

## **807 KAR 5:041. Electric.**

RELATES TO: KRS Chapter 278

STATUTORY AUTHORITY: KRS 278.280(2)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 278.280(2) provides that the commission shall prescribe rules for the performance of any service or the furnishing of any commodity by the utility. This administrative regulation establishes general rules which apply to electric utilities.

Section 1. Definitions. For purposes of this administrative regulation:

(1) "Applicant" means for purposes of Section 21 of this administrative regulation the developer, builder or other person, partnership, association, corporation or governmental agency applying for the installation of an underground electric supply system.

(2) "Building" means a structure enclosed within exterior walls or fire walls, built, erected and framed of component structural parts and designed for less than five (5) family occupancy.

(3) "Customer" means for purposes of Section 21 of this administrative regulation the developer, builder or other person, partnership, association, corporation or governmental agency applying for installation of an underground electric supply system.

(4) "Customer premises" means the building for which service is intended or in use.

(5) "Distribution system" means electric service facilities consisting of primary and secondary conductors, transformers, and necessary accessories and appurtenances for furnishing electric power at utilization voltage.

(6) "Multiple-occupancy building" means a structure enclosed within exterior walls or fire walls, built, erected and framed of component structural parts and designed to contain five (5) or more individual dwelling units.

(7) "Subdivision" means a tract of land which is divided into ten (10) or more lots for the construction of new residential buildings, or for construction of two (2) or more new multiple occupancy buildings.

Section 2. General Requirements. Every utility shall furnish adequate service and facilities at rates filed with the commission, and in accordance with administrative regulations of the commission and applicable rules of the utility. Energy shall be generated, transmitted, converted and distributed by the utility, and utilized, whether by the utility or the customer, in such manner as to obviate undesirable effects upon the operation of standard services or equipment on the utility, its customers and other utilities.

Section 3. Acceptable Standards. A utility shall construct and maintain its plant and facilities in accordance with good accepted engineering practices. Unless otherwise specified by the commission, the utility shall use applicable provisions in the following publications as standards of accepted good engineering practice for construction and maintenance of plant and facilities, herein incorporated by reference:

(1) National Electrical Safety Code; ANSI C-2. 1990 Edition, available by contacting the IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, New Jersey 08855-1331. This material is also available for inspection and copying, subject to copyright law, at the offices of the Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602, Monday through Friday between the hours of 8 a.m. to 4:30 p.m. local time.

(2) National Electrical Code; ANSI-NFPA 70. 1990 Edition, available by contacting the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02169. This material is also available for inspection and copying, subject to copyright law, at the offices of the Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602, Monday through Friday between the hours of 8 a.m. to 4:30 p.m. local time.

(3) American National Standard Code for Electricity Metering; ANSI C-12.1. 1982 Edition, available by contacting the Institute of Electrical and Electronics Engineers, Inc., 345 E. 47th Street, New York, New York 10017;

(4) USA Standard Requirements, for Instrument Transformers; ANSI Standard C57.13, 1978 Edition, available by contacting the IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, New Jersey 08855-1331. This material is also available for inspection and copying, subject to copyright law, at the offices of the Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602, Monday through Friday between the hours of 8 a.m. to 4:30 p.m. local time.

(5) The adoption and applicability of the National Electrical Code as a standard of utility construction is limited to electric utility auxiliary buildings which are not an integral part of a generating plant, substation, or control center. Integral part is defined as essential to the operation or necessary to make complete.

(6) All materials incorporated by reference above are available for public inspection and copying at the Public Service Commission of Kentucky, 211 Sower Boulevard, Frankfort, Kentucky 40601, between the hours of 8 a.m. and 4:30 p.m.

Section 4. Generating Station Meter Records. Every utility shall install such watt-hour meters as necessary to obtain a record of output of its generating station or stations. Every utility purchasing electrical energy shall install such meters as necessary to furnish a proper record of its purchases, unless such instruments are installed by the selling company.

Section 5. Maintenance or Continuity of Service. (1) Each utility shall make all reasonable efforts to prevent interruptions of service, and when such interruptions occur shall endeavor to reestablish service with the shortest possible delay. Whenever service is necessarily interrupted or curtailed for the purpose of working on equipment, it shall be done at a time if practicable, that will cause least inconvenience to customers, and those customers which may be seriously affected shall be notified in advance, except in cases of emergency.

(2) Each utility shall keep a record of: time of starting and shutting down the principal units of its power station equipment and feeders for major divisions; indications of sufficient switchboard instruments to show voltage and quantity of the load; all interruptions to service affecting the entire distribution system of any single community or important division of a community; and date and time of interruption, date and time of restoring service, and when known, cause of each interruption.

(3) When complete distribution systems or portions of communities have service furnished from unattended stations, the utility shall keep these records to the extent practicable. The records of unattended stations shall show interruptions which require attention to restore service, with estimated time of interruption. Breaker or fuse operations affecting service shall also be indicated even though duration of interruption may not be known.

Section 6. Voltage and Frequency. (1) Each utility shall adopt a standard nominal voltage or standard nominal voltages, as required by its distribution system for its entire constant-voltage service, or for each of several districts into which the systems may be divided, which standard voltages shall be stated in every schedule of rates of each utility or in its terms and conditions of service.

(2) Voltage at the customer's service entrance or connection shall be maintained as follows:

(a) For service rendered primarily for lighting purposes, variation in voltage between 5 p.m. and 11 p.m. shall not be more than five (5) percent plus or minus the nominal voltage adopted, and total variation of voltage from minimum to maximum shall not exceed six (6) percent of the nominal voltage.

(b) 1. For service rendered primarily for power purposes, voltage variation shall not at any time exceed ten (10) percent above or ten (10) percent below standard nominal voltage.

2. Where a limited amount of lighting is permitted under these contracts, the entire load shall be considered power as far as voltage variation is concerned.

(c) Where utility distribution facilities supplying customers are reasonably adequate and of sufficient capacity to carry actual loads normally imposed, the utility may require that starting and operating characteristics of equipment on customer premises shall not cause an instantaneous voltage drop of more than four (4) percent of standard voltage nor cause objectionable flicker in other customer's lights.

(d) Equipment supplying constant current circuits shall be adjusted to furnish as nearly as practicable the rated current of the circuit supplied, and in no case shall the current vary more than four (4) percent above or below the circuit rating.

(3) Each utility supplying alternating current shall adopt a standard frequency of sixty (60) hertz which shall be stated in the schedule of rates of each utility.

(4) A frequency meter monitor shall be maintained for each system frequency. Accuracy of the frequency meter shall be checked each day and frequency shall be governed within limits as set forth in this section so that the frequency meters on the system are correct once daily.

(5) The following shall not be considered a violation of this section: Voltage variations in excess of those caused by operation of power apparatus on customer premises which require large starting currents and affect only the user of such apparatus, by action of the elements and infrequent and unavoidable fluctuations of short duration due to system operation.

(6) Greater variation of voltage than specified under this section may be allowed if service is supplied directly from a transmission line, if emergency service, or if in a limited or extended area in which customers are widely scattered or business done does not justify close voltage administrative regulation. In such cases the best voltage administrative regulation shall be provided that is practicable under the circumstances.

Section 7. Voltage Surveys and Records. (1) Every utility shall have two (2) or more portable indicating voltmeters and two (2) or more recording or graphic voltmeters of type and capacity suited to the voltage supplied.

Every utility shall make a sufficient number of voltage surveys to indicate the service furnished from each center of distribution. To satisfy the commission of its compliance with voltage requirements, each utility shall keep at least one (1) of these instruments in continuous service at some representative point on its system. All records of the most recent voltage surveys taken within the last three (3) calendar years shall be available for inspection by the utility's customers and commission staff.

(2) Each graphic recording voltmeter shall be checked with a working standard indicating voltmeter when it is placed in operation and when it is removed, or periodically if the instrument is in a permanent location. Notations on each chart shall indicate beginning time and date of registration and when the chart was removed, as well as the point where voltage was taken, and results of the check with indicating voltmeter.

Section 8. Servicing Utilization Control Equipment. (1) Utilities shall service and maintain any equipment they use on customer's premises and shall adjust thermostats, clocks, relays, or time switches, if such devices must be so adjusted to provide service in accordance with their rate provisions.

(2) Time switches used by the utility for controlling equipment such as water heaters and street lights shall be of such quality that the timing mechanism may be adjusted to be accurate within ten (10) minutes per month. Time switches used by the utility for controlling street lighting or display lighting shall be inspected or monitored at least once a month and, if in error, adjusted. Time switches shall also be adjusted upon complaint if found in error or when service interruptions cause them to be in error by one-half (1/2) hour or more.

(3) Time switches and control devices used by the utility for controlling off-peak appliances shall be inspected or monitored periodically and adjusted if in error, and also adjusted upon complaint if found in error or whenever service interruptions result in error of two (2) hours or more or in supplying service to off-peak appliances during peak periods.

Section 9. Measuring Customer Service. (1) All energy sold within the State of Kentucky shall be measured by commercially acceptable measuring devices owned and maintained by the utility, except where it is impracticable to meter loads, such as multiple street lighting, temporary or special installations, in which case consumption may be calculated. The utility shall meter its own electrical energy use except when such service is for emergency or incidental lighting such as outdoor substations, or at remote points on its transmission or distribution lines. All other electrical quantities which the utility's tariff indicates are to be metered shall be metered by commercially acceptable instruments owned and maintained by the utility.

(2) The utility shall regard each point of delivery as an independent customer and meter the power delivered at each point. Combined meter readings shall not be taken at separate points, nor shall energy used by more than one (1) residence or place of business on one (1) meter be measured to obtain a lower rate.

(3) Metering facilities located at any point where energy may flow in either direction and where the quantities measured are used for billing purposes shall consist of meters equipped with ratchets or other devices to prevent reverse registration and be so connected as to separately meter energy flow in each direction.

(4) Whenever possible reactive meters required to meet the conditions of a given rate schedule shall be either all ratcheted or none shall be ratcheted. Reactive metering shall not be employed for determining average power factor for billing purposes where energy may flow in either direction or where a customer may generate an appreciable amount of his own requirements.

(5) Meters which are not direct reading and those operating from instrument transformers shall have the multiplier plainly marked on the dial of the instrument or otherwise suitably marked and all charts taken from recording meters shall be marked with the record date, meter number, customer and chart multiplier.

(6) The register ratio shall be marked on all electro-mechanical meter registers. Meters already in service may be so marked when they are tested.

(7) The watt-hour constant for the meter itself shall be placed on all watt-hour meters. Meters already in service shall be so marked when they come to the meter shop.

Section 10. Service Connections. (1) The utility shall pay all costs of a service drop or an initial connection to its line with the customer's service outlet, except the attachment of the wire support to customer premises. When the customer's outlet is inaccessible to the utility, or the customer desires that the service outlet on any building be at a location other than that closest to the utility's line, cost of such special construction as necessary shall be borne by the customer. The utility shall furnish at its expense an amount of wire, labor and material equivalent to that furnished for a like service connection not requiring such special construction.

(2) Underground service requirements and administrative regulations shall be established by each utility and be on file with the commission.

(3) All equipment and material furnished by the utility at its own expense shall remain the property of the utility and may be removed by it at any reasonable time after discontinuance of service.

Section 11. Distribution Line Extensions. (1) Normal extensions. An extension of 1,000 feet or less of single phase line shall be made by a utility to its existing distribution line without charge for a prospective customer who shall apply for and contract to use the service for one (1) year or more and provides guarantee for such service. The "service drop" to customer premises from the distribution line at the last pole shall not be included in the foregoing measurements. This distribution line extension shall be limited to service where installed transformer capacity does not exceed 25 KVA. Any utility which extends service to a customer who may require polyphase service or whose installed transformer capacity will exceed 25 KVA may require the customer to pay in advance additional cost of construction which exceeds that for a single phase line where the installed transformer capacity does not exceed 25 KVA.

(2) Other extensions.

(a) When an extension of the utility's line to serve an applicant or group of applicants amounts to more than 1,000 feet per customer, the utility may, if not inconsistent with its filed tariff, require total cost of the excessive footage over 1,000 feet per customer to be deposited with the utility by the applicant or applicants, based on the average estimated cost per foot of the total extension.

(b) Each customer receiving service under such extension will be reimbursed under the following plan: Each year, for a refund period of not less than ten (10) years, the utility shall refund to the customer(s) who paid for the excessive footage the cost of 1,000 feet of extension in place for each additional customer connected during the year whose service line is directly connected to the extension installed and not to extensions or laterals therefrom. Total amount refunded shall not exceed the amount paid the utility. No refund shall be made after the refund period ends.

(c) For additional customers connected to an extension or lateral from the distribution line, the utility shall refund to any customer who paid for excessive footage the cost of 1,000 feet of line less the length of the lateral or extension.

(3) An applicant desiring an extension to a proposed real estate subdivision may be required to pay the entire cost of the extension. Each year, for a period of not less than ten (10) years, the utility shall refund to the applicant who paid for the extension a sum equivalent to the cost of 1,000 feet of the extension installed for each additional customer connected during the year. Total amount refunded shall not exceed the amount paid to the utility. No refund shall be made after the refund period ends.

(4) Nothing contained herein shall be construed as to prohibit the utility from making extensions under different arrangements if such arrangements have been approved by the commission.

(5) Nothing contained herein shall be construed to prohibit a utility from making at its expense greater extensions than herein prescribed, if similar free extensions are made to other customers under similar conditions.

(6) Upon complaint to and investigation by the commission, a utility may be required to construct extensions greater than 1,000 feet upon a finding by the commission that such extension is reasonable.

Section 12. Distribution Line Extensions to Mobile Homes. (1) All extensions of up to 150 feet from the nearest distribution line shall be made without charge.

(2) Extensions greater than 150 feet from the nearest distribution line and up to 300 feet shall be made if the customer pays the utility a "customer advance for construction" of fifty (50) dollars in addition to any other charges required by the utility for all customers. This advance shall be refunded at the end of one (1) year if service to the mobile home continues for that length of time.

(3) For extensions greater than 300 feet and less than 1,000 feet from the nearest distribution line, the utility may charge an advance equal to reasonable costs incurred by it for that portion of service beyond 300 feet plus fifty (50) dollars. Beyond 1,000 feet the extension policies set forth in Section 11 of this administrative regulation shall apply.

(a) This advance shall be refunded to the customer over a four (4) year period in equal amounts for each year service is continued. The customer advance for construction of fifty (50) dollars shall be added to the first of four (4) refunds.

(b) If service is discontinued for a period of sixty (60) days, or the mobile home is removed and another does not take its place within sixty (60) days, or is not replaced by a permanent structure, the remainder of the advance shall be forfeited.

(c) No refunds shall be made to any customer who did not make the advance originally.

(4) If a utility implements specific requirements pertaining to mobile homes, such requirements shall be subject to approval by the commission and comply with the provisions of this administrative regulation.

Section 13. Testing Equipment and Standards. (1) Each utility shall maintain sufficient laboratories, meter testing shops, standards, instruments and facilities to determine accuracy of all types of meters and measuring devices used by the utility except as provided in 807 KAR 5:006, Section 13.

(2) The following testing equipment shall be available as minimum requirements for each utility or agency making tests or checks for a utility pursuant to 807 KAR 5:006, Section 13(2):

(a) One (1) or more working watt-hour standards and associated devices of capacity and voltage range adequate to test all watt-hour meters used by the utility.

(b) One (1) or more watt-hour standards, which shall be the utility's master watt-hour standards, used for testing the working watt-hour standards of the utility. These standards shall be of an approved type, shall be well compensated for both classes of temperature errors, practically free from errors due to ordinary voltage variations, and free from erratic registration. These master watt-hour standards shall be of capacity and voltage range adequate to test all working watt-hour standards at all loads and voltages at which they are used. These standards shall be kept permanently at one place and not used for routine testing.

(c) Working indicating instruments, such as ammeters, voltmeters and watt-meters, of such various types required to determine the quality of service to customers.

(d) A voltmeter and ammeter, which shall be master indicating instruments, and which shall be used for testing of working indicating and recording instruments. These instruments shall be of an approved type and of accuracy class and range sufficient to determine accuracy of working instruments to within five-tenths (0.5) percent of all ranges and scale deflections at which working instruments are used. They shall be kept permanently at one place and not used for routine testing.

(3) The utility's master watt-hour standards shall not be in error by more than plus or minus three-tenths (0.3) percent at 100 percent power factor, nor more than plus or minus five-tenths (0.5) percent at fifty (50) percent power factor at loads and voltages at which they are used, and shall not be used to check or calibrate working standards unless the master standard has been certified as to accuracy by the commission within the preceding twelve (12) months. Each master watt-hour standard shall have a history card and calibration data available, and when used to calibrate working standards, correction for any error of the master standard shall be applied.

(4) All working watt-hour standards when regularly used shall be compared with a master standard at least once in every four (4) weeks. Working watt-hour standards infrequently used shall be compared with a master standard before they are used.

(5) Working watt-hour standards shall be adjusted, if necessary, so that their accuracy will be within plus or minus three-tenths (0.3) percent at 100 percent power factor and within plus or minus five-tenths (0.5) percent at fifty (50) percent lagging power factor at all voltages and loads at which the standard may be used. A history and calibration record shall be kept for each working watt-hour standard showing all pertinent data and name of person performing tests.

(6) After having adjusted working watt-hour standards to the accuracy specified above, service measuring equipment shall be adjusted to within the accuracies required, assuming working watt-hour standards to be 100 percent accurate.

(7) If calibration charts are attached to working watt-hour standards and the error indicated is applied to all tests run and the accuracy on any range has not varied more than two-tenths (0.2) percent during the past twelve (12) regular test periods, accuracy limits may be extended to plus or minus five-tenths (0.5) percent at 100 percent power factor and plus or minus seven-tenths (0.7) percent at fifty (50) percent lagging power factor at all voltages and loads at which the standard may be used.

(8) The utility's master indicating instruments shall not be in error by more than plus or minus five-tenths (0.5) percent of indication at commonly used scale deflections and shall not be used to check or calibrate working indicating instruments unless the master instrument has been checked and adjusted, if necessary, and certified as to accuracy by the commission within the preceding twenty-four (24) months. A calibration record shall be maintained for each instrument.

(9) All working indicating instruments shall be checked against master indicating instruments at least once in each six (6) months. If the working instrument is found appreciably in error at zero or in error by more than one (1) percent of indication at commonly used scale deflections, it shall be adjusted. A calibration record shall be maintained for each instrument showing all pertinent data and name of person performing tests.

Section 14. Check of Standards by Commission. (1) Each utility, and/or agency making tests or checks for a utility, shall submit to the commission Meter Standards Laboratory, its master watt-hour standard once in each year, and its master indicating voltmeter and ammeter once in each two (2) years.

(2) At the discretion of the commission any or all of these required tests may be made at the utility's or agency's testing facility by means of portable transfer standards. If the standards satisfy the requirements of the commission a Certificate of Accuracy shall be issued by the commission's Division of Engineering.

(3) Each utility which normally checks its own master watt-hour standards and master indicating instruments against primary standards such as precision watt-meters, volt boxes, resistances, standard cells, potentiometers, and timing devices, shall calibrate the master watt-hour standards and indicating instruments before they are submitted to the commission for test, and attach to them a record of such calibration.

Section 15. Testing of Metering Equipment. (1) Testing of any unit of metering equipment shall consist of a comparison of its accuracy with a standard of known accuracy. All metering equipment shall be in good order, and shall be adjusted to as close to zero error as possible.

(2) No meter or measuring device shall be deliberately set in error by any amount. Because of unavoidable irregularities of work done on a commercial scale, some accuracy tolerance shall be allowed. Meters shall be set as near as practicable to 100 percent accuracy but in no case shall the inaccuracy exceed one (1) percent. Further, meters with defective parts shall be repaired regardless of their accuracy.

(3) Metering equipment, including instrument transformers and demand meters, shall be tested for accuracy prior to being placed in service, periodically in accordance with the schedule below, upon complaint, when suspected of being in error, or when removed from service for any cause.

Period Test Schedule		
	Self-Contained Meters	
	Single phase	8 years
	3 wire network	8 years
	Polyphase	6 years
Meters used with instrument transformers		
	Single phase	6 years
	Polyphase	4 years
Demand Meters		
	Indicating block-interval and lagged-demand meters	same as associated watt-hour meter
	Graphic and pulse operated recording demand meters	2 years
Instrument Transformers		
	Current: high burden test	same as associated watt-hour meter
	Potential: secondary voltage test	same as associated watt-hour meter
	Var-hour Meters	same as associated watt-hour meter
Direct Current Watt-hour Meters:		
	Up to and including 6 KW	4 years
	Over 6 KW through 100 KW	2 years
	Over 100 KW	1 year

(4) Tests may be made at a meter shop, on the customer's premises, or in a mobile shop.

Section 16. Sample Testing of Single Phase Meters. A utility desiring to adopt a scientific sample meter testing plan for single phase meters shall submit its application to the commission for approval. Upon approval the sample testing plan may be followed in lieu of the periodic test prescribed in Section 15(3) of this administrative regulation. The plan shall include the following:

(1) Meters shall be divided into separate groups to recognize differences in operating characteristics due to changes in design, taking into consideration date of manufacture and serial number.

(2) The sampling procedure shall be based upon accepted statistical principles.

(3) The same sampling procedure shall be applied to each group.

(4) Each utility authorized to test meters by sample meter testing plan shall comply with the following conditions:

(a) The number of meters in addition to the sample shall be taken from those meters in each group longest in service since last test unless a particular meter type is known to be increasing the percentage of meters requiring test for the sample group. In such a case where a particular meter type is increasing the percentage of meters requiring test in any group, these meters may be selected first regardless of test date with any additional tests as required for that group coming from those in that group longest in service since last test. Each year the utility shall use the following table to determine the percentage of the total meters in each group to be tested.

Percentage of Meters Within Limits of 2% Fast or Slow (Indicated by Sample)		Percentage of Meters to be Tested the Next Year
99.0	100.0	2
98.0	98.9	4
97.0	97.9	6
96.0	96.9	8
95.0	95.9	10
93.0	94.9	12
91.0	92.9	14
Less than	91.0	16

(b) Provided, however, that no meter shall remain in service without periodic test for a period longer than twenty-five (25) years.

(5) Whenever a meter is found to be more than two (2) percent fast or slow, refunds or back billing shall be made for the period during which the meter error is known to have existed or if not known for one-half (1/2) the elapsed time since the last test but in no case to exceed three (3) years. This provision shall apply only when sample testing of single phase meters has been approved by the commission and utilized by the utility.

Section 17. Test Procedures and Accuracy Requirements. (1) Meters and associated devices shall be tested at the loads indicated below and adjusted as close as practicable to zero error when found to exceed the tolerance prescribed below.

AC Watt-hour Meters		
% of Test Current	Power Factor	Allowable Tolerance
100	1.0	+ or - 1.0%
10	1.0	+ or - 1.0%
100	0.5	+ or - 1.0%
DC Watt-hour Meters		
% of Test Current		Allowable Tolerance
100	1.0%	
10	1.0%	

(a) Only one (1) test run shall normally be required at each test configuration. However if the test indicates the meter is more than two (2) percent in error fast or slow, additional tests shall be made to verify accuracy prior to refunding or back billing the customer.

(b) When a meter is tested on complaint or request, additional test runs shall be made and care exercised to insure that any trouble with the meter will be detected.

(c) For refund and back billing purposes, accuracy of the meter shall be determined by adding the average registration at light load (ten (10) percent of test current) and the average registration at full load (100 percent of test current) and dividing by two (2).

(2) Demand meters. A demand meter, demand register, or demand attachment used to measure customer's service shall:

- (a) Be in good mechanical and electrical condition.
- (b) Have proper constants, indicating scale, contact device, and resetting device.
- (c) Not register at no load.
- (d) Be accurate to the following degrees:

1. Graphic meters which record quantity-time curves and integrated-demand meters shall be accurate to within plus or minus two (2) percent of full scale throughout their working range. Timing elements measuring specific

demand intervals shall be accurate to within plus or minus two (2) percent and the timing element which serves to provide a record of the time of day when demand occurs shall be accurate to within plus or minus four (4) minutes in twenty-four (24) hours.

2. Lagged-demand meters shall be accurate to within plus or minus two (2) percent at final indication.

(3) Instrument transformers.

(a) Instrument transformers used in conjunction with metering equipment to measure customer's service shall:

1. Be in proper mechanical condition and have electrical insulation satisfactory for the service on which used.

2. Have characteristics such that the combined inaccuracies of all transformers supplying one (1) or more meters in a given installation shall not exceed the following:

	100% Power Factor		50% Power Factor	
	10% Current	100% Current	10% Current	100% Current
Purchased after Jan. 1, 1942	1%	.75%	3%	2%
Purchased prior to Jan. 1, 1942	2%	1.50%	5%	3%

(b) Meters used in conjunction with instrument transformers shall be adjusted so that verall accuracies will come within the limits specified in this administrative regulation.

(c) Instrument transformers shall be tested with the meter with which they are associated by making an overall test, or may be checked separately. If transformers are tested separately, meters shall also be checked to see that overall accuracy of installation is within the prescribed accuracy requirements.

(d) Results of tests of instrument transformers shall be kept on record and be available for use during the life of the transformer.

(e) Phase shifting transformers shall have secondary voltages under balanced line voltage conditions within one (1) percent plus or minus of the voltage impressed on the primary.

Section 18. Location of Meters. (1) Meters shall be installed in a clean, dry, safe, convenient place as free as possible from vibration. Meters shall be easily accessible for reading, testing, and making necessary adjustments and repairs, and where indoor type meters are necessary they shall not be placed in coal or wood bins or on partitions forming bins, nor on any unstable supports. Unless absolutely unavoidable, meters shall not be installed in attics, sitting rooms, bathrooms, bedrooms, restaurant kitchens, over doors, over windows, or in any location where visits of the meter reader or tester will cause annoyance to the customer or a severe inconvenience to the utility.

(2) Districts subject to flood are excepted from this rule as far as it applies to the location of meters.

(3) Proper provision shall be made by the customer for installation of the utility's meter. Unless the meter is to be mounted upon a panel or installed within a cabinet, such provision shall consist of a board not less than three-quarters (3/4) of an inch in thickness which shall be mounted not less than five (5) or not more than seven (7) feet from the floor, and in general as near as possible to point of entrance of service. At least six (6) inches clear space shall be available, on all sides of the meter board and not less than thirty (30) inches in front of it. The above provisions as to method of mounting and height from floor do not apply to the installation of weatherproof outdoor meters. Electric meters shall not be installed close to either water or gas meters or anything liable to damage the meter, thereby constituting a hazard to customer's safety and continuous service.

(4) When more than one (1) meter is installed without a meter cabinet in the same building, proper space shall be allotted and provision made by the customer for locating the meters at one (1) place. When a number of meters are placed in the same cabinet or upon the same board, each meter shall be tagged or marked to indicate the circuit metered by it.

Section 19. Overhead and Underground Wire Entrances. (1) The overhead wire entrance shall be located on the exterior of the building nearest the utility's lines at a point not less than twelve (12) nor more than thirty (30) feet above the ground. When proper ground clearance cannot be obtained due to height of building, a proper supporting structure shall be provided by the customer unless arrangements can be made with the utility whereby their overhead service wires can be carried to the building in such a manner that these wires will not constitute an obstruction to free passage of vehicles or fire fighting apparatus.

(2) Approval shall be obtained from the utility as to the proper location for a service entrance.

(3) New service drops, both overhead and underground, shall be installed in accordance with the National Electrical Safety Code.

Section 20. Operation of Illegal Gambling Devices. (1) When an electric utility, subject to the jurisdiction of this commission, is notified in writing by a federal or state law enforcement agency, the Attorney General of Kentucky, a Commonwealth's Attorney or a County Attorney acting in his official capacity, that electric energy furnished by it is being used or will be used for operating an illegal gambling device, it shall discontinue rendering electric service to such customer, after reasonable notice to the customer. No damages, penalty or forfeiture, civil or criminal, shall be found against any electric utility for any act done in compliance with any such notice received from the law enforcement agency or officer. Nothing in this section shall be deemed to prejudice the right of any person affected thereby to secure an appropriate judicial determination that such service should not be discontinued, or should be restored.

(2) As provided by KRS 278.230, any electric utility subject to commission jurisdiction shall furnish to the commission upon request any records or information in the possession of such electric utility that may assist in the enforcement of this rule.

Section 21. Underground Electric Distribution Systems for New Residential Customers. (1) Purpose of rules. To formulate requirements for underground electric distribution systems for all new customers of those systems which will insure safe and adequate service and which will be uniformly applicable within a utility's service area.

(2) Applicability. New residential customers and subdivisions as defined below after the effective date of this rule.

(3) Rights of way and easements.

(a) The utility shall construct, own, operate and maintain distribution lines only along easements, public streets, roads and highways which are by legal right accessible to the utility's equipment and which the utility has legal right to occupy, and on public lands and private property across which rights of way and easements satisfactory to the utility may be obtained without cost or condemnation by the utility.

(b) Rights of way and easements suitable to the utility for underground distribution facilities shall be furnished by the applicant in reasonable time to meet service requirements. The utility may require that the applicant make the area in which underground distribution facilities are to be located accessible to the company's equipment, remove all obstructions from such area, stake to show property lines and final grade, perform rough grading to reasonable approximation of final grade, and maintain clearing and grading during construction by the utility. The utility may require that suitable land rights be granted to it, obligating the applicant and subsequent property owners to provide continuing access to the utility for operation, maintenance or replacement of its facilities, and to prevent any encroachment in the utility's easement or substantial changes in grade or elevation.

(4) Installation of underground distribution system within new subdivision.

(a) Where appropriate contractual arrangements have been made, the utility shall install within the subdivision an underground electric distribution system of sufficient capacity and suitable materials which, in its judgment, will assure that the property owners will receive safe and adequate electric service for the foreseeable future.

(b) Facilities required to be underground:

1. All single phase conductors installed by the utility shall be underground. Appurtenances such as transformers, pedestal-mounted terminals, switching equipment and meter cabinets may be placed above ground.

2. Three (3) phase primary mains or feeders required within a subdivision to supply local distribution or to serve individual three (3) phase loads may be overhead unless underground is required by governmental authority or chosen by the applicant, in either of which case the differential cost of underground shall be borne by the applicant.

(c) If the applicant has complied with the requirements herein and with the utility's specifications on file with the commission, and has given the utility not less than 120 days written notice prior to anticipated date of completion (i.e., ready for occupancy) of the first building in the subdivision, the utility shall complete installation thirty (30) days prior to estimated completion date. (Subject to weather and ground conditions and availability of materials and barring extraordinary or emergency circumstances beyond reasonable control of the utility.) However, nothing in these administrative regulations shall be interpreted to require the utility to extend service to portions of subdivisions not under active development.

(5) Schedule of charges.

(a) Within sixty (60) days after the effective date of these rules, each utility shall file with the commission a statement setting forth the utility's policy with respect to electric underground extensions. Such policy shall provide for payment by the applicant for the difference between the cost of providing underground facilities and that of providing overhead facilities. The payment made by applicant shall be expressed in terms of an amount per foot of conductor or other appropriate measure.

(b) The utility's policy as filed with the commission shall set forth an "estimated average cost differential," if any, between the average or representative cost of underground distribution systems and of equivalent overhead

distribution systems within the utility's service areas. The payment made by applicant as provided for in paragraph (a) of this subsection shall not be more than the estimated average cost differential and shall be nonrefundable.

(c) Detailed supporting data used to determine estimated average cost differential shall be concurrently filed by the utility with the commission and shall be updated annually.

(d) Applicant may be required to deposit the entire estimated cost of the extension. If this is done, the amount deposited in excess of the normal charge for underground extensions, as provided in paragraph (a) of this subsection, shall be refunded to the applicant over a ten (10) year period as provided in Section 11 of this administrative regulation.

(e) Upon agreement by both parties, if the applicant chooses to perform all necessary trenching and backfilling in accordance with utility specifications, the utility shall credit applicant's cost in an amount equal to the utility's cost for trenching and backfilling.

(f) Utility extension from the property or boundary of the subdivision to its existing supply facilities shall normally be made overhead, and any deposit required for that extension is subject to refund under Section 11 of this administrative regulation. Upon request, such extension may be made underground, if the applicant agrees to pay the excess cost for the underground extension, which excess cost shall be nonrefundable.

(g) 1. Point of service shall be that point where utility facilities join customer facilities, irrespective of the location of the meter. Such point of service shall normally be either at the property line or at the corner of the building nearest the point at which underground systems enter the property to be served, depending upon whether the utility or the customer owns the underground service lateral.

2. If established utility practice dictates service termination at the customer's property line, the utility shall credit the applicant fifty (50) dollars or the equivalent cost of an overhead service line to the applicant's meter base, whichever is greater.

3. Where established utility practice does not dictate service termination at the customer property line, the utility shall include in its underground plan the furnishing, installation, ownership, and maintenance of the service lateral to the meter base providing the applicant installs in the building adequate electric service entrance capacity to the satisfaction of the utility to assure that the underground service conductors will be adequate to handle present and future load requirements of the building. In this instance the utility will determine the size and type of service lateral conductors and appurtenances to be used in any installation.

4. If, by mutual agreement of the parties, service terminates at some other point on the building or property, the applicant shall pay the full cost of any additional extension required in excess of that provided for in paragraph (g) 1, 2 and 3 of this subsection.

(h) When an existing utility-owned supply circuit or service lateral requires replacement or reinforcement due to added loads, etc., the utility at its expense will replace or reinforce it.

(i) Nothing in this administrative regulation shall be construed to prevent any utility from assuming any part of the cost differential of providing underground distribution systems within subdivisions, provided the utility demonstrates to the commission that such practice will not result in increased rates to the general body of rate payers.

(j) The utility shall not be obligated to install any facility within a subdivision until satisfactory arrangements for payment of charges have been completed by the applicant.

(6) Cooperation by applicant. Charges specified in these rules are based on the premise that each applicant will cooperate with the utility in an effort to keep the cost of construction and installation of the underground electric distribution system as low as possible and make satisfactory arrangements for payment of the above charges prior to installation of the facilities.

(7) Construction. All electrical facilities shall be installed and constructed to comply with applicable codes, rules and administrative regulations of the commission.

Section 22. Deviations from Rules. In special cases for good cause shown the commission may permit deviations from these rules. (8 Ky.R. 814; eff. 4-7-82; Am. 16 Ky.R. 2046; 2430; eff. 6-10-90; 17 Ky.R. 2507; eff. 4-4-91.)