

Statutory Instrument No. 20 of 2019

**THE SIERRA LEONE ELECTRICITY AND WATER REGULATORY
COMMISSION**

(ACT NO 13 OF 2011)

THE WATER (QUALITY OF SUPPLY) REGULATIONS, 2019

In exercise of the powers conferred upon it by section 66 of the Sierra Leone Electricity and Water Regulatory Commission Act, 2011 the Commission hereby makes these regulations-

PART I—PRELIMINARY

Interpretation 1. In these regulations unless the context otherwise requires-

“Act” means the Sierra Leone Electricity and Water Regulatory Commission Act, No. 13 of 2011;

“Commission” means the Sierra Leone Electricity and Water Regulatory Commission.

“consumer service agreement” means an agreement between a distribution licensee and consumers on the duties and responsibilities of the licensee and consumer;

“consumer’s service pipe” means any pipe, valve, or other apparatus used for supplying water from a main to any premises or part of any such pipe, and include stopcocks and other necessary fittings;

“Key Performance Indicators” or KPIs mean a set of measurements and calculations, which describe or characterise the state of the distribution network, the quality of service rendered by a licensee, the continuity of service, the quality of the water delivered to consumers, and other measures of performance of the delivery of water to consumers.

“licensee” means a person engaged in harnessing, abstraction, treatment, pumping, transportation, and distribution of water to consumers;

“mains” means a pipe transferred to or laid by the licensee for the purpose of giving a general supply of water as distinct from a supply to individual consumers, and includes any apparatus used in connection with such a pipe;

“meter” means any appliance or device supplied by the licensee to measure, ascertain or regulate the amount of water taken or used from the licensee’s supply;

“point of service” means the licensee’s pipe and appurtenances which connect any licensee’s service pipe with the inlet connection of a consumer’s service pipe at the consumer’s property line, or elsewhere on the consumer’s property if provided for in a user’s agreement;

“potable water” means water supplied that is fit for human consumption;

“potential consumer” means an applicant who applies for a water service connection with the licensee, and where the application process is not completed;

“SLSB” means the Sierra Leone Standards Bureau;

“WHO” means the World Health Organization;

“WHO Drinking Water Standards” means Drinking Water Quality Standards recommended by the World Health Organisation and attached to this regulation in Schedule 2.

Application 2 (1)These regulations shall apply to a person licensed to harness, abstract, treat, transport and distribute water to consumers.

(2)Where there is a conflict between these regulations and any other statutory instruments made under the Act these regulations shall prevail.

PART II—SERVICE AGREEMENT AND OTHER RELATED PROVISIONS

Service Agreements

3(1) Every licensee shall submit the following documents to the Commission for its approval before it is finalized –

- a) the terms and conditions for the connection between installations of the licensee and those of other licensees and consumers; and
- b) the terms of business relations with the other licensees.

Point of Service

4. A licensee shall own and maintain all facilities located between the mains and the consumer's point of service.

Reliability of Supply

5 (1) A licensee shall make all reasonable efforts to prevent interruption of service to other licensees and consumers.

(2) When an interruption occurs, the licensee shall seek to re-establish service within the shortest possible time consistent with prudent operating principles, so that the smallest number of consumers is affected for the shortest duration of time.

(3) Whenever a licensee is to interrupt or curtail the supply to another licensee or a consumer's premises in order to undertake planned maintenance to its equipment, the licensee shall provide the licensee or consumer with a minimum of 5 days notice of the planned interruption or curtailment.

(4) A licensee shall, prior to any planned interruption or curtailment, supply the following information to the Commission-

- (a) reason for interruption or curtailment of service;
- (b) date of interruption or curtailment is to begin;
- (c) duration of interruption or curtailment, and projected correction programs with time parameters for completion.

**Emergency Response
Plan**

6(1) A licensee shall make its best efforts to meet emergencies resulting from a planned or unplanned failure of service, and shall—

- (a) issue instructions to its employees covering procedures to be followed in the case of an emergency in order to prevent or mitigate the interruptions or impairment of service;
- (b) have public notice templates prepared in advance of an emergency, and use them in response to an emergency to achieve efficient and timely response;
- (c) notify as soon as possible the Commission and consumers affected by the emergency;
- (d) coordinate with state and local emergency management agencies, as needed, to use any emergency alert system available for qualifying situations;
- (e) ensure that a knowledgeable contact person is stationed onsite during the emergency, to communicate to the public and media on behalf of the licensee;
- (f) use its best efforts to ensure that adequate quantities of alternative supplies of water essential for domestic use are made available at predetermined locations proximate to consumers affected by the emergency.

6(2) A licensee shall draft an emergency response plan detailing how to meet emergencies.

**Standard
Pressure**

7(1)A licensee shall maintain the pressure of water delivered to consumers and other licensee within the prescribed standards which shall include all levels of pressure plus or minus a [50%] deviation from the standard pressure applicable for each class of consumer.

(2)The licensee shall meet the standard pressure required for each consumer class as determined by the Commission and published in the Gazette.

PART III—QUALITY OF SUPPLY AND OTHER RELATED PROVISIONS

Quality of water 8.A licensee shall ensure that all water it supplies to another licensee or consumers shall be pure, wholesome, potable and in no way dangerous to health and meets the WHO Drinking Water Standards as specified in Schedule 2.

Monit-Oring 9.The Commission shall monitor the quality of supply delivered by a licensee with respect to the reliability, wholesomeness of water or water quality and effectiveness of the maintenance practices employed by the licensee.

Demand Side 10(1)The licensee shall ensure that each consumer within its limit of supply gets enough water in liters per day.

(2)The Licencee shall within its limit of supply use its best endeavors to increase per capita consumption over time by the following activities:

- (a) enhancing water supply;
- (b) reduction of unaccounted for water;
- (c) implementation of water conservation measures;
- (d) public education and awareness building;
- (e) conduct consumer surveys;
- (f) implementation of a full metering policy for all consumers.

Reporting 11(1)A licensee shall keep a complete record and report of its activities which shall include the following -

(a) all interruptions affecting parts of the water supply system or any of its major divisions that lasts more than 24 hours, including:

(i)details of record that show the causes of interruption,

- (ii) date, time, duration,
 - (iii) number of customers affected,
 - (iv) steps taken to remedy, and
 - (v) steps taken to prevent recurrence.
- (b) data required to calculate and verify the Key Performance Indicators, as specified in Schedule 1 of these Regulations.
- (c) every major incident caused as a result of poor water quality or low pressure;
- (d) every major study performed in regards to improvement of water service quality.

(2) A Licensee shall issue quarterly reports to the Commission, containing—

- (a) the aggregate version of the records required under the Act and these Regulations;
- (b) the record of level of compliance with each Key Performance Indicator, supported by sufficient data and appropriate methodology.

(3) The Commission may prescribe additional content and format of the reports required under these Regulations.

PART IV—MISCELLANEOUS

Confidentiality 12. A licensee to whom confidential information is provided shall-

- (a) not divulge or give access to that confidential information to any person except as permitted or obliged under these Regulations or any other law; and
- (b) only use or reproduce the confidential information for the purposes for which it was provided under the Regulations or any other law, or for a purpose consented to by the person making the disclosure

Reports 13 The licensee shall submit quarterly reports to the Commission as set out in Schedule 3.

Investigation 14. The Commission may monitor or investigate the quality of supply measurement and shall report and record procedures of a licensee.

1. Auditing Data

The Commission may audit some or all of the quality of supply data retained by a licensee and may vary the regularity and frequency of the audits, as well as the licensee's service parameters, reporting areas and reporting periods that require audits.

2. Enforcement

The Commission shall enforce these Regulations in accordance with the Enforcement of Regulations of 2019.

3. Amendment or repeal of Regulations

The Commission may amend or repeal the provisions of these Regulation at any time and may, from time to time, amend the list of Key Performance Indicators contained in Schedule 1, or the targets for such indicators.

4. Reviews and Appeals

- (1) Any person who is aggrieved by a decision of the Commission under these Regulations may apply in writing to the Commission for a review.
- (2) Any order, or decision of the Commission made under these Regulations is subject to review by the committee established under section 21(2)(a) of the Act.

SCHEDULE 1 - Key Performance Indicators

The Commission has approved the following Key Performance Indicators for the distribution and supply of water and the utilities involved in the distribution and supply of water. The Key Performance Indicators are measured on a quarterly basis and shall be reported by each licensee as shall be applicable.

Table 1: Summary of Key Performance Indicators for Water

Water KPI (IBNET Ref.)		Unit	Frequency
WQ1	Water Coverage Ratio	%	Annual
WQ2	Household Connections Ratio	%	
WQ3	Public Water Points Ratio	%	
WQ4	Water Production	Litres per person/day	
WQ5	Water Consumption		
WQ6	Non-Revenue Water (NRW)	%	
WQ7	Metering ratio	%	
WQ8	Continuity of Services	Hours/day	
WQ9	Water quality compliance (Chlorine Residuals)	%	
WQ10	Water quality compliance (E. Coli)	%	
WQ11	Revenue collection ratio	%	

WQ1: Water Coverage

The proportion of population served with water is the percentage of the total population living in the service area that is served through household connections and public stand posts. The number of household connections shall be multiplied by the average number of members living in a household. The number of public stand posts and kiosks shall be multiplied by the average number of the population served by one of them.

$$\text{Proportion of population served} = \frac{(HC \times HS) + (PK \times PS)}{TP}$$

Where:

- HC is the total number of household connections in the service area;
- HS is the average household size in the service area;

- PK is the total number of public stand posts and kiosks in the service area;
- PS is the average number of people served by a stand post or kiosk; and
- TP is the total population of the service area.

WQ2: Household Connection Ratio

The proportion of population served with water is the percentage of the total population living in the service area that is served through household connections. The number of household connections shall be multiplied by the average number of members living in a household.

$$\textit{Proportion of population served} = \frac{(HC \times HS)}{TP}$$

Where:

- HC is the total number of household connections in the service area;
- HS is the average household size in the service area;
- TP is the total population of the service area.

WQ3: Public Water Point Ratio

The proportion of population served with water is the percentage of the total population living in the service area that is served through public stand posts and kiosk. The number of public stand posts and kiosks shall be multiplied by the average number of the population served by one of them.

$$\textit{Proportion of population served} = \frac{(PK \times PS)}{TP}$$

Where:

- PK is the total number of public stand posts and kiosks in the service area;
- PS is the average number of people served by a stand post or kiosk; and
- TP is the total population of the service area.

WQ4: Water Production

Total annual water supplied by Licencee to the distribution system (including purchased water, if any) expressed by population served per day

$$\text{Water Production} = \frac{TAWP}{TP \times CD \times 1000}$$

Where:

- TAWP is the annual potable water produced at the Licencees Treatment Works, distributed to the service area in cubic meters
- TP is the total population of the service area.
- CD is the annual calendar days (365 days/year)

SCHEDULE 2 - WHO Guideline Values for Potable Water

The Commission has approved the following chemical & physical quality parameters for potable water to be distributed by licensee to the Customer. The chemical & physical parameters are measured daily at defined water sample network within the distribution system. Analytical results must be reported to the commission on a monthly base.

No.:	Chemical & Physical Characteristics	Units	WHO Guidelines Values	Frequency
1	Colour	Hazen Unit	< 15	Monthly
2	Turbidity	NTU	< 5	Monthly
3	pH Value	@	@	Monthly
4	Conductivity	µs/cm	@	Monthly
5	Taste	unobjectionable	unobjectionable	Monthly
6	Odour	unobjectionable	unobjectionable	Monthly
7	Nitrate	mg/l	< 50	Monthly
8	Residual Chlorine	mg/l	< 5	Monthly
9	Total Dissolved Solid	mg/l	< 1000	Monthly
10	Total Alkalinity	mg/l	@	Monthly
11	Total Hardness	mg/l	@	Monthly
12	Chloride	mg/l	< 250	Monthly
13	Sulphate	mg/l	< 250	Monthly
14	Phosphate	mg/l	@	Monthly
15	Silica	mg/l	@	Monthly
16	Iron	mg/l	< 0.3	Monthly
17	Manganese	mg/l	< 0.4	Monthly
18	Copper	mg/l	< 2	Monthly
19	Aluminium	mg/l	< 0.2	Monthly
20	Bacteriological Characteristics	(cfu/100ml, 35 °C, 24hours)	< 1	Monthly

	E.Coli			
@	No		guideline	Value

SCHEDULE 3 - Reporting Guidelines for KPIs

The licensee is required to report on the quality of supply provided to water consumers. In that regard, the following format shall be used for the reporting.

(1)	(2)	(3)	(4)	(5)
Key Performance Indicator	Minimum Standard	Total Number	Number (Standard Achieved)	% of Total (Success Rate)
<p>NOTE 1: In column 3, list for each status of the distribution network or consumer classification shown in column 1, the total number for the year.</p> <p>NOTE 2: In column 4, list the total number that were within the period prescribed as the minimum standard in column 2.</p> <p>NOTE 3: The value in column 5 is the value in column 4 divided by the value in column 3 multiplied by 100.</p>				

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Chairman, Sierra Leone Electricity and Water Regulatory Commission

Date of Gazette notification:

Date of entry into force: