

RULES REGULATING  
THE OPERATIONS  
AND STANDARD  
OF SERVICE  
OF  
ELECTRIC LIGHT AND  
POWER COMPANIES  
IN  
NORTH CAROLINA

ISSUED BY  
STATE OF NORTH CAROLINA  
UTILITIES COMMISSIONER  
RALEIGH, N. C.

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# Rules Regulating The Operations and Standard of Service of Electric Light and Power Companies in North Carolina

## GENERAL PROVISIONS

### RULE 1. AUTHORIZATION OF RULES.

Section 1054, Sub-Section I, Consolidated Statutes 1919 provides that the Utilities Commissioner shall be empowered to establish rules and fix standards for electric service as follows:

"The Utilities Commissioner shall make reasonable and just rules and regulations to prevent discrimination in the transportation of freight or passengers, or in furnishing electricity, electric light, current, power or gas."

In accordance with the above provision, the Utilities Commissioner has adopted the following rules and affixed the following standards for electric service, to become effective the first day of January, 1934. All previous rules or standards conflicting with those contained herein are hereby superseded.

The adoption of these rules shall in no way preclude the Utilities Commissioner from altering or amending them in whole or in part, or from requiring any other or additional service, equipment, facility, or standard, either upon complaint or upon his own motion, or upon the application of any utility. Furthermore, these rules shall not in any way relieve any utility from any of its duties under the laws of this State.

### RULE 2. APPLICATION OF RULES.

(a) These rules shall apply to any person, firm, or corporation (except municipalities, or agents thereof) which is now or may hereafter become engaged as a public utility in the business of furnishing electric current for domestic, commercial or industrial consumers within the State of North Carolina.

(b) The rules are intended to define good practice which can normally be expected. They are intended to insure adequate service and to protect the public from unfair practices and the utilities

from unreasonable demands. The cooperation of the utilities with the Commissioner is presupposed.

(c) In any case where compliance with any of these rules introduces unusual difficulty, such rule may be temporarily waived by the Commissioner upon application of the utility. If in such case compliance with the rule would cost more than the results of such compliance are worth to the public and consumers of electric current, it may be permanently set aside by the Commissioner.

### **RULE 3. DEFINITIONS.**

In the interpretation of these rules the word "Commissioner" shall be taken to mean the North Carolina Utilities Commissioner; the word "utility" shall be taken to mean any person, firm or corporation (except a municipality or agent thereof) engaged in the business of supplying electric current to domestic, commercial, or industrial users within this State; and the word "Consumer" shall be taken to mean any person, firm, corporation, municipality, or other political subdivision of the State supplied by any such utility.

### **RULE 4. RECORDS.**

(a) A complete record shall be kept of all tests and inspections required under these rules as to the quality or condition of service which is rendered.

(b) All records of tests shall contain complete information concerning the test, including the date, hour, and place where the test was made; the name of the person making the test, and the result.

All records required by these rules shall be preserved by the utility for at least one year after they are made. Such records shall be kept within the State at the office or offices of the utility, and shall be open for examination by the Commissioner or his representatives at all reasonable hours.

### **RULE 5. REPORTS TO COMMISSIONER.**

Each utility shall, at such times and in such form as the Commissioner shall prescribe, report to the Commissioner the results of all tests required to be made or the information contained in any records required to be kept by the utility.

## **GENERAL SERVICE PROVISIONS**

### **RULE 6. INSPECTION OF PLANT AND EQUIPMENT.**

(a) Each utility shall maintain its plant, distribution system and facilities at all times in proper condition for use in rendering safe and adequate service.

(b) Each utility shall, upon request of the Commissioner, file with him a statement regarding the condition and adequacy of its plant, equipment, facilities and service in such form as he may require.

### **RULE 7. COMPLAINTS.**

Each utility shall make a full and prompt investigation of all service complaints made to it by its consumers, either directly or through the Commissioner. It shall keep a record of all such complaints received which record shall show the name and address of the complainant, the date and character of the complaint and the adjustment or disposal made thereof. Such record shall be kept for a period of one year.

### **RULE 8. INFORMATION FOR CONSUMERS.**

Each utility shall upon request inform its consumers as to the method of reading meters. It is recommended that an exhibition meter be kept on display in each office maintained by a utility.

### **RULE 9. METER READINGS AND BILL FORMS.**

Bills shall be rendered for metered service periodically, and shall show the readings of the meter at the beginning and end of the period for which the bill is rendered, the number and kinds of units of service supplied, and the date of the last meter reading.

Each bill shall bear upon its face the date when the bill was mailed, or left at the premises of the consumer, or the latest date on which it may be paid without loss of discount or incurring of penalty.

## **METERS, METER TESTS AND RECORDS**

### **RULE 10. LOCATION.**

(a) No consumer's meter shall be installed in any location where it may be unreasonably exposed to heat, cold, dampness or other cause of damage, or in any unduly dirty or inaccessible location.

(b) Meters should not be placed in coal or wood bins or on partitions forming such bins, or on any unstable supports subject to vibration.

(c) Meters should be easily accessible for reading, testing, and making necessary adjustments and repairs. When several meters are placed on one meter board the distance between centers should not, where practicable, be less than 15 inches, and each "house" loop should be tagged or marked to indicate the circuit metered.

(d) Each customer shall provide a suitable and convenient place for the location of meters, where they will be readily accessible at any reasonable hour for the purpose of reading, testing, repairing, etc., and such other appliances owned by the utility and placed on the premises of the consumer shall be so placed as to be readily accessible at such times as are necessary, and the authorized agent of the utility shall have authority to visit such meters and appurtenances at such times as are necessary in the conduct of the business of the utility.

#### **RULE 11. TESTING FACILITIES.**

(a) Each utility furnishing metered electric service shall, unless specifically excused by the Commissioner, provide and have available such meter laboratory, standard meters, instruments and facilities as may be necessary to make the tests required by these rules, together with such portable indicating electrical testing instruments, watt hour meters, and facilities of suitable type and range for testing service watt hour meters, voltmeters and other electrical equipment, used in its operations, as may be deemed necessary and satisfactory to the Commissioner.

(b) All portable indicating electrical testing instruments such as voltmeters, ammeters and watt hour meters, when in regular use for testing purposes, shall be checked against suitable reference standards periodically, and with such frequency as to insure their accuracy whenever used in testing service meters of the utility.

#### **RULE 12. METHOD OF DETERMINING AVERAGE ERROR OF METERS.**

In determining the average error of a watt-hour meter, the following procedure is recommended:

(a) All meters whenever possible, shall be tested at the following three loads: one-tenth of the current rating of the meter, normal load, and at rating.

(b) The average of these tests obtained by multiplying the results of the test at normal load by 3 (three) adding the results of the tests at one-tenth rating and at the current rating, and dividing the total by five, shall be deemed the condition of the meter.

(c) In an installation where it is impossible to obtain a load of ten percent (10%) of the rating, or one hundred per cent (100%) of the rating of the meter, tests shall be made at the nearest obtainable loads to ten per cent (10%) and one hundred per cent (100%) of the rating of the meter and the values given in the ratios as stated above.

To determine normal load, use the percentage of connected load indicated below for the class of service metered.

Class of Service Metered	Percentage of connected load
Residence and Apartment Lighting	40 %
Elevator Service	40 %
Factories (Individual Drive) Churches and offices	45 %
Factories (Shaft Drive), Theatres, Clubs, Entrances, Hallways, and General Store Lighting	60 %
Restaurants, Pumps, Air Compressors, Ice Machines and Moving Picture Theatres	70 %
Signs and Window Lighting and Blowers	100 %

When a meter is connected to an installation consisting of two or more of the above classes of load, the normal load would be the sum of the normal loads for each class.

#### **RULE 13. METER ACCURACY.**

(a) Creeping. No watt hour meter which registers on "no load" when the applied voltage is less than one hundred and ten per cent (110%) of standard service voltage shall be placed in service or allowed to remain in service.

(b) Initial Accuracy Requirements. No watt hour meter shall be placed in service which is any way mechanically defective, or which has incorrect constants, nor shall any watt hour meter be maintained in service which is not adjusted to meet the following requirements:

- Average error not over 2% plus or minus;
- Error at heavy load not over 2% plus or minus;
- Error at light load not over 4% plus or minus;

(c) Adjustment after Test. Whenever a test made by the utility or by the Commissioner on a service watt hour meter connected in its permanent position in place of service shows that the average error is greater than that specified above, the meter shall be adjusted to bring the average error within the specified limits.

(d) Allowable Error. A service watt hour meter having an average error of not more than 4% plus

or minus, may be considered as correct, and no adjustment of charges shall be entailed by such an error.

**RULE 14. PERIODIC TESTS OF METERS.**

Each watt hour meter shall be tested according to the following schedule, while connected, if practical, in its permanent position in place of service;

(a) Two and three wire commutating type and mercury type meters, up to and including 50 amperes rated capacity of meter element shall be tested at least once every 18 months.

(b) Two and three wire commutating type and mercury type meters of over 50 amperes rated capacity of meter element, shall be tested at least once every 12 months.

(c) Two and three wire single phase induction type meters, up to and including 25 amperes rated capacity of meter element, shall be tested at least once every 60 months.

(d) Two and three wire single phase induction type meters of over 25 amperes rated capacity of meter element, shall be tested at least every 60 months.

(e) Self contained polyphase meters, up to and including 50 K.W. rated capacity, shall be tested at least once every 36 months.

(f) Self contained polyphase meters of over 50 K.W. rated capacity, shall be tested at least once every 36 months.

(g) Polyphase meters, connected through current transformers or current and potential transformers, to circuits up to and including 50 K.W. rated capacity, shall be tested at least once every 6 months.

(h) Polyphase meters, connected through current transformers or current and potential transformers, to circuits of over 50 K.W. rated capacity, shall be tested at least once every 6 months.

**RULE 15. METER TESTING ON REQUEST OF CONSUMERS.**

(a) Each utility shall, at any time (when requested in writing by a consumer) upon reasonable notice, test the accuracy of the meter in use by him.

No deposit or payment shall be required from the consumer for such meter test except when a consumer requests a meter test within six months after date of the installation or the last previous test of this meter, in which case he shall be required by the utility to deposit with it, to cover the reasonable cost of such test, an amount not to exceed the following:

- (1) For direct current and single phase meters operating on 600 volts or less, up to and including 25 amperes rated capacity of the meter element ----- \$ 1.50
- (2) For each additional 50 amperes or fraction thereof ----- .50
- (3) For single phase meters above 600 volts, and for polyphase meters, with or without instrument transformers, up to and including 25 K.W. rated capacity of the circuit\_ 12.50
- (4) For each additional 25 K.W. rated capacity or fraction thereof----- 2.50

Special rates for meters not included in above classifications or so located that the cost is out of proportion to the fee specified, may be approved by the Commissioner upon application and upon receipt of complete specifications.

(b) The amount so deposited with the utility shall be refunded or credited to the consumer, (as a part of the settlement in the case of a disputed account) if the meter is found, when tested, to register more than 4% fast, otherwise the deposit shall be retained by the utility.

(c) The consumer shall, if he so requests, be present when the utility conducts the test on his meter, or, if he desires, may provide (at his expense) an expert or other representative appointed by him.

(d) A report giving the name of the consumer requesting the test, the date of the request, the location of the premises where the meter has been installed, the type, make, size and serial number of the meter, the date of removal, the date tested, and the result of the test, shall be supplied to such consumers within a reasonable time after the completion of the test

**RULE 16. ADJUSTMENT OF BILLS FOR METER ERROR.**

(a) Fast meters. If on test of any electric meter, whether at the request of a consumer or not, it is found to be more than 4% fast, the utility shall refund to the consumer such percentage of the amount of his bills for the period of 60 days, just previous to the removal of such meter from service, or, for the time the meter was in service, not exceeding 60 days, as the meter shall have been shown to be in error by such test in excess of 4%. Provided, however, that if the error was due to some cause, the date of which can be fixed, and

which date is within the 60 days' period, herein mentioned, the overcharge shall be computed back to, but not beyond, such time. No part of any minimum service charge shall be refunded.

(b) Slow Meters. If on test of any electric meter made by the utility under Rules 14 and 15, whether at the request of a consumer or not, it be found more than 4% slow, the utility may collect from the consumer the amount estimated to be due from the consumer for electricity used but not charged for in bills rendered, not to exceed the sixty days previous to removal of the meter.

## OPERATION

### RULE 17. STANDARD FREQUENCY.

Each utility supplying alternating current, shall adopt a standard frequency, the suitability of which may be determined by the Commissioner, and shall maintain this frequency within 2% plus or minus of standard at all times during which service is supplied; provided, however, that momentary variations of frequency of more than 5%, which are clearly due to no lack of proper equipment or reasonable care on the part of the utility, shall not be construed as a violation of this rule.

### RULE 18. STANDARD VOLTAGE.

Each utility shall adopt standard average voltages for its different classes of constant voltage service. The voltage maintained at the utility mains shall at all times be reasonably constant, and the variations in voltage from the average shall in no case exceed the limitations as prescribed by good practice for such classes of service.

For service rendered for lighting purposes plus or minus variations from the standard adopted, should not exceed 6% for service rendered for power, or primarily for power purposes, the voltage variations should not exceed 10% above or below the standard average voltage.

A greater variation of voltage than specified above may be allowed when service is supplied directly from the transmission line, or in a limited or extended area where consumers are widely scattered, and the business done does not justify close voltage regulation. In such cases the best voltage regulation should be provided that is practicable under the circumstances.

Variations in the voltage in excess of those specified, caused by the operation of power apparatus on consumer's premises, which necessarily require large starting current, by the action of the

elements, and by infrequent and unavoidable fluctuations of short duration due to station operation, shall not be construed a violation of this rule.

Consumers shall select, install, maintain and operate their electrical equipment so as to cause the least interference with the regulation of the local light and power system. Squirrel cage induction motors in excess of 20 HP must not be installed without the consent of the utility furnishing service.

### RULE 19. VOLTAGE SURVEYS AND RECORDS.

Each utility shall provide itself with suitable indicating or recording voltmeters, and shall make a sufficient number of voltage tests periodically so as to insure compliance with the voltage requirements cited above. These tests shall be made at appropriate points upon the utility's distribution lines.

### RULE 20. DEPOSITS FROM CONSUMERS AND GUARANTEE PAYMENT OF BILLS.

(a) Each utility may require from any consumer or prospective consumer a deposit intended to guarantee payment of current bills. Such required deposit shall not exceed the amount of an estimated ninety days' bill of such consumer. Interest shall be paid by the utility upon such deposits at the rate of 6% per annum, payable upon the return of the deposit, for the time such deposit was held by the utility and the consumer was served by the utility, provided such period was not less than six months, in which case no interest shall be paid.

(b) Each utility having on hand deposits from consumers or hereafter receiving deposits from them, shall keep records to show: (1) the name of each consumer making such deposit. (2) the premises occupied by the consumer when the deposit was made. (3) the amount and date of making the deposit, and (4) a record of each transaction concerning such deposit such as payment of interest, interest credited, etc.

(c) Each utility shall issue to every consumer from whom a deposit is received a non-assignable receipt.

(d) Each utility shall provide reasonable ways and means whereby a depositor who makes application for the return of his deposit or any balance to which he is entitled, but is unable to produce the original certificate of deposit or receipt, may not be deprived of his deposit or balance.

**RULE 21. DISCONTINUANCE OF SERVICE FOR VIOLATION OF RULES OR NON-PAYMENT OF BILLS.**

(a) No utility shall discontinue the service to any consumer for violation of its rules or regulations, or for non-payment of bills without having first tried to induce the consumer to comply with its rules and regulations or to pay his bills.

Service shall actually be discontinued only after at least 24 hours' written notice of such intention shall have been given to the consumer by the utility; provided, however, that where fraudulent use of current is detected, or where a dangerous condition is found to exist on the consumer's premises, the service may be shut off without notice in advance.

Said notice herein prescribed may be given by leaving a copy thereof with such consumer at the premises where such service is rendered, or by mailing same through the United States mail to the consumer's last known postoffice address.

Consumer shall have the privilege of paying delinquent bill at any time prior to actual disconnection of service lines supplying him; provided, that where the utility dispatches an employee to the premises of any consumer for the purpose of disconnecting service lines, a fee not to exceed one dollar may be added to consumer's delinquent bill to cover cost to utility of dispatching such employee to consumer's premises, which fee must be paid as a part of consumer's delinquent account.

(b) Whenever the service is turned off for violation of rules or regulations, or fraudulent use of current, the utility may make a reasonable charge for the cost of renewing it.

(c) Where a consumer has been required to make a guarantee deposit this shall not relieve consumer of the obligation to pay the service bills when due, but where such deposit has been made and service has been discontinued on account of non-payment of bill, then in such event unless consumer shall, within forty-eight hours after service has been discontinued, apply for reconnection of service and pay the account, then in such event the utility shall apply the deposit of such consumer toward the discharge of such account and shall as soon thereafter as practicable, refund the consumer any excess of the deposit.

**RULE 22. REPLACEMENT OF METERS AND CHANGES IN LOCATION OF SERVICE.**

(a) Whenever a consumer requests the replacement of the service meter on his premises, such re-

quest shall be treated as a request for the test of such meter, and as such, shall fall under the provisions of Rule 15.

(b) Whenever a consumer moves from the location where current is used by him, and thereby requires the disconnecting and/or connecting at a new location of the electric supply, and the same work has been done for him within one year preceding, the utility may make a charge, subject to such charge having been approved by the Commission.

**RULE 23. UTILITY MAY WITHHOLD SERVICE UNTIL CUSTOMER COMPLIES WITH RULES AND REGULATIONS.**

Any utility may decline to serve a customer or prospective customer until he has complied with the State and municipal regulations on electric service, and the rules and regulations of the utility furnishing the service, provided such rules and regulations have been approved by the Commissioner.

**RULE 24. EXTENT OF SYSTEM ON WHICH UTILITY MUST MAINTAIN SERVICE.**

Each electric utility, unless specifically relieved in any case by the Commissioner from such obligation, shall operate and maintain in safe, efficient and proper condition, all the facilities and instrumentalities used in connection with the regulation, measurement and delivery of electric current to any consumer up to and including the point of delivery into the wiring owned by the consumer.

**RULE 25. EXTENSIONS.**

Each utility shall adopt rules, subject to the approval of the Commission, under which it will, upon written request for service by a prospective consumer or a group of prospective consumers, located in the same neighborhood, make the extension necessary to give service and furnish service connection or connections.

**RULE 26. RATE SCHEDULE—RULES AND REGULATIONS.**

(a) Copies of all schedules of rates for service, forms of contracts, charges for service connections and extensions of circuits, and of all rules and regulations covering the relations of consumer and utility, shall be filed by each utility in the office of the Commissioner. Copies of such rates, rules and regulations shall be furnished consumers or prospective consumers upon request.

(b) Consumers applying for more than one class of service on the same premises shall so arrange

their wiring that each class of service can be metered separately, (unless utility has scheduled on file covering service to a combination of classes on one meter) and consumers purchasing any particular class of service shall confine the use of current supplied thereunder to the purposes set forth in the rate schedule for such class. Separate meters will be required for each building on the same premises except outhouses and for each separate class of service in the same building except when a commercial lighting consumer occupies the same building in part for residential purposes the utility may supply both the commercial and residential lighting through one meter at the commercial lighting rate, or on rural lines at the rural rate.

(c) Consumers desiring service in excess of 25 HP will be required to enter into term contracts with the utility supplying service, for the period established in the schedule of rates filed with the Commissioner. Failure to enter into contract for the period specified in the rate schedule will entitle the utility to impose a surcharge of five percent on all bills rendered to such consumers. The utility shall not be required to supply service for a period of less than one year except under rate schedules designed expressly for short term service. In case of initial contracts for service where the investment required of the utility is large, the Commissioner may require contracts of sufficiently long term to justify the investment, regardless of the provisions of the rate schedule filed for such service.

**RULE 27. STATUTORY CONFLICTS.**

In any instance in which there may be a conflict between the provisions of the Consolidated Statutes of North Carolina and the foregoing rules, the provisions of the Consolidated Statutes shall apply.

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### NOTICE

The Rules and regulations contained in this compilation are supported by duly promulgated orders on file in the office of The Utilities Commissioner and were in full force and effect at the time of this publication.

This March 1st, 1936.

R. O. SELF,  
Chief Clerk.