Improved
Billing System	19.8%	25.7%	29.2%	20.2%	5.1%
Complaint Response Time	23.1%	30.9%	27.8%	15.8%	2.4%
Complaint Resolution Procedure	22.4%	31.9%	27.0%	15.7%	3.0%
Accessibility of Service Provider	19.8%	25.4%	27.5%	23.9%	3.5%
Service Provider's Ability to Understand Customer Needs	20.2%	29.3%	27.8%	19.7%	3.0%
Availability of Supply	21.4%	26.5%	27.4%	21.4%	3.4%
Reliability of Water Supply	27.6%	26.7%	25.2%	17.8%	2.7%
Quality of Water Supplied	16.2%	22.6%	31.3%	25.6%	4.4%
Responsiveness to Customer Issues	18.3%	28.0%	30.4%	20.4%	2.9%
Flexibility in Bill Payment	15.7%	19.3%	32.5%	25.7%	6.8%

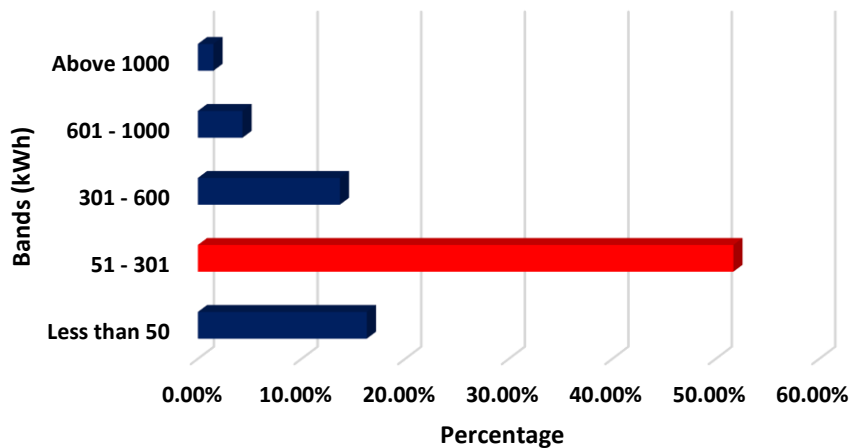
4.5 Utility Pricing

This section of the report assesses the various amounts respondents spend on the usage of both electricity and water services.

4.5.1 Electricity

Respondents were asked to indicate on average, how much electricity they consumed (kWh) on a monthly basis and the corresponding expenditure incurred on electricity consumption over the same period.

Figure 4: Average Monthly Electricity Consumption (in kWh)



As shown in Figure 4 above, majority of respondents, representing approximately 52% of the total survey population indicated they consumed between 51 – 300 kWh of electricity in a month. It was observed that 16.3% of respondents fell in the ‘lifeline’ category, consuming less than 50 kWh of electricity per month.

The data revealed that the aggregate mean cost of electricity consumption to customers in the survey is approximately Ghs1,476.7 with a minimum cost of Ghs10.00 and a maximum cost of Ghs1,160,000. Compared to the mean monthly income of Ghs2,484.3 of respondents, consumers expenditure on electricity constitutes approximately 59%. Researchers in the United States, estimate that household energy costs should be no more than 20% of housing costs. Thus, affordable household energy costs should be no more than 6% of total household income¹

The monthly mean cost for residential customers in the survey, however, stands at Ghs197.00 with a minimum amount of Ghs10.0 and maximum amount of Ghs2000.00. The average cost of electricity for non-residential customers according to data captured

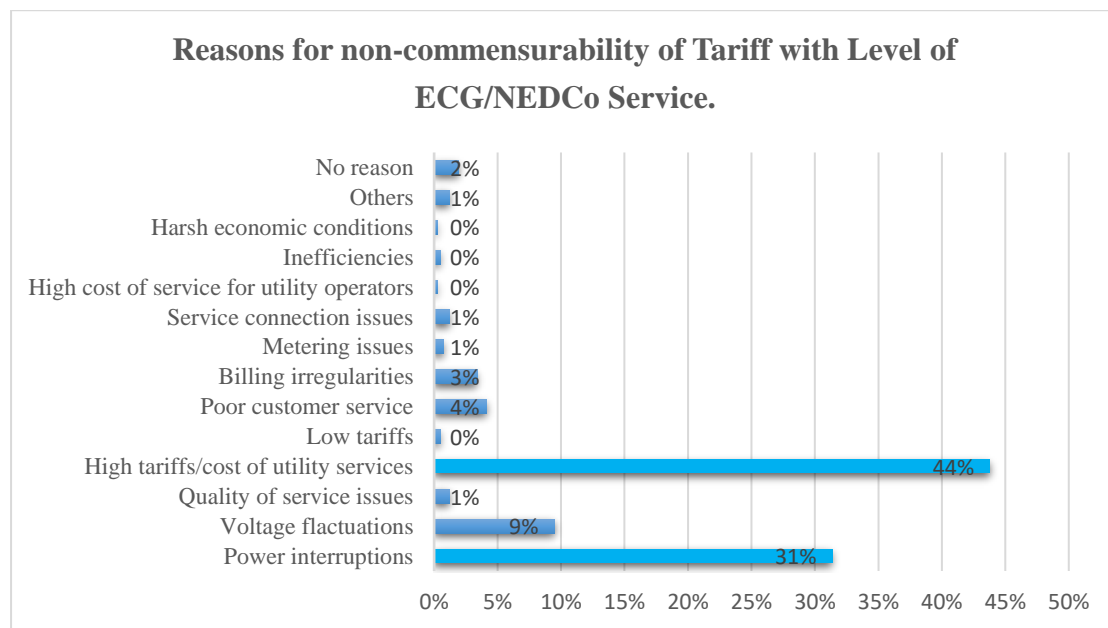
¹ <https://www.aceee.org>; September 2020

“Supply is not consistent and there are phases that go on and off whenever they feel like. I need my power on as long as I pay for that service and if it should go off for any reason, I should be given prior notice” Residential Customer

Other justifications given were due to voltage fluctuations, poor customer service delivery, inefficiencies, among others as described in Figure 11.

“When there's an issue and you call, you end up looking for an electrician to solve the issue for you.” Non-Residential Consumer

Figure 6: Customer Justifications on Commensurability of Electricity Tariffs



4.5.2 Water

Respondents were asked to provide their monthly expenditure on water services in a month. On average, 50% of respondents sampled spend between Ghs51 and Ghs300 of their incomes on water. Cumulatively, only 1% of respondents spend above Ghs600 of their incomes on water (see Figure 7).

Further analysis from Table 4 below indicates that, the aggregate mean expenditure for all respondents is **Ghs1,719**, with a maximum amount of Ghs450, 000 and minimum amount of Ghs5/month. The minimum amount spent on water by residential customers sampled is Ghs5 while that of non-residential customers is Ghs500.

Figure 8 shows a wide distribution of the amount customers are paying for water in a month. Similar to that of their electricity expenditure, most respondents spend about Ghs100 on water service in a month.

Figure 7: Average Monthly Expenditure on Water

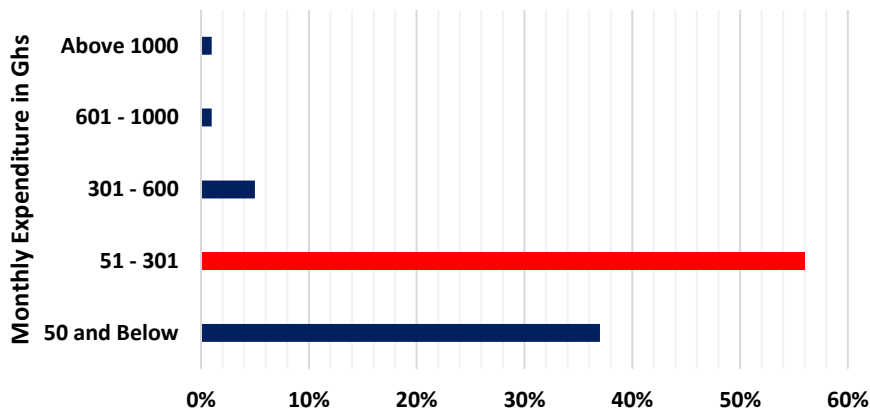
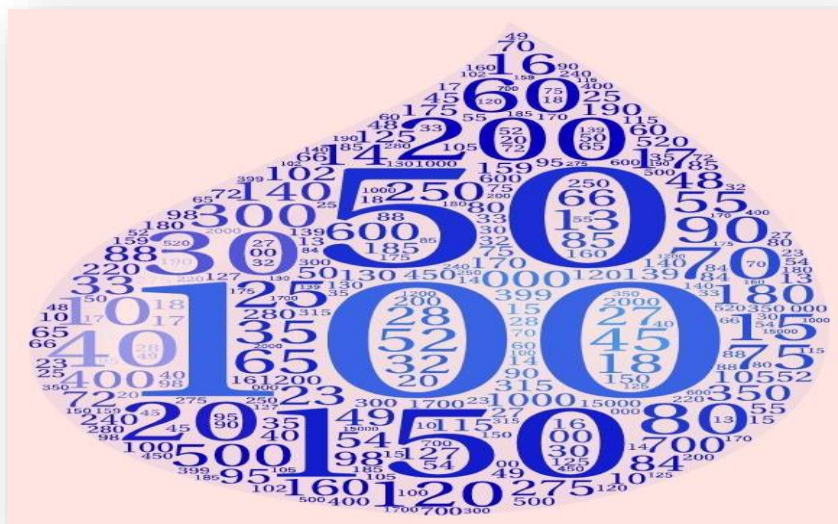


Table 4: Cost of Water to Customers

Customer Class	Minimum Cost (Ghc)	Maximum Cost (Ghc)	Mean/Average Cost (Ghc)
Residential Customers	5	500	102.1
Non-Residential Customers	500	450,000	40,122
All Customers	5	450,000	1,719

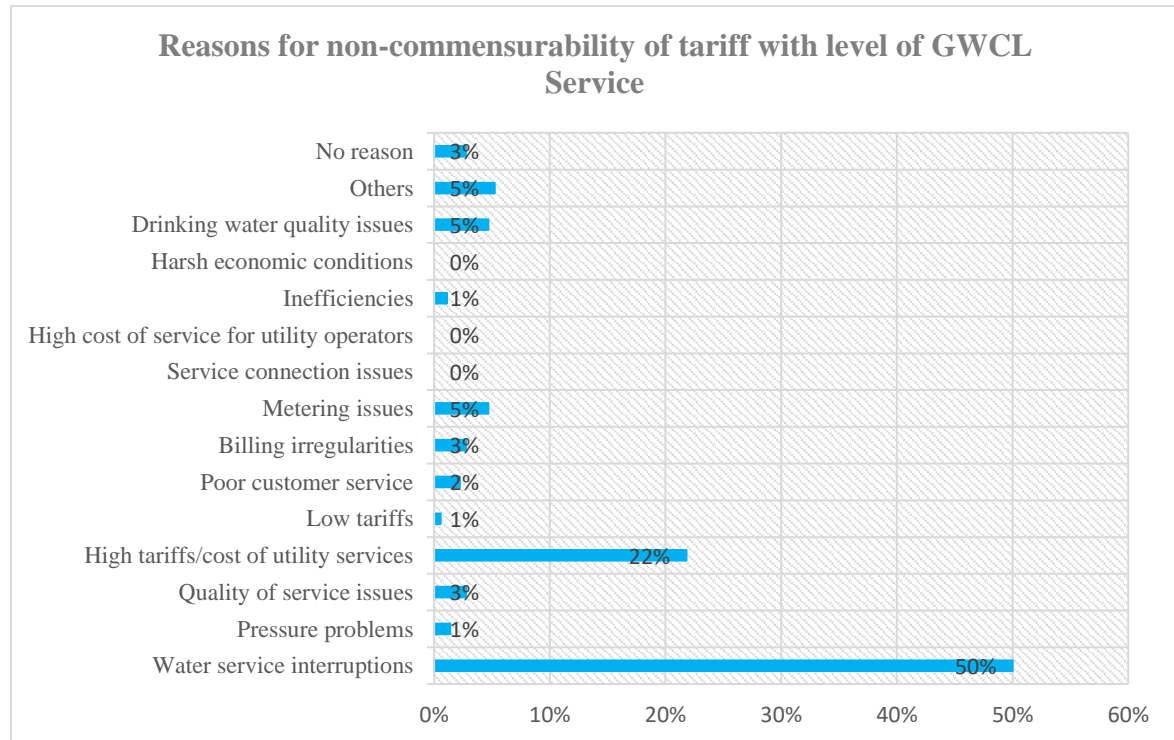
Figure 8: Word Cloud on Consumers' Average Monthly Expenditure on Water



Respondents similarly expressed several justifications to the commensurability or otherwise of water tariffs and service provision. Frequent water supply interruptions (50%) and high utility costs (22%) were cited by most respondents as reasons why

water tariff rates paid are not commensurate with service received. Other justifications are provided in Figure 9.

Figure 9: Customer Justification on Commensurability of Water Tariffs



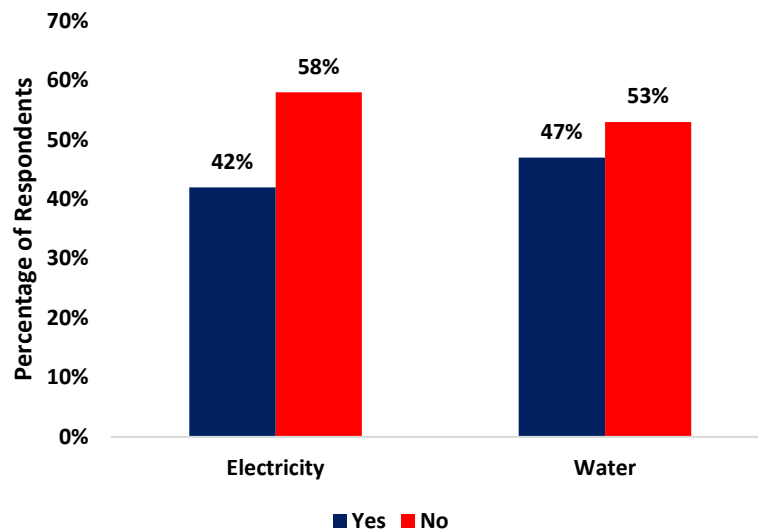
4.6 Customer Expectation on Utility Tariffs

4.6.1 Customer Expectation of Utility Price Change

In view of the ongoing engagements regarding tariff review and the public reactions around the proposed tariffs by the utilities, this study also sought to gauge the public expectation for the tariff review process.

As shown in Figure 10, over half of respondents do not expect changes in electricity (58%) and water tariffs (53%).

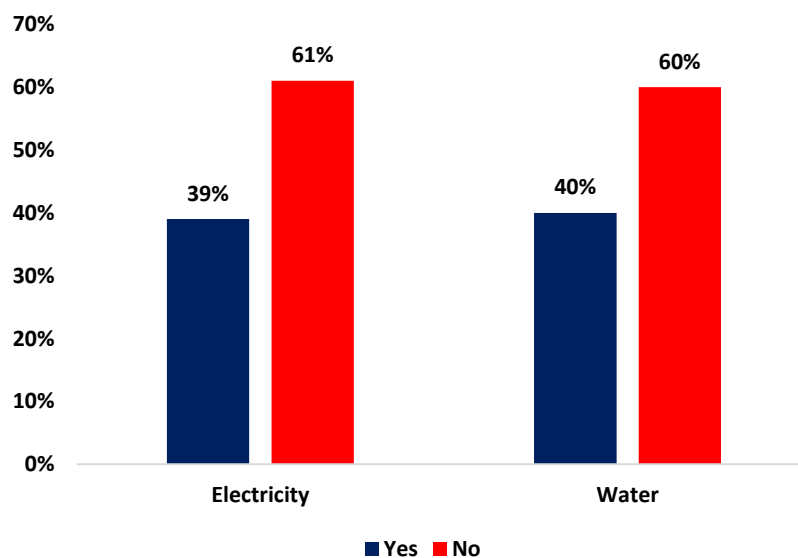
Figure 10: Consumer Expectation of Price Change



4.6.2 Customer Willingness to Pay more for Utilities

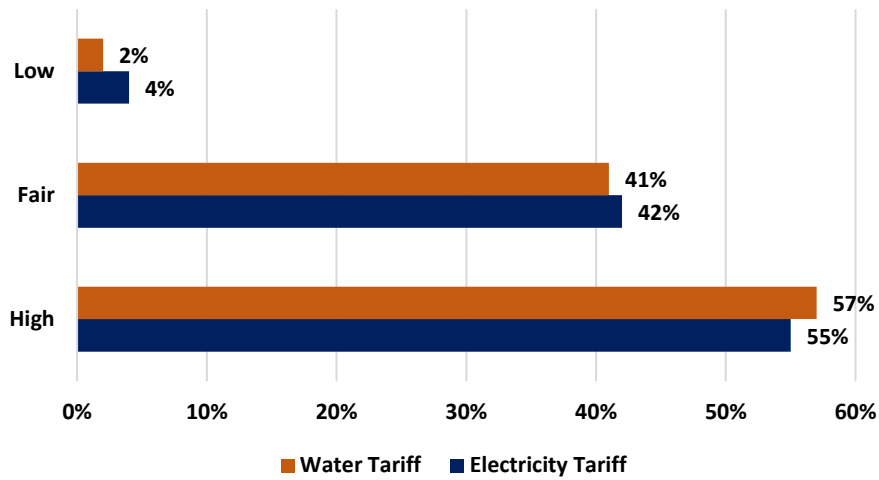
Customers were asked to indicate their willingness to pay more for the supply of water and electricity service. From Figure 11, over 60% of respondents are reluctant to pay more for electricity (61%) and water (60%) services provision.

Figure 11: Respondents Willingness to Pay for Quality Utility Service



Most respondents further indicated that their electricity and water bills over the past two years have been high. From Figure 12, these respondents represent over 50% of the sampled respondents. A reasonable number of respondents however rated the current utility tariffs as fair.

Figure 12: Customer Rating of Utility Tariffs



4.6.3 Amount Customers Are Willing to Pay for Utility Service Provision

Regarding how much customers consider a realistic price for their use of electricity and water, about 70.5% of respondents indicated their willingness to pay for between Ghs51 and Ghs250 per month for utility service provision (see Figure 13 below).

Figure 13: Residential Customers Preferred Monthly Charges for Electricity/Water Services

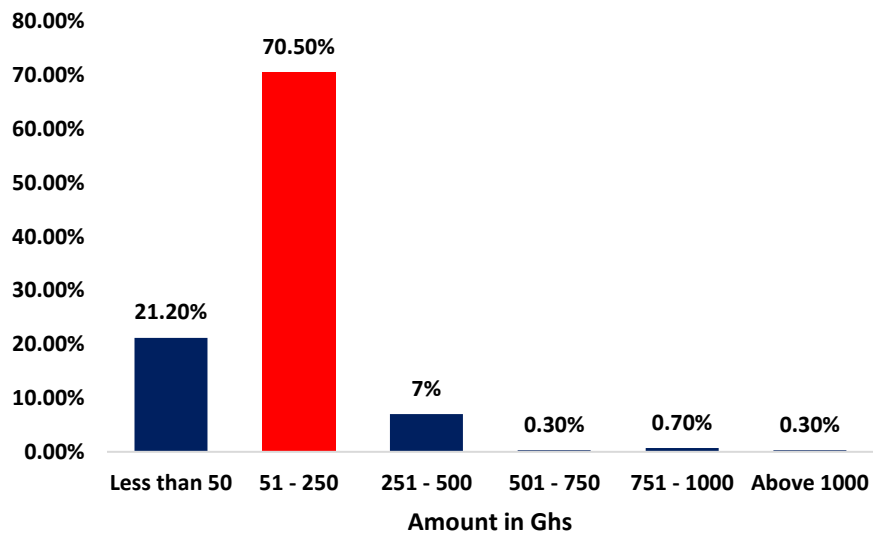


Table 5: Conditions for Tariff Adjustment

Conditions for Consumers' Acceptance of Tariff Change	% of Responses
<i>Improved Quality of Service Delivery</i>	47%
<i>Efficiency of Operations</i>	6%
<i>Improvement in the General Income & Standard of Living</i>	14%
<i>Improved Customer Care</i>	3%
<i>Reduction in Losses</i>	4%
<i>Debt Recovery</i>	4%
<i>Improved National Economic Situation</i>	7%
<i>Improved Business Environment</i>	0%
<i>None / No Condition</i>	13%
<i>Changes in Prices of Input Materials</i>	3%

Respondents further indicated the conditions under which they would accept a tariff adjustment. From Table 5 above, the responses predominantly centered on improved quality of service of the utilities (47%) followed by improvements in income levels and standard of living (14%).

5.0 Recommendations

The findings of the survey have brought to the fore, consumers perspectives on the state of utility service provision; quality of service issues; consumers expectations of the upcoming utility tariff adjustment; and the expected post-tariff phase of service delivery. Based on these, the study makes the following recommendations;

- The Commission should consider the ability and willingness of consumers to pay for utility services in the multi-year tariff regime.
- In addition to the proposals submitted by the utilities and the ongoing public hearings, the Commission should assess customers' expectations of the tariff vis-a-vis the expected price adjustments. This could provide a fair representation of the interest of customers as major stakeholders in the tariff decision-making process of the Commission.