IOWA UTILITIES BOARD

IN RE:	DOCKET NO. RMU-2023-0020
EXECUTIVE ORDER 10 —REVIEW OF SERVICE SUPPLIED BY RATE-REGULATED ELECTRIC UTILITIES RULES [199 IOWA ADMINISTRATIVE CODE CHAPTER 20]	

ORDER OPENING DOCKET AND SETTING TECHNICAL CONFERENCE AND COMMENT DEADLINE

On January 10, 2023, Gov. Kim Reynolds issued Executive Order Number 10 (Executive Order), which put a moratorium on agency rulemaking and directed agencies, including the Utilities Board (Board), to engage in a comprehensive evaluation of existing rules. The goals of the Executive Order include increasing public input in the rulemaking process, eliminating rules that do not provide substantial benefits to Iowans, reducing the page and word count of the Iowa Administrative Code, and reducing restrictive rule language. As a part of the comprehensive review, agencies are required to repeal each rules chapter and evaluate whether the chapter, or a portion of the chapter, should be re-promulgated. To assist agencies in performing their comprehensive reviews, the Iowa Department of Management developed and published forms and processes. *See* https://dom.iowa.gov/red-tape-review (last accessed on May 1, 2024).

Pursuant to the Executive Order, the Board is conducting comprehensive reviews of each chapter of its administrative rules, and the Board will open the above-captioned docket for purposes of conducting a comprehensive review of chapter 20, which

contains the rules for the Board's Service Supplied by Rate-regulated Electric Utilities. Attached to this order as Attachment A is the Board's retrospective analysis (Red Tape Review Rule Report) of chapter 20, which the Board will publish on the Board's website, iub.iowa.gov, as required by section III.B of the Executive Order. Attached to this order as Attachment B is the Board's Draft Regulatory Analysis of chapter 20, which the Board will submit in the legislative Rules Management System for publication in the Iowa Administrative Bulletin. The Draft Regulatory Analysis attached to this order as Attachment B will be submitted to the Administrative Rules Code Editor for review and publication in the Iowa Administrative Bulletin and may contain changes from the version attached to this order. Finally, attached to this order as Attachment C is a draft version of chapter 20 that the Board is evaluating whether to re-promulgate. Most of the current proposed changes to chapter 20 center on the removal of unnecessary and restrictive language. The proposed chapter 20 is reflecting the Board's anticipated name change to the Iowa Utilities Commission on or after July 1, 2024.

The Board also will schedule a technical conference for August 1, 2024. The technical conference will be led by Board staff, and participation may occur in person or by webinar. The purpose of the technical conference is to receive comments regarding the Draft Regulatory Analysis and the proposed version of chapter 20 to be re-promulgated. The Board specifically requests comments to current subrule 20.3(11) in regard to advances in aid of construction including the basis for using the multiplier of three times estimated base revenues to determine requirements related to advances and refunds. Additionally, the Board will accept written comments through August 1, 2024, concerning the Draft Regulatory Analysis and the proposed re-promulgated

version of chapter 20. The Board will use the oral and written comments received to prepare a final version of the Regulatory Analysis, which will be uploaded in this docket and published on the Board's website.

IT IS THEREFORE ORDERED:

1. Docket No. RMU-2023-0020 is opened for the purpose of conducting a comprehensive review of 199 Iowa Administrative Code chapter 20 pursuant to Executive Order Number 10.

2. A technical conference is set for 9 a.m. August 1, 2024, in the Utilities Board hearing room, located at 1375 East Court Avenue, Des Moines, Iowa. Interested persons may appear in person or by webinar. Information for attending by webinar can be found on the Utilities Board's website on the Hearing and Meeting Calendar webpage.

3. Comments regarding the Draft Regulatory Analysis or the proposed re-promulgated version of chapter 20 shall be filed by August 1, 2024.

UTILITIES BOARD

Erik M. Helland Date: 2024.06.17 13:19:22 -05'00'

Joshua Byrnes Date: 2024.06.17 13:29:29 -05'00'

ATTEST:

Sadi Reimann Digitally signed by Sadi Reimann Date: 2024.06.17 15:02:10 -05'00'

Sarah Martz Date: 2024.06.17 14:08:12 -05'00'

Dated at Des Moines, Iowa, this 17th day of June, 2024.

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Red Tape Review Rule Report
(Due: September 1, 2025)

Department Name:	Iowa Utilities Board	**Date:**	May 7, 2024	**Total Rule Count:**	21 rules in chapter 20
IAC #:	199	**Chapter/ SubChapter/ Rule(s):**	199 IAC chapter 20	**Iowa Code Section Authorizing Rule:**	Iowa Code §§ 476.1, 476.1B, 476.2, 478.19, and 478.20
Contact Name:	Carter Wright	**Email:**	Carter.wright@iub.iowa.gov	**Phone:**	515-423-7260

PLEASE NOTE, THE BOXES BELOW WILL EXPAND AS YOU TYPE

What is the intended benefit of the rule?

The benefits of the chapter are safe and adequate electric service being provided to the public, standards for uniform and reasonable practices by utilities being implemented, and demands that are reasonable to be made by the public upon the utilities.

Is the benefit being achieved? Please provide evidence.

The benefit is being achieved through the industry following the provided standards for uniform and reasonable practices, which are in place to ensure safe and adequate electric service is provided to the public.

What are the costs incurred by the public to comply with the rule?

The only costs are the costs for the utility to operate according to the rules contained within the chapter, which are already incurred by the utilities and these costs are generally covered through the rates paid by the ratepayers.

What are the costs to the agency or any other agency to implement/enforce the rule?

There are no additional costs to the Utilities Board as the costs are for standard operation of staff members to ensure that tariffs are following the requirements of the chapter, and any investigation of complaints made against utilities are done according to the utility's requirements under this chapter.

Do the costs justify the benefits achieved? Please explain.

The benefits of consistent and safe electric service throughout Iowa justify the costs, as the costs to the Board are consistent with normal operation and are not increased through the chapter's rules, while the costs to utilities and ratepayers are outweighed by the positive benefits of the chapter.

Are there less restrictive alternatives to accomplish the benefit? ☐ YES ☒ NO

If YES, please list alternative(s) and provide analysis of less restrictive alternatives from other states, if applicable. If NO, please explain.

This chapter provides the necessary rules and references to give utilities an understanding of what is required for consistent, safe, and reliable electric service to be provided throughout Iowa. Additionally,

there are rules in place to allow for certain demands to be made by the public upon the rate-regulated utilities. Overall, this is the least restrictive means to provide for these goals in a way that still allows utilities to have judgment in their choices as electric service providers.

Does this chapter/rule(s) contain language that is obsolete, outdated, inconsistent, redundant, or un-necessary language, including instances where rule language is duplicative of statutory language? [list chapter/rule number(s) that fall under any of the above categories]

PLEASE NOTE, THE BOXES BELOW WILL EXPAND AS YOU TYPE

20.1 – outdated language and unnecessary language removed
20.2 – obsolete and outdated language removed
20.3 – outdated, obsolete and redundant language removed
20.4 – obsolete and outdated language removed
20.5 – outdated information updated
20.6 – unnecessary language removed
20.10 – outdated information updated
20.18 – outdated and unnecessary information removed

RULES PROPOSED FOR REPEAL (list rule number[s]):

20.12

RULES PROPOSED FOR RE-PROMULGATION (list rule number[s] or include rule text if available):

ATTACHMENT A

CHAPTER 20
SERVICE SUPPLIED BY RATE-REGULATED ELECTRIC UTILITIES

199—20.1(476) General information.

20.1(1) *Authorization of rules.* Iowa Code chapter 476 provides that the Iowa Utilities Commission shall establish all needful, just and reasonable rules, not inconsistent with law, to govern the exercise of its powers and duties, the practice and procedure before it, and to govern the form, content, and filing of reports, documents, and other papers necessary to carry out the provisions of this law.

a. Iowa Code chapter 478 provides that the Iowa Utilities Commission shall have power to make and enforce rules relating to the location, construction, operation, and maintenance of certain electrical transmission lines.

b. Electric utilities with fewer than 10,000 customers subject to commission regulation pursuant to Iowa Code section 476.1A are subject to the regulatory requirements set out in 199—Chapter 27(476) for municipal electric utilities and electric cooperatives.

20.1(2) *Application of rules.* The rules shall apply to any rate-regulated electric utility operating within the state of Iowa subject to Iowa Code chapter 476, and to the construction, operation, and maintenance of electric transmission lines to the extent provided in Iowa Code chapter 478, and shall supersede all tariffs on file with the commission that are in conflict with these rules.

a. These rules are intended to promote safe and adequate service to the public, to provide standards for uniform and reasonable practices by utilities, and to establish a basis for determining the reasonableness of such demands as may be made by the public upon the utilities.

b. The adoption of these rules shall in no way preclude the commission from altering or amending them pursuant to statute or from making such modifications with respect to their application as may be found necessary to meet exceptional conditions.

20.1(3) *Definitions.* The following words and terms, when used in these rules, shall have the meaning indicated below:

"Acid Rain Program" means the sulfur dioxide and nitrogen oxides air pollution control program established pursuant to Title IV of the Act under 40 CFR Parts 72-78.

"Act" means the Clean Air Act, 42 U.S.C. Section 7401, et seq, as amended on November 15, 1990.

"Affected unit" means a unit or source that is subject to any emission reduction requirement or limitation under the Acid Rain Program, the CAIR, the CSAPR, or the MATS, or a unit or source that opts in under 40 CFR Part 74, dated April 4, 1995.

"Allowance" means an authorization, allocated by the United States Environmental Protection Agency (EPA), to emit sulfur dioxide (SO_2) under the Acid Rain Program or SO_2 and nitrogen oxide (NOx) under the CAIR, and the CSAPR during or after a specified calendar year.

"Allowance futures contract" is an agreement between a futures exchange clearinghouse and a buyer or seller to buy or sell an allowance on a specified future date at a specified price.

"Capacity" means the instantaneous rate at which energy can be delivered, received, or transferred, measured in kilowatts (kW).

"Clean Air Interstate Rule" or *"CAIR"* means the requirements EPA published in the Federal Register (70 Fed. Reg. 25161) on May 12, 2005.

"Code of Federal Regulations" or *"CFR"* means the Code of Federal Regulations, which contains the general administrative rules adopted by federal departments and agencies, in effect as of [effective date of chapter], unless a separate effective date is identified in a specific rule.

"Complaint," as used in this chapter, is a statement or question by anyone, whether a utility customer or not, alleging a wrong, grievance, injury, dissatisfaction, illegal action or procedure, dangerous condition or action, or utility obligation.

"Compliance plan" means the document submitted for an affected source to the EPA that specifies the methods by which each affected unit at the source will meet the applicable emissions limitation and emissions reduction requirements.

"Cross-State Air Pollution Rule" or *"CSAPR"* means the requirements established by EPA in 40 CFR 97 Subparts AAAAA, BBBBB, CCCCC, and DDDDD as amended by 81 FR 13275 (March 14, 2016).

"Customer" means any person, firm, association, or corporation, any agency of the federal, state, or local government, or legal entity responsible by law for payment for the electric service or heat from the electric utility.

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"Delinquent" or *"delinquency"* means an account for which a service bill or service payment agreement has not been paid in full on or before the last day for timely payment.

"Distribution line" means any single or multiphase electric power line operating at nominal voltage in either of the following ranges: 2,000 to 26,000 volts between ungrounded conductors or 1,155 to 15,000 volts between grounded and ungrounded conductors, regardless of the functional service provided by the line.

"Electric plant" includes all real estate, fixtures, and property owned, controlled, operated, or managed in connection with or to facilitate production, generation, transmission, or distribution, in providing electric service or heat by an electric utility.

"Electric service" is furnishing to the public for compensation any electricity, heat, light, power, or energy.

"Emission for emission trade" is an exchange of one type of emission for another type of emission. For example, the exchange of SO_2 emission allowances for NOx emission allowances.

"Energy" means electric energy measured in kilowatt hours (kWh).

"Mercury and Air Toxics Standards" or *"MATS"* means the requirements established by EPA in 40 CFR Parts 60 and 63 regarding limits of power plant emissions of toxic air pollutants (February 16, 2012).

"Meter" means, unless otherwise qualified, a device that measures and registers the integral of an electrical quantity with respect to time.

"Power" means electric power measured in kW.

"Price hedging" means using futures contracts or options to guard against unfavorable price changes.

"Rate-regulated utility" means any utility, as defined in subrule 20.1(3), which is subject to rate regulation under Iowa Code chapter 476.

"Secondary line" means any single or multiphase electric power line operating at nominal voltage less than either 2,000 volts between ungrounded conductors or 1,155 volts between grounded and ungrounded conductors, regardless of the functional service provided by the line.

"Service limitation" means the establishment of a limit on the amount of power that may be consumed by a residential customer through the installation of a service limiter on the customer's meter.

"Service limiter" or *"service limitation device"* means a device that limits a residential customer's power consumption to 3,600 watts (or some higher level of usage approved by the commission) and that resets itself automatically, or can be reset manually by the customer, and may also be reset remotely by the utility at all times.

"Speculation" means using futures contracts or options to profit from expectations of future price changes.

"Tariff" means the entire body of rates, tolls, rentals, charges, classifications, rules, procedures, policies, etc., adopted and filed with the commission by an electric utility in fulfilling its role of furnishing service.

"Timely payment" means a payment on a customer's account made on or before the date shown on a current bill for service, or on a form, which records an agreement between the customer and a utility for a series of partial payments to settle a delinquent account, as the date that determines application of a late payment charge to the current bill or future collection efforts.

"Transmission line" means any single or multiphase electric power line operating at nominal voltages at or in excess of either 69,000 volts between ungrounded conductors or 40,000 volts between grounded and ungrounded conductors, regardless of the functional service provided by the line.

"Uniform System of Accounts" means the Uniform System of Accounts as effective on October 11, 2016.

"Utility" means any person, partnership, business association, or corporation, domestic or foreign, owning or operating any facilities for providing electric service or heat to the public for compensation.

"Vintage trade" means an exchange of one vintage of allowances for another vintage of allowances with the difference in value between vintages being cash or additional allowances.

"Weighted average unit cost of inventoried allowances" equals the dollars in inventory at the end of the month divided by the total allowances available for use at the end of the month.

20.1(4) *Abbreviations.* The following abbreviations, when used in these rules, have the following meanings:

ANSI—American National Standards Institute

DOE—Department of Energy

FERC—Federal Energy Regulatory Commission

NFPA—National Fire Protection Association

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199—20.2(476) Records, reports, and tariffs.

20.2(1) *Location and retention of records.* Unless otherwise specified by this chapter, all records required by these rules shall be kept and preserved in accordance with the applicable provisions of 199—Chapter 18(476,546).

20.2(2) *Tariffs to be filed with the commission.* The schedules of rates and rules of rate-regulated electric utilities shall be filed with the commission and shall be classified, designated, arranged, and submitted so as to conform to the requirements of this chapter. Provisions of the schedules shall be definite and so stated as to minimize ambiguity or the possibility of misinterpretation. The form, identification, and content of tariffs shall be in accordance with these rules. A rate-regulated electric utility's current tariff will be made available through the commission's electronic filing system (EFS).

20.2(3) *Form and identification.* All tariffs shall conform to the following rules:

a. The tariff shall be filed electronically using the commission's EFS. The filed tariff shall be capable of being reproduced on 8½- × 11-inch paper so customers may readily view and reproduce copies of the tariff. A tariff filed with the commission may be the same format as is required by a federal agency provided that the rules of the commission as to title page; identity of superseding, replacing, or revision sheets; identity of amending sheets; identity of the filing utility, issuing official, date of issue, effective date; and the words "Electric Tariff filed with Iowa Utilities Commission" shall apply in the modification of the federal agency format for the purposes of filing with this commission.

b. The title page of every tariff and supplement show:

(1) The first page shall be the title page, which shall show:

(Name of Public Utility)
Electric Tariff
Filed with
Iowa Utilities Commission
(Date)

(2) When a tariff is to be superseded or replaced in its entirety, the replacing tariff shall show on the upper right corner of its title page that it supersedes a tariff on file and the number being superseded or replaced, for example:

tariff no.
supersedes tariff no.

(3) When a new part of a tariff eliminates an existing part of a tariff it shall so state and clearly indicate the part eliminated.

(4) Any tariff modifications as defined above shall be marked in the right-hand margin of the replacing tariff sheet with symbols described below to indicate the place, nature, and extent of the change in text.

—Symbols—

(C)—Changed regulation
(D)—Discontinued rate or regulation
(I)—Increase in rate or new treatment resulting in increased rate
(L)—Changed text location
(N)—New rate, treatment, or regulation
(R)—Reduction in rate or new treatment resulting in reduced rate
(T)—Change in text only

c. All sheets except the title page shall have, in addition to the above-stated requirements, the following information:

(1) Name of utility, followed by the words "Electric Tariff filed with Iowa Utilities commission." If the utility is not a corporation, and a trade name is used, the name of the individual or partners must precede the trade name.

(2) Issuing official and issue date.

(3) Effective date (to be left blank by rate-regulated utilities).

d. All sheets except the title page shall have the following form:

(Company Name)	(Part identification)
Electric Tariff	(This sheet identification)
Filed with commission	(Canceled sheet identification, if any)

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	(Content or tariff)
Issued: (Date)	Effective:
Issued by: (Name, title)	(Proposed Effective Date:)

The issued date is the date the tariff or the amended sheet content was adopted by the utility.

The effective date will be left blank by rate-regulated utilities and shall be determined by the commission. The utility may propose an effective date in the cover letter or interpretation submitted with the tariff. In lieu of a proposed effective date, the utility can provide the date of the month the utility would like the tariff to become effective in the cover letter or interpretation.

20.2(4) *Content of tariffs.*

a. A table of contents containing a list of rate schedules and other sections in the order in which they appear showing the sheet numbers of the first page of each rate schedule or other section. In the event the utility filing the tariff elects to segregate a section, such as general rules from the section containing the rate schedules or other sections, it may at its option prepare a separate table of contents for each such segregated section.

b. A preliminary statement containing a brief general explanation of the utility's operations.

c. All rates for service with indication for each rate of the type and voltage of service and the class of customers to which each rate applies. There shall also be shown any limitations on loads and type of equipment that may be connected, the net prices per unit of service and the number of units per billing period to which the net prices apply, the period of billing, the minimum bill, any effect of transformer capacity upon minimum bill or upon the number of kWh in any step of the rate, method of measuring demands, method of calculating or estimating loads in cases where transformer capacity has a bearing upon minimum bill or size of rate steps, level payment plan, and any special terms or conditions applicable. The period during which the net amount may be paid before the account becomes delinquent shall be specified. In any case where net and gross amounts are billed, the difference between net and gross is a late payment charge and shall be so specified.

d. The voltage and type of service, (direct current or single or polyphase alternating current) supplied in each municipality, but without reference required to any particular part thereof.

e. Forms of standard contracts required of customers for the various types of service available.

f. If service to other utilities or municipalities is furnished at a standard filed rate, either a copy of each signed contract or a copy of the standard uniform contract form together with a summary of the provisions of each signed contract. The summary shall show the principal provisions of the contract and include the name and address of the customer, the points where energy is delivered, rate, term, minimum, load conditions, voltage of delivery, and any special provisions such as rentals.

g. Copies of special contracts for the purchase, sale, or interchange of electrical energy. All tariffs must provide that, notwithstanding any other provision of this tariff or contract with reference thereto, all rates and charges contained in this tariff or contract with reference thereto may be modified at any time by a subsequent filing made pursuant to the provisions of Iowa Code chapter 476.

h. A list of all communities in which service is furnished.

i. The list of service areas and the rates shall be filed in a form to facilitate ready determination of the rates available in each municipality and in unincorporated communities that have service. Any areas with the same rates shall be indicated.

j. Definitions of classes of customers.

k. Extension rules for extending service to new customers indicating what portion of the extension or cost thereof will be furnished by the utility; and if the rule is based on cost, the items of cost included.

l. Type of construction that the utility requires the customer to provide if in excess of the Iowa electric safety code or the requirements of the municipality having jurisdiction, whichever may be the most stringent.

m. Specification of such portions of service as the utility furnishes, owns, and maintains, such as service drop, service entrance cable or conductors, conduits, service entrance equipment, meter, and socket. Indication of the portions of interior wiring such as range or water heater connection, furnished in whole or in part by the utility, and statement indicating final ownership and responsibility for maintaining equipment furnished by utility.

n. Statement of the type of special construction commonly requested by customers that the utility allows to be connected, and terms upon which such construction will be permitted, with due provision for the avoidance of unjust

discrimination as between customers who request special construction and those who do not. This applies, for example, to a case where a customer desires underground service in overhead territory.

o. Rules with which prospective customers must comply as a condition of receiving service, and the terms of contracts required.

p. Rules governing the establishment and maintenance of credit by customers for payment of service bills.

q. Rules governing the procedure followed in disconnecting and reconnecting service.

r. Notice required from a customer for having service discontinued.

s. Rules covering temporary, emergency, auxiliary, and stand-by service.

t. Rules covering the type of equipment that may or may not be connected, including rules such as those requiring demand-limiting devices or power-factor corrective equipment.

u. General statement of the method used in making adjustments for wastage of electricity when accidental grounds exist without the knowledge of the customer.

v. Statements of utility rules on meter reading, bill issuance, customer payment, notice of delinquency, and service discontinuance for nonpayment of bill.

w. Rules for extending service in accordance with subrule 20.3(13).

x. If a sliding scale or automatic adjustment is applicable to regulated rates and charges of billed customers, the manner and method of such adjustment calculation shall be covered through a detailed explanation.

y. Rules on how a customer or prospective customer should file a complaint with the utility, and how the complaint will be processed.

z. Rules on how a customer, disconnected customer, or potential customer for residential service may negotiate for a payment agreement on amount due, determination of even payment amounts, and time allowed for payments.

20.2(5) *Annual, periodic, and other reports to be filed with the commission.*

a. System map verification. The utility shall file annually a verification that it has a currently correct set of utility system maps in accordance with the general requirements of subrule 20.3(11) and a statement as to the location of the utility's offices where such maps, except those deemed confidential by the commission, are accessible and available for examination by the commission or its agents. The verification and map location information shall also be reported to the commission upon other occasions when significant changes occur in either the maps or location of the maps.

b. Electric service record. Each utility shall compile a monthly record of electric service showing the production, acquisition, and disposition of electric energy, the number of customer terminal voltage investigations made, the number of customer meters tested, and such other information as may be required by the commission. The monthly "Electric Service" record shall be compiled not later than 30 days after the end of the month covered and such record shall, upon and after compilation, be kept available for inspection by the commission or its staff at the utility's principal office within the state of Iowa. A summary of the 12 monthly "Electric Service" records for each calendar year shall be attached to and submitted with the utility's annual report to the commission.

c. The utility shall keep the commission informed currently by written notice as to the location at which the utility keeps the various classes of records required by these rules.

d. The utility's current rules, if any, published or furnished by the utility for the use of engineers, architects, electrical contractors, etc., covering meter and service installations shall be maintained and made available to the commission upon request.

e. A copy of each type of customer bill form in current use shall be filed with the commission.

f. A copy of the adjustment calculation shall be provided to the commission prior to each billing cycle on the forms adopted by the commission.

g. Residential customer statistics. Each rate-regulated electric utility shall file with the commission on or before the fifteenth day of each month one copy of the following residential customer statistics for the preceding month:

(1) Number of accounts;

(2) Number of accounts certified as eligible for energy assistance since the preceding October 1;

(3) Number of accounts past due;

(4) Number of accounts eligible for energy assistance and past due;

(5) Total revenue owed on accounts past due;

(6) Total revenue owed on accounts eligible for energy assistance and past due;

(7) Number of disconnection notices issued;
(8) Number of disconnection notices issued on accounts eligible for energy assistance;
(9) Number of disconnections for nonpayment;
(10) Number of reconnections;
(11) Number of accounts determined uncollectible; and
(12) Number of accounts eligible for energy assistance and determined uncollectible.

h. List of persons authorized to receive commission inquiries. Each utility shall file with the commission in the annual report required in the "General Information" rule of 199— Chapter 23(476) a list of names, titles, addresses, and telephone numbers of persons authorized to receive, act upon, and respond to communications from the commission in connection with: (1) general management duties; (2) customer relations (complaints); (3) engineering operations; (4) meter tests and repairs; (5) franchises for electric lines; and (6) certificates for electric generating plants; (7) outages and interruptions 24 hours a day. The contact information required by this paragraph shall be kept current as changes or corrections are made.

This rule is intended to implement Iowa Code section 476.2.

199—20.3(476) General service requirements.

20.3(1) *Disposition of electricity.* The utility shall own the meter and associated instrument transformers, own or control the wiring between the instrument transformers and the meter, and place a visible seal on all meters in customer use in a manner the seal must be broken to gain entry.

a. For purposes of this subrule, the following definitions shall apply:

"Master meter" means a single meter used in determining the amount of electricity provided to a multi-occupancy building or multiple buildings.

"Multi-occupancy building" means a building that contains two or more units for occupancy or premises.

b. All electricity sold by a utility shall be on the basis of meter measurement except:

(1) Where the consumption of electricity may be readily computed without metering; or
(2) For temporary service installations not otherwise metered.

c. The amount of all electricity delivered to multi-occupancy buildings, where units are separately rented or owned, shall be measured on the basis of individual meter measurement for each unit, except in the following instances:

(1) Where electricity is used in centralized heating, cooling, water-heating, or ventilation systems;
(2) Where a facility is designated for elderly or handicapped persons;
(3) Where submetering or resale of service was permitted prior to 1966;
(4) Where individual metering is impractical. "Impractical" means:

1. Conditions or structural barriers exist in the multi-occupancy building that would make individual meters unsafe or physically impossible to install; or
2. The cost of providing individual metering exceeds the long-term benefits of individual metering; or

(5) Where the benefits of individual metering (reduced and controlled energy consumption) are more effectively accomplished through a master meter arrangement.

1. A new multi-occupancy building qualifies for master metering under this subparagraph if the predicted annual energy use would result in at least a 30 percent energy savings compared to the predicted annual energy use of a new building meeting the requirements of the State of Iowa Energy Code and operating with equipment, fixtures, and appliances meeting federal energy standards for manufactured devices for a new building.
2. An existing multi-occupancy building qualifies for master metering under this subparagraph when the predicted annual energy use would result in at least a 20 percent energy savings compared to the building's current annual energy usage levels.
3. Credits for on-site renewable energy generation shall not be taken into account when determining the predicted energy savings.
4. A report from a qualified, independent third party stating that the proposed building or renovation will meet the energy savings requirements of this subparagraph shall establish a rebuttable presumption of eligibility for master metering. "Qualified, independent third party" means a licensed architect or engineer, a certified residential energy services network home energy rating system rater, or any other professional deemed qualified by the commission.

If a multi-occupancy building is master-metered, the end-user occupants may be charged for electricity as an unidentified portion of the rent, condominium fee, or similar payment, or, if some other method of allocating the cost of the electric

service is used, the total charge for electric service shall not exceed the total electric bill charged by the utility for the same period.

d. Master metering to multiple buildings is prohibited, except for multiple buildings owned by the same person or entity. Multi-occupancy buildings within a multiple building complex may be master-metered pursuant to this paragraph only if the requirements of paragraph 20.3(1)*"c"* have been met.

e. This rule shall not be construed to prohibit any utility from requiring more extensive individual metering than otherwise required by this rule if pursuant to tariffs filed with and approved by the commission.

f. All electricity consumed by the utility shall be on the basis of meter measurement except where consumption may be readily computed without metering, or where metering is impractical.

20.3(2) *Meter reading records.* The meter reading records shall show:

a. Customer's name, address, and rate schedule or identification of rate schedule.

b. Identification of the meter or meters either by permanently marked utility number or by manufacturer's name, type number, and serial number.

c. Meter readings.

d. If the reading has been estimated.

e. Any applicable multiplier or constant.

20.3(3) *Meter register.* If it is necessary to apply a multiplier to the meter readings, the multiplier must be marked on the face of the meter register or stenciled in weather-resistant paint upon the front cover of the meter. Customers shall have continuous visual access to meter registers as a means of verifying the accuracy of bills presented to them and for implementing such energy conservation initiatives as they desire, except in the individual locations where the utility has experienced vandalism to windows in the protective enclosures. Where remote meter reading is used, whether outdoor on premises or off premises automated, the customer shall also have readable meter registers at the meter. A utility may comply with the requirements of this subrule by making the required information available via the Internet or other equivalent means.

Where a delayed processing means is used, the utility may comply by having readable kWh registers only, visually accessible.

In instances in which the utility has determined that readable access, to locations existing July 1, 1981, will create a safety hazard, the utility is exempted from the access provisions above.

In instances when a building owner has determined that unrestricted access to tenant metering installation would create a vandalism or safety hazard, the utility is exempted from the access provision above.

Continuing efforts should be made to eliminate or minimize the number of restricted locations. The utility should assist affected customers in obtaining meter register information.

20.3(4) *Meter reading and billing interval.* Readings of all meters used for determining charges and billings to customers shall be scheduled at least monthly and for the beginning and termination of service. Bills to larger customers may, for good cause, be provided weekly or daily for a period not to exceed one month. Intervals other than monthly shall not be applied to smaller customers, or to larger customers after the initial month provided above, without a waiver from the commission. If the commission denies a waiver, or if a waiver is not sought with respect to a high-demand customer after the initial month, that customer's meter shall be read monthly for the next 12 months. The group of larger customers to which shorter billing intervals may be applied shall be specified in the utility's tariff sheets, but shall not include residential customers.

An effort shall be made to obtain readings of the meters on corresponding days of each meter reading period. When the meter reading date causes a given billing period to deviate by more than 10 percent (counting only business days) from the normal meter reading period, such bills shall be prorated on a daily basis.

In the event that the utility leaves a meter reading form with the customer when access to meters cannot be gained and the form is not returned in time for the billing operation, an estimated bill may be provided.

If an actual meter reading cannot be obtained, the utility may provide an estimated bill without reading the meter or supplying a meter reading form to the customer. Only in unusual cases or when approval is obtained from the customer shall more than three consecutive estimated bills be provided.

20.3(5) *Demand meter registration.* When a demand meter is used for billing, the meter installation should be designed so that the highest expected annual demand reading to be used for billing will appear in the upper half of the meter's range.

20.3(6) *Service areas.* Service areas are defined by the boundaries on service area maps. Electronic maps are available for viewing during regular business hours at the commission's offices and on the commission's website.

20.3(7) *Modification of service area and answers.*

a. An exclusive service area is subject to modification through a contested case proceeding that may be commenced by filing a petition for modification of service area with the commission. The commission may commence a service area modification proceeding on its own motion. In determining whether the modification is in the public interest, the commission will consider the factors described in Iowa Code section 476.25(1) and any other relevant factors.

b. An electric utility may file a petition for modification of service area containing (1) a legal description of the service area desired, (2) a designation of the utilities involved in each boundary section, (3) a justification for the proposed service area modification, and (4) in addition to the PDF (Portable Document Format) required in the "Paper copies required" subrule of 199—Chapter 14(17A,476), an electronic file of the proposed service area boundaries, in a format designated by the commission, as described on the EFS homepage under EFS Filing Standards. The justification shall include a detailed statement of why the proposed modification is in the public interest. A map showing the affected areas that complies with paragraph 20.3(11)*"a"* shall be attached to the petition as an exhibit.

c. Electric utilities may agree to service area modifications by contract pursuant to Iowa Code section 476.25(2).

20.3(8) *Certificate of authority.* Any electric utility or municipal corporation requesting a service territory modification pursuant to subrule 20.3(9) that would result in service to a customer by a utility other than the utility currently serving the customer must also petition the commission for a certificate of authority under Iowa Code section 476.23. The electric utility or municipal corporation shall pay the party currently serving the customer a reasonable price for the facilities serving the customer.

20.3(9) *Maps.*

a. Each utility shall maintain a current map or set of maps, including KMZ or other similar format, showing the physical location of electric lines, stations, and electric transmission facilities for its service areas, which include the exact location of the following:

(1) Generating stations with capacity designation.
(2) Purchased power supply points with maximum contracted capacity designation.
(3) Purchased power metering points if located at other than power delivery points.
(4) Transmission lines with size and type of conductor designation and operating voltage designation.
(5) Transmission-to-transmission voltage transformation substations with transformer voltage and capacity designation.
(6) Transmission-to-distribution voltage transformation substations with transformer voltage and capacity designation.
(7) Distribution lines with size and type of conductor designation, phase designation, and voltage designation.
(8) All points at which transmission, distribution, or secondary lines of the utility cross Iowa state boundaries.
(9) All current information required in Iowa Code section 476.24(1).
(10) All county boundaries and county names.
(11) Natural and artificial lakes that cover more than 50 acres and all rivers.
(12) Any additional information required by the commission.

b. All maps, except those deemed confidential by the commission, shall be available for examination at the utility's designated offices during the utility's regular office hours or on the utility's website. The maps shall be drawn with clean, uniform lines to a scale of one inch per mile. A large scale shall be used where it is necessary to clarify areas where there is a heavy concentration of facilities. All cartographic details shall be clean cut, and the background shall contain little or no coloration or shading.

20.3(10) *Prepayment meters.* Prepayment meters shall not be geared or set so as to result in the charge of a rate or amount higher than would be paid if a standard type meter were used, except under tariffs approved by the commission.

20.3(11) *Plant additions, electrical line extensions, and service lines.*

a. Definitions. The following definitions shall apply to the terms used in this subrule:

"Advance for construction" means cash payments or equivalent surety made to the utility by an applicant for an extensive plant addition or an electrical line extension, portions of which may be refunded depending on the attachment of any subsequent service line made to the extensive plant addition or electrical line extension. Cash payments or equivalent surety shall include a grossed-up amount for the income tax effect of such revenue. The amount of tax shall be reduced by the present value of the tax benefits to be obtained by depreciating the property in determining tax liability.

"Agreed-upon attachment period" means a period of not less than 30 days nor more than one year mutually agreed upon by the utility and the applicant within which the customer will attach. If no time period is mutually agreed upon, the agreed-

upon attachment period shall be deemed to be 30 days.

"Contribution in aid of construction" means a nonrefundable cash payment grossed-up for the income tax effect of such revenue covering the costs of a service line that are in excess of costs paid by the utility. The amount of tax shall be reduced by the present value of the tax benefits to be obtained by depreciating the property in determining the tax liability.

"Electrical line extensions" means distribution line extensions and secondary line extensions as defined in subrule 20.1(3), except for service lines as defined in this subrule.

"Equivalent overhead transformer cost" is that transformer capitalized cost, or fraction thereof, that would be required for similarly situated customers served by a pole-mounted or platform-mounted transformer(s). For each overhead service, it is the capitalized cost of the transformer(s) divided by the number of customers served by that transformer(s). For each underground service, it is the capitalized cost of an overhead transformer(s) with the same voltage and volt-ampere rating divided by the number of customers served by that transformer(s).

"Estimated annual revenues" is calculated based upon the following factors, including, but not limited to: The size of the facility to be used by the customer, the size and type of equipment to be used by the customer, the average annual amount of service required by the equipment, and the average number of hours per day and days per year the equipment will be in use.

"Estimated base revenues" is calculated by subtracting the fuel expense costs as described in the uniform system of accounts as adopted by the commission and energy efficiency charges from the estimated annual revenues.

"Estimated construction costs" is calculated using average current costs in accordance with good engineering practices and upon the following factors: amount of service required or desired by the customer requesting the electrical line extension or service line; size, location, and characteristics of the electrical line extension or service line, including appurtenances, except equivalent overhead transformer cost; and whether the ground is frozen or whether other adverse conditions exist. In no event shall estimated construction costs include costs associated with facilities built for the convenience of the utility. The customer shall be charged actual permit fees in addition to estimated construction costs. Permit fees are to be paid regardless of whether the customer is required to pay an advance for construction or a nonrefundable contribution in aid of construction, and the cost of any permit fee is not refundable.

"Plant addition" means any additional plant required to be constructed to provide service to a customer other than an electrical line extension or service line.

"Point of attachment" is that point of first physical attachment of the utilities' service drop (overhead) or service lateral (underground) conductors to the customer's service entrance conductors. For overhead services it shall be the point of tap or splice to the service entrance conductors. For underground services it shall be the point of tap or splice to the service entrance conductors in a terminal box or meter or other enclosure with adequate space inside or outside the building wall. If there is no terminal box, meter, or other enclosure with adequate space, it shall be the point of entrance into the building.

"Service line" means any secondary line extension, as defined in subrule 20.1(3), on private property serving a single customer or point of attachment of electric service.

"Similarly situated customer" means a customer whose annual consumption or service requirements, as defined by estimated annual revenue, are approximately the same as the annual consumption or service requirements of other customers.

"Utility" means a rate-regulated utility.

b. Plant additions. The utility shall provide all electric plant at its cost and expense without requiring an advance for construction from customers or developers except in those unusual circumstances where extensive plant additions are required before the customer can be served. A written contract between the utility and the customer that requires an advance for construction by the customer to make plant additions shall be available for commission inspection.

c. Electrical line extensions. Where the customer will attach to the electrical line extension within the agreed-upon attachment period after completion of the electrical line extension, the following shall apply:

(1) The utility shall finance and make the electrical line extension for a customer without requiring an advance for construction if the estimated construction costs to provide an electrical line extension are less than or equal to three times estimated base revenue calculated on the basis of similarly situated customers. The utility may use a feasibility model, rather than three times estimated base revenue, to determine what, if any, advance for construction is required by the customer. The utility shall file a summary explaining the inputs into the feasibility model and a description of the model as part of the utility's tariff. Whether or not the construction of the electrical line extension would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees, and the permit fees are not refundable.

(2) If the estimated construction cost to provide an electrical line extension is greater than three times estimated base

revenue calculated on the basis of similarly situated customers, the applicant for the electrical line extension shall contract with the utility and make, no more than 30 days prior to commencement of construction, an advance for construction equal to the estimated construction cost less three times estimated base revenue to be produced by the customer. The utility may use a feasibility model to determine whether an advance for construction is required. The utility shall file a summary explaining the inputs into the feasibility model and a description of the model as part of the utility's tariff. A written contract between the utility and the customer shall be available for commission inspection upon request. Whether or not the construction of the electrical line extension would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees, and the permit fees are not refundable.

(3) Where the customer will not attach within the agreed-upon attachment period after completion of the electrical line extension, the applicant for the electrical line extension shall contract with the utility and make, no more than 30 days prior to the commencement of construction, an advance for construction equal to the estimated construction cost. The utility may use a feasibility model to determine the amount of the advance for construction. The utility shall file a summary explaining the inputs into the feasibility model and a description of the model as part of the utility's tariff. A written contract between the utility and the customer shall be available for commission inspection upon request. Whether or not the construction of the electrical line extension would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees, and the permit fees are not refundable.

(4) Advances for construction may be paid by cash or equivalent surety and shall be refundable for ten years. The customer has the option of providing an advance for construction by cash or equivalent surety unless the utility determines that the customer has failed to comply with the conditions of a surety in the past.

(5) Refunds. When the customer is required to make an advance for construction, the utility shall refund to the depositor for a period of ten years from the date of the original advance a pro-rata share for each service line attached to the electrical line extension. The pro-rata refund shall be computed in the following manner:

1. If the combined total of three times estimated base revenue, or the amount allowed by the feasibility model, for the electrical line extension and each service line attached to the electrical line extension exceeds the total estimated construction cost to provide the electrical line extension, the entire amount of the advance for construction provided will be refunded.
2. If the combined total of three times estimated base revenue, or the amount allowed by the feasibility model, for the electrical line extension and each service line attached to the electrical line extension is less than the total estimated construction cost to provide the electrical line extension, the amount to be refunded will equal three times estimated base revenue, or the amount allowed by the feasibility model, when a service line is attached to the electrical line extension.
3. In no event will the total amount to be refunded exceed the amount of the advance for construction. Any amounts subject to refund will be paid by the utility without interest. At the expiration of the above-described ten-year period, the advance for construction record will be closed and the remaining balance will be credited to the respective plant account.

(6) The utility shall keep a record of each work order under which the electrical line extension was installed, to include the estimated revenues, the estimated construction costs, the amount of any payment received, and any refunds paid.

d. Service lines.

(1) The utility shall finance and construct either an overhead or underground service line without requiring a nonrefundable contribution in aid of construction or any payment by the applicant where the length of the overhead service line to the first point of attachment is up to 50 feet on private property or where the cost of the underground service line to the meter or service disconnect is less than or equal to the estimated cost of constructing an equivalent overhead service line of up to 50 feet.

(2) Where the length of the overhead service line exceeds 50 feet on private property, the applicant shall be required to provide a nonrefundable contribution in aid of construction for that portion of the service line on private property, exclusive of the point of attachment, within 30 days after completion. The nonrefundable contribution in aid of construction for that portion of the service line shall be computed as follows:

$$\text{(Estimated Construction Costs)} \times \frac{\text{(Total Length in Excess of 50 Feet)}}{\text{(Total Length of Service Line)}}$$

(3) Where the cost of the underground service line exceeds the estimated cost of constructing an equivalent overhead

service line of up to 50 feet, the applicant shall be required to provide a nonrefundable contribution in aid of construction within 30 days after completion equal to the difference between the estimated cost of constructing the underground service line and the estimated cost of constructing an equivalent overhead service line of up to 50 feet.

(4) A utility may adopt a tariff or rule that allows the utility to finance and construct a service line of more than 50 feet without requiring a nonrefundable contribution in aid of construction from the customer if the tariff or rule applies equally to all customers or members.

(5) Whether or not the construction of the service line would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees.

e. Extensions not required. Utilities shall not be required to make electrical line extensions or install service lines as described in this subrule, unless the electrical line extension or service line shall be of a permanent nature. When the utility provides a temporary service to a customer, the utility may require that the customer bear all the cost of installing and removing the service in excess of any salvage realized.

f. Different payment arrangement. This subrule shall not be construed as prohibiting any utility from making a contract with a customer using a different payment arrangement, if the contract provides a more favorable payment arrangement to the customer, so long as no discrimination is practiced among customers.

This rule is intended to implement Iowa Code section 476.8.

199—20.4(476) Customer relations.

20.4(1) *Customer information.* Each utility shall:

a. Maintain up-to-date maps, plans, or records of its entire transmission and distribution systems, together with such other information as may be necessary to enable the utility to advise prospective customers, and others entitled to the information, as to the facilities available for serving prospective customers in its service area.

b. Assist the customer or prospective customer in selecting the most economical rate schedule available for the customer's proposed type of service.

c. Notify customers affected by a change in rates or schedule classification in the manner provided in the rules of practice and procedure before the commission. ("Compliance Filings and Tariffs" rule of 199—Chapter 26(476))

d. Post a notice in a conspicuous place in each office of the utility where applications for service are received, informing the public that copies of the rate schedules and rules relating to the service of the utility, as filed with the commission, are available for public inspection. The utility shall provide access to its rate schedules and rules for service on its website and the notice shall include the website address.

e. Upon request, inform its customers as to the method of reading meters.

f. State, on the bill form, that tariff and rate schedule information is available upon request at the utility's local business office or on the utility's website. If the utility provides access to its tariff and rate schedules on its website, the bill form shall include the website address.

g. Upon request, transmit a statement of either the customer's actual consumption, or degree day adjusted consumption, at the company's option, of electricity for each billing during the prior 12 months.

h. Furnish such additional information as the customer may reasonably request.

20.4(2) *Customer contact employee qualifications.* Each utility shall promptly and courteously resolve inquiries for information or complaints. Employees who receive customer telephone calls and office visits shall be qualified and trained in screening and resolving complaints, to avoid a preliminary recitation of the entire complaint to employees without ability and authority to act. The employee shall provide identification to the customer that will enable the customer to reach that employee again if needed.

a. Each utility shall notify its customers, by bill insert or notice on the bill form, of the address and telephone number where a utility representative qualified to assist in resolving the complaint can be reached. The bill insert or notice shall also include the following statement: "If (utility name) does not resolve your complaint, you may request assistance from the Iowa Utilities Commission by calling 515.725.7300, or toll-free 877.565.4450, or by writing to 1375 E. Court Avenue, Des Moines, Iowa 50319, or by email to customer@iuc.iowa.gov."

b. The bill insert or notice on the bill shall be provided monthly.

20.4(3) *Customer deposits.*

a. Each utility may require from any customer or prospective customer a deposit intended to guarantee partial payment of bills for service. Each utility shall allow a person other than the customer to pay the customer's deposit. In lieu of a cash

deposit, the utility may accept the written guarantee of a surety or other responsible party as surety for an account. Upon termination of a guarantee contract, or whenever the utility deems the contract insufficient as to amount or surety, a cash deposit or a new or additional guarantee may be required for good cause upon written notice.

b. A new or additional deposit may be required from a customer when a deposit has been refunded or is found to be inadequate. Written notice shall be mailed advising the customer of any new or additional deposit requirement. The customer shall have no less than 12 days from the date of mailing to comply. The new or additional deposit shall be payable at any of the utility's business offices or local authorized agents. An appropriate receipt shall be provided. No written notice is required to be given of a deposit required as a prerequisite for commencing initial service.

c. No deposit shall be required as a condition for service other than determined by application of either credit rating or deposit calculation criteria, or both, of the filed tariff.

d. The total deposit for any residential or commercial customer for a place that has previously received service shall not be greater than the highest billing of service for one month for the place in the previous 12-month period. The deposit for any residential or commercial customer for a place that has not previously received service, or for an industrial customer, shall be the customer's projected one-month usage for the place to be served as determined by the utility, or as may be reasonably required by the utility in cases involving service for short periods or special occasions.

20.4(4) *Interest on customer deposits.* Interest shall be paid by the rate-regulated utility to each customer required to make a deposit. Rate-regulated utilities shall compute interest on customer deposits at 7.5 percent per annum, compounded annually. Interest shall be paid for the period beginning with the date of deposit to the date of refund or to the date that the deposit is applied to the customer's account, or to the date the customer's bill becomes permanently delinquent. The date of refund is that date on which the refund or the notice of deposit refund is forwarded to the customer's last-known address. The date a customer's bill becomes permanently delinquent, relative to an account treated as an uncollectible account, is the most recent date the account became delinquent.

20.4(5) *Customer deposit records.* Each utility shall keep records to show:

a. The name and address of each depositor.

b. The amount and date of the deposit.

c. Each transaction concerning the deposit.

20.4(6) *Customer's receipt for a deposit.* Each utility shall issue a receipt of deposit to each customer from whom a deposit is received, and shall provide means whereby a depositor may establish claim if the receipt is lost.

20.4(7) *Deposit refund.* A deposit shall be refunded after 12 consecutive months of prompt payment, ~~(~~which may be 11 timely payments and 1 automatic forgiveness of late payment~~)~~. For refund purposes the account shall be reviewed for prompt payment after 12 months of service following the making of the deposit and for each 12-month interval terminating on the anniversary of the deposit. However, deposits received from customers subject to the exemption provided by 20.4(3)*"b,"* including surety deposits, may be retained by the utility until final billing. Upon termination of service, the deposit plus accumulated interest, less any unpaid utility bill of the customer, shall be reimbursed to the person who made the deposit.

20.4(8) *Unclaimed deposits.* The utility shall make a reasonable effort to return each unclaimed deposit and accrued interest after the termination of the services for which the deposit was made. The utility shall maintain a record of deposit information for at least two years or until such time as the deposit, together with accrued interest, escheats to the state pursuant to Iowa Code section 556.4, at which time the record and deposit, together with accrued interest less any lawful deductions, shall be sent to the state treasurer pursuant to Iowa Code section 556.11.

20.4(9) *Customer bill forms.* Each customer shall be informed as promptly as possible following the reading of the customer's meter, on bill form or otherwise, of the following:

a. The reading of the meter at the beginning and at the end of the period for which the bill is provided.

b. The dates on which the meter was read, at the beginning and end of the billing period.

c. The number and kind of units metered.

d. The applicable rate schedule, with the identification of the applicable rate classification.

e. The account balance brought forward and amount of each net charge for rate-schedule-priced utility service, sales tax, other taxes, late payment charge, and total amount currently due. In the case of prepayment meters, the amount of money collected shall be shown.

f. The last date for timely payment shall be clearly shown and shall be not less than 20 days after the bill is provided.

g. A distinct marking to identify an estimated bill.

h. A distinct marking to identify a minimum bill.

i. Any conversions from meter reading units to billing units, or any calculations to determine billing units from recording or other devices, or any other factors, such as sliding scale or automatic adjustment and amount of sales tax adjustments used in determining the bill.

j. Customer billing information alternate. A utility serving less than 5000 electric customers may provide the information in this subrule on bill form or otherwise. If the utility elects not to provide this information, it shall advise the customer, on bill form or by bill insert, that such information can be obtained by contacting the utility's local office.

20.4(10) *Payment agreements.*

a. Availability of a first payment agreement. When a residential customer cannot pay in full a delinquent bill for utility service or has an outstanding debt to the utility for residential utility service and is not in default of a payment agreement with the utility, a utility shall offer the customer an opportunity to enter into a reasonable payment agreement.

b. Reasonableness. Whether a payment agreement is reasonable will be determined by considering the current household income, ability to pay, payment history including prior defaults on similar agreements, the size of the bill, the amount of time, the reasons why the bill has been outstanding, and any special circumstances creating extreme hardships within the household. The utility may require the person to confirm financial difficulty with an acknowledgment from the department of human services or another agency.

c. Terms of payment agreements.

(1) First payment agreement. The utility shall offer the following conditions to customers who have received a disconnection notice or who have been previously disconnected and are not in default of a payment agreement:

1. For customers who received a disconnection notice or who have been disconnected less than 120 days and are not in default of a payment agreement, the utility shall offer an agreement with at least 12 even monthly payments. For customers who have been disconnected more than 120 days and are not in default of a payment agreement, the utility shall offer an agreement with at least 6 even monthly payments. The utility shall inform customers they may pay off the delinquency early without incurring any prepayment penalties.
2. The agreement shall also include a provision for payment of the current account.
3. The utility may also require the customer to enter into a budget billing plan to pay the current bill.
4. When the customer makes the agreement in person, a signed copy of the agreement shall be provided to the customer.
5. The utility may offer the customer the option of making the agreement over the telephone or through electronic transmission.
6. When the customer makes the agreement over the telephone or through electronic transmission, the utility shall provide to the customer a written document reflecting the terms and conditions of the agreement within three days of the date the parties entered into the oral agreement or electronic agreement.
7. The document will be considered provided to the customer when addressed to the customer's last-known address and deposited in the U.S. mail with postage paid. If delivery is by other than U.S. mail, the document shall be considered provided to the customer when delivered to the last-known address of the person responsible for payment for the service.
8. The document shall state that unless the customer notifies the utility otherwise within ten days from the date the document is provided, it will be deemed that the customer accepts the terms as stated in the written document. The document stating the terms and conditions of the agreement shall include the address and a toll-free or collect telephone number where a qualified representative can be reached.
9. Once the first payment required by the agreement is made by the customer or on behalf of the customer, the oral or electronic agreement is deemed accepted by the customer.
10. Each customer entering into a first payment agreement shall be granted at least one late payment that is four days or less beyond the due date for payment, and the first payment agreement shall remain in effect.
11. The initial payment is due on the due date for the next regular bill.
12. A customer shall not be charged interest, or a late payment charge, on a payment agreement where the customer is making payments consistent with the terms of the payment agreement.

(2) Second payment agreement. The utility shall offer a second payment agreement to a customer who is in default of a first payment agreement if the customer has made at least two consecutive full payments under the first payment agreement.

1. The second payment agreement shall be for a term at least as long as the term of the first payment agreement.

2. The customer shall be required to pay for current service in addition to the monthly payments under the second payment agreement and may be required to make the first payment up-front as a condition of entering into the second payment agreement.

3. The utility may also require the customer to enter into a budget billing plan to pay the current bill.

(3) Additional payment agreements. The utility may offer additional payment agreements to the customer.

d. Refusal by utility. A customer may offer the utility a proposed payment agreement. If the utility and the customer do not reach an agreement, the utility may refuse the offer orally, but the utility must provide a written refusal to the customer, stating the reason for the refusal, within three days of the oral notification. The written refusal shall be considered provided to the customer when addressed to the customer's last-known address and deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the written refusal shall be considered provided to the customer when handed to the customer or when delivered to the last-known address of the customer.

A customer may ask the commission for assistance in working out a reasonable payment agreement. The request for assistance must be made to the commission within ten days after the written refusal is provided. During the review of this request, the utility shall not disconnect the service.

20.4(11) *Bill payment terms.* The bill shall be considered provided to the customer when deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the bill shall be considered provided when delivered to the last-known address of the customer. There shall not be less than 20 days between the providing of a bill and the date by which the account becomes delinquent. Bills for customers on more frequent billing intervals under subrule 20.3(6) may not be considered delinquent less than 5 days from the date the bill is provided. However, a late payment charge may not be assessed if payment is received within 20 days of the date the bill is provided.

a. The date of delinquency for all residential customers or other customers whose consumption is less than 3,000 kWh per month shall be changeable for cause; such as, but not limited to, 15 days from the approximate date each month upon which income is received by the person responsible for payment. In no case, however, shall the utility be required to delay the date of delinquency more than 30 days beyond the date of preparation of the previous bill.

b. In any case where net and gross amounts are billed to customers, the difference between net and gross is a late payment charge and is valid only when part of a delinquent bill payment. A utility's late payment charge shall not exceed 1.5 percent per month of the past due amount. No collection fee may be levied in addition to this late payment charge. This rule does not prohibit cost-justified charges for disconnection and reconnection of service.

c. If the customer makes partial payment in a timely manner, and does not designate the service or product for which payment is made, the payment shall be credited pro rata between the bill for utility services and related taxes.

d. Each account shall be granted not less than one complete forgiveness of a late payment charge each calendar year. The utility's rules shall be definitive that on one monthly bill in each period of eligibility, the utility will accept the net amount of such bill as full payment for such month after expiration of the net payment period. The rules shall state how the customer is notified that the eligibility has been used. Complete forgiveness prohibits any effect upon the credit rating of the customer or collection of late payment charge.

e. Budget billing plan. Utilities shall offer a budget billing plan to all residential customers or other customers whose consumption is less than 3,000 kWh per month. A budget billing plan should be designed to limit the volatility of a customer's bill and maintain reasonable account balances. The budget billing plan shall include at least the following:

(1) Be offered to each eligible customer when the customer initially requests service. The plan may be estimated if there is insufficient usage history to create a budget billing plan based on actual use.

(2) Allow for entry into the budget billing plan anytime during the calendar year.

(3) Provide that a customer may request termination of the plan at any time. If the customer's account is in arrears at the time of termination, the balance shall be due and payable at the time of termination. If there is a credit balance, the customer shall be allowed the option of obtaining a refund or applying the credit to future charges. A utility is not required to offer a new budget billing plan to a customer for six months after the customer has terminated from a budget billing plan.

(4) Use a computation method that produces a reasonable monthly budget billing amount, which may take into account forward-looking factors such as fuel price and weather forecasts, and that complies with requirements of this subrule. The computation method used by the utility shall be described in the utility's tariff and shall be subject to commission approval. The utility shall give notice to customers when it changes the type of computation method in the budget billing plan.

The amount to be paid at each billing interval by a customer on a budget billing plan shall be computed at the time of

entry into the plan and shall be recomputed at least annually. The budget billing amount may be recomputed monthly, quarterly, when requested by the customer, or whenever price, consumption, or a combination of factors results in a new estimate differing by 10 percent or more from that in use.

When the budget billing amount is recomputed, the budget billing plan account balance shall be divided by 12, and the resulting amount shall be added to the estimated monthly budget billing amount. Except when a utility has a budget billing plan that recomputes the budget billing amount monthly, the customer shall be given the option of applying any credit to payments of subsequent months' budget billing amounts due or of obtaining a refund of any credit in excess of $25.

Except when a utility has a budget billing plan that recomputes the budget billing amount monthly, the customer shall be notified of the recomputed payment amount not less than one full billing period prior to the date of delinquency for the recomputed payment. The notice may accompany the bill prior to the bill that is affected by the recomputed payment amount.

(5) Irrespective of the account balance, a delinquency in payment shall be subject to the same collection and disconnection procedures as other accounts, with the late payment charge applied to the budget billing amount. If the account balance is a credit, the budget billing plan may be terminated by the utility after 30 days of delinquency.

20.4(12) *Customer records.* The utility shall retain records as may be necessary to effectuate compliance with subrules 20.4(14) and 20.6(6), but not less than five years. Records for customer shall show where applicable:

a. kWh meter reading.
b. kWh consumption.
c. kW meter reading.
d. kW measured demand.
e. kW billing demand.
f. Total amount of bill.

20.4(13) *Adjustment of bills.*

a. Meter error. Whenever a meter creeps or whenever a metering installation is found upon any test to have an average error of more than 2.0 percent for watthour metering; or a demand metering error of more than 1.5 percent in addition to the errors allowed under accuracy of demand metering; an adjustment of bills for service for the period of inaccuracy shall be made in the case of overregistration and may be made in the case of underregistration. The amount of the adjustment shall be calculated on the basis that the metering equipment should be 100 percent accurate with respect to the testing equipment used to make the test. For watthour metering installations the average accuracy shall be the arithmetic average of the percent registration at 10 percent of rated test current and at 100 percent of rated test current giving the 100 percent of rated test current registration a weight of four and the 10 percent of rated test current registration a weight of one.

b. Determination of adjustment. Recalculation of bills shall be on the basis of actual monthly consumption except that if service has been measured by self-contained single-phase meters or three-wire network meters and involves no billing other than for kWh, the recalculation of bills may be based on the average monthly consumption determined from the most recent 36 months, consumption data.

When the average error cannot be determined by test because of failure of part or all of the metering equipment, it shall be permissible to use the registration of check metering installations, if any, or to estimate the quantity of energy consumed based on available data. The customer must be advised of the failure and of the basis for the estimate of quantity billed. The periods of error shall be used as defined in immediately following subparagraphs (1) and (2).

(1) Overregistration. If the date when overregistration began can be determined, such date shall be the starting point for determination of the amount of the adjustment. If the date when overregistration began cannot be determined, it shall be assumed that the error has existed for the shortest time period calculated as one-half the time since the meter was installed, or one-half the time elapsed since the last meter test, unless otherwise ordered by the commission.

The overregistration due to creep shall be calculated by timing the rate of creeping and assuming that the creeping affected the registration of the meter for 25 percent of the time since the more recent of either metering installation or last previous test.

(2) Underregistration. If the date when underregistration began can be determined, it shall be the starting point for determination of the amount of the adjustment except that billing adjustment shall be limited to the preceding six months. If the date when underregistration began cannot be determined, it shall be assumed that the error has existed for one-half of the time elapsed since the more recent of either meter installation or the last meter test, except that billing adjustment shall be

limited to the preceding six months, unless otherwise ordered by the commission.

The underregistration due to creep shall be calculated by timing the rate of creeping and assuming that this creeping affected the registration for 25 percent of the time since the more recent of either metering installation or last previous test, except that billing adjustment shall be limited to the preceding six months.

c. Refunds. If the recalculated bills indicate that $5 or more is due an existing customer or $10 or more is due a person no longer a customer of the utility, the tariff shall provide refunding of the full amount of the calculated difference between the amount paid and the recalculated amount. Refunds shall be made to the two most recent customers who received service through the metering installation found to be in error. In the case of a previous customer who is no longer a customer of the utility, a notice of the amount subject to refund shall be mailed to such previous customer at the last-known address, and the utility shall, upon demand made within three months thereafter, refund the same.

Refunds shall be completed within six months following the date of the metering installation test.

d. Back billing. A utility may not back bill due to underregistration unless a minimum back bill amount is specified in its tariff. The minimum amount specified for back billing shall not be less than, but may be greater than, $5 for an existing customer or $10 for a former customer. All recalculations resulting in an amount due equal to or greater than the tariff specified minimum shall result in issuance of a back bill.

Back billings shall be provided no later than six months following the date of the metering installation test.

e. Overcharges. When a customer has been overcharged as a result of incorrect reading of the meter, incorrect application of the rate schedule, incorrect connection of the metering installation, or other similar reasons, the amount of the overcharge shall be adjusted, refunded, or credited to the customer. The time period for which the utility is required to adjust, refund, or credit the customer's bill shall not exceed five years unless otherwise ordered by the commission.

f. Undercharges. When a customer has been undercharged as a result of incorrect reading of the meter, incorrect application of the rate schedule, incorrect connection of the meter, or other similar reasons, the amount of the undercharge may be billed to the customer. The period for which the utility may adjust for the undercharge shall not exceed five years unless otherwise ordered by the commission. The maximum back bill shall not exceed the dollar amount equivalent to the tariffed rate for like charges (e.g., usage-based, fixed, or service charges) in the 12 months preceding discovery of the error, unless otherwise ordered by the commission.

g. Credits and explanations. Credits due a customer because of meter inaccuracies, errors in billing, or misapplication of rates shall be separately identified.

20.4(14) *Refusal or disconnection of service.* A utility shall refuse service or disconnect service to a customer, as defined in subrule 20.1(3), in accordance with tariffs that are consistent with these rules.

a. The utility shall give written notice of pending disconnection except as specified in paragraph 20.4(15)*"b."* The notice shall set forth the reason for the notice and the final date by which the account is to be settled or specific action taken. The notice shall be considered provided to the customer when addressed to the customer's last-known address and deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the notice shall be considered provided when delivered to the last-known address of the customer. The date for disconnection of service shall be not less than 12 days after the notice is provided. The date for disconnection of service for customers on shorter billing intervals under subrule 20.3(6) shall not be less than 24 hours after the notice is posted at the service premises.

One written notice, including all reasons for the notice, shall be given where more than one cause exists for disconnection of service. In determining the final date by which the account is to be settled or other specific action taken, the days of notice for the causes shall be concurrent.

b. Service may be disconnected without notice:

(1) In the event of a condition on the customer's premises determined by the utility to be hazardous.

(2) In the event of customer use of equipment in a manner that adversely affects the utility's equipment or the utility's service to others.

(3) In the event of tampering with the equipment furnished and owned by the utility. For the purposes of this subrule, a broken or absent meter seal alone shall not constitute tampering.

(4) In the event of unauthorized use.

c. Service may be disconnected or refused after proper notice:

(1) For violation of or noncompliance with the utility's rules on file with the commission.

(2) For failure of the customer to furnish the service equipment, permits, certificates, or rights-of-way that are specified

to be furnished, in the utility's rules filed with the commission, as conditions of obtaining service, for the withdrawal of that same equipment, for the termination of those same permissions or rights, or for the failure of the customer to fulfill the contractual obligations imposed as conditions of obtaining service by any contract filed with and subject to the regulatory authority of the commission.

(3) For failure of the customer to permit the utility reasonable access to the utility's equipment.

d. Service may be refused or disconnected after proper notice for nonpayment of a bill or deposit, except as restricted by subrules 20.4(16) and 20.4(17), provided that the utility has complied with the following provisions when applicable:

(1) Given the customer a reasonable opportunity to dispute the reason for the disconnection or refusal.

(2) Given the customer, and any other person or agency designated by the customer, written notice that the customer has at least 12 days in which to make settlement of the account to avoid disconnection and a written summary of the rights and responsibilities available. Customers billed more frequently than monthly pursuant to subrule 20.3(6) shall be given posted written notice that they have 24 hours to make settlement of the account to avoid disconnection and a written summary of the rights and responsibilities. All written notices shall include a toll-free or collect telephone number where a utility representative qualified to provide additional information about the disconnection can be reached. Each utility representative must provide the representative's name and have immediate access to current, detailed information concerning the customer's account and previous contacts with the utility.

(3) The summary of the rights and responsibilities must be approved by the commission. Any utility providing electric service and defined as a public utility in Iowa Code section 476.1 that does not use the standard form set forth below for customers billed monthly shall submit to the commission electronically its proposed form for approval. A utility billing a combination customer for both gas and electric service may modify the standard form to replace each use of the word "electric" with the words "gas and electric" in all instances.

CUSTOMER RIGHTS AND RESPONSIBILITIES TO AVOID SHUTOFF OF ELECTRIC SERVICE FOR NONPAYMENT

1. What can I do if I receive a notice from the utility that says my service will be shut off because I have a past due bill?

a. Pay the bill in full;

b. Enter into a reasonable payment plan with the utility (see #2 below);

c. Apply for and become eligible for low-income energy assistance (see #3 below);

d. Give the utility a written statement from a doctor or public health official stating that shutting off your electric service would pose an especial health danger for a person living at the residence (see #4 below); or

e. Tell the utility if you think part of the amount shown on the bill is wrong.

However, you must still pay the part of the bill you agree you owe the utility (see #5 below).

2. How do I go about making a reasonable payment plan? (Residential customers only)

a. Contact the utility as soon as you know you cannot pay the amount you owe. If you cannot pay all the money you owe at one time, you are to be offered a payment plan that spreads payments evenly over at least 12 months. The plan may be longer depending on your financial situation.

b. If you have not made the payments you promised in a previous payment plan with the utility and still owe money, you may qualify for a second payment agreement under certain conditions.

c. If you do not make the payments you promise, the utility may shut off your utility service on one day's notice, unless all the money you owe the utility is paid or you enter into another payment agreement.

3. How do I apply for low-income energy assistance? (Residential customers only)

a. Applications are taken at your local community action agency. If you are unsure where to apply, call 211 or 800.244.7431, or visit https://hhs.iowa.gov/programs/programs-and-services/liheap. To prevent disconnection, contact the utility prior to disconnection of your service.

b. To avoid disconnection, you must apply for energy assistance or weatherization before your service is shut off. Notify your utility that you may be eligible and have applied for energy assistance. Once your service has been disconnected, it will not be reconnected based on approval for energy assistance.

c. Being certified eligible for energy assistance will prevent your service from being disconnected from November 1 through April 1.

4. What if someone living at the residence has a serious health condition? (Residential customers only)

Contact the utility if you believe this is the case. Contact your doctor or a public health official and ask the doctor or health official to contact the utility and state that shutting off your utility service would pose an especial health danger for a person living at your residence. The doctor or public health official must provide a written statement to the utility office within five days of when your doctor or public health official notifies the utility of the health condition; otherwise, your utility service may be shut off. If the utility receives this written statement, your service will not be shut off for 30 days. This 30-day delay is to allow you time to arrange payment of your utility bill or find other living arrangements. After 30 days, your service may be shut off if full payment or payment arrangements have not been made.

5. What should I do if I believe my bill is not correct?

You may dispute your utility bill. You must tell the utility that you dispute the bill. You must pay the part of the bill you think is correct. If you do this, the utility will not shut off your service for up to 45 days from the date the bill was mailed while you and the utility work out the dispute over the part of the bill you think is incorrect. You may ask the Iowa Utilities Commission for assistance in resolving the dispute. (See #9 below.)

6. When can the utility shut off my utility service because I have not paid my bill?

a. Your utility can shut off service between the hours of 6 a.m. and 2 p.m., Monday through Friday.

b. The utility will not shut off your service on nights, weekends, or holidays for nonpayment of a bill.

c. The utility will not shut off your service if you enter into a reasonable payment plan to pay the overdue amount (see #2 above).

d. The utility will not shut off your service if the temperature is forecasted to be 20 degrees Fahrenheit or colder during the following 24-hour period, including the day your service is scheduled to be shut off.

e. If you have qualified for low-income energy assistance, the utility cannot shut off your service from November 1 through April 1. However, you will still owe the utility for the service used during this time.

f. The utility will not shut off your service if you have notified the utility that you dispute a portion of your bill and you pay the part of the bill that you agree is correct.

g. If one of the heads of household is a service member deployed for military service, utility service cannot be shut off during the deployment or within 90 days after the end of deployment. In order for this exception to disconnection to apply, the utility must be informed of the deployment prior to disconnection. However, you will still owe the utility for service used during this time.

7. How will I be told the utility is going to shut off my service?

a. You must be given a written notice at least 12 days before the utility service can be shut off for nonpayment. This notice will include the reason for shutting off your service.

b. If you have not made payments required by an agreed-upon payment plan, your service may be disconnected with only one day's notice.

c. The utility must also try to reach you by telephone or in person before it shuts off your service. From November 1 through April 1, if the utility cannot reach you by telephone or in person, the utility will put a written notice on the door of or another conspicuous place at your residence to tell you that your utility service will be shut off.

8. If service is shut off, when will it be turned back on?

a. The utility will turn your service back on if you pay the whole amount you owe.

b. If you make your payment during regular business hours, or by 7 p.m. for utilities permitting such payment or other arrangements after regular business hours, the utility must make a reasonable effort to turn your service back on that day. If service cannot reasonably be turned on that same day, the utility must do it by 11 a.m. the next day.

c. The utility may charge you a fee to turn your service back on which may be higher in the evening or on weekends, so you may ask that your service be turned on during normal utility business hours.

9. Is there any other help available besides my utility?

If the utility has not been able to help you with your problem, you may contact the Iowa Utilities Commission toll-free at 877.565.4450. You may also write the Iowa Utilities Commission at 1375 E. Court Ave., Des Moines, IA 50319, or email at customer@iuc.iowa.gov. Low-income customers may also be eligible for free legal assistance from Iowa Legal Aid, and may contact Legal Aid at 800.532.1275.

(4) If the utility has adopted a service limitation policy pursuant to subrule 20.4(23), the following paragraph shall be appended to the end of the standard form for the summary of rights and responsibilities, as set forth in subparagraph 20.4(15)*"d"*(3):

Service limitation: We have adopted a limitation of service policy for customers who otherwise could be disconnected. Contact our business office for more information or to learn if you qualify.

(5) When disconnecting service to a residence, the utility made a diligent attempt to contact, by telephone or in person, the customer to inform the customer of the pending disconnection and the customer's rights and responsibilities. During the period from November 1 through April 1, if the attempt at customer contact fails, the premises shall be posted at least one day prior to disconnection with a notice informing the customer of the pending disconnection and rights and responsibilities available to avoid disconnection.

If an attempt at personal or telephone contact of a customer occupying a rental unit has been unsuccessful, the utility shall make a diligent attempt to contact the landlord of the rental unit, if known, to determine if the customer is still in occupancy and, if so, the customer's present location. The landlord shall also be informed of the date when service may be disconnected. The utility shall make a diligent attempt to inform the landlord at least 48 hours prior to disconnection of service to a tenant.

If the disconnection will affect occupants of residential units leased from the customer, the premises of any building known by the utility to contain residential units affected by disconnection must be posted, at least two days prior to disconnection, with a notice informing any occupants of the date when service will be disconnected and the reasons for the disconnection.

(6) Disputed bill. If the customer has received notice of disconnection and has a dispute concerning a bill for electric utility service, the utility may require the customer to pay a sum of money equal to the amount of the undisputed portion of the bill pending settlement and thereby avoid disconnection of service. A utility shall delay disconnection for nonpayment of the disputed bill for up to 45 days after the providing of the bill if the customer pays the undisputed amount. The 45 days shall be extended if requested of the utility by the commission in the event the customer files a written complaint with the commission in compliance with 199—Chapter 6(476,546).

(7) Reconnection. Disconnection of a residential customer may take place only between the hours of 6 a.m. and 2 p.m. on a weekday and not on weekends or holidays. If a disconnected customer makes payment or other arrangements during normal business hours, or by 7 p.m. for utilities permitting such payment or other arrangements after normal business hours, all reasonable efforts shall be made to reconnect the customer that day. If a disconnected customer makes payment or other arrangements after 7 p.m., all reasonable efforts shall be made to reconnect the customer not later than 11 a.m. the next day.

(8) Severe cold weather. A disconnection may not take place where electricity is used as the only source of space heating or to control or operate the only space heating equipment at a residence when the actual temperature or the 24-hour forecast of the National Weather Service for the residence's area is predicted to be 20 degrees Fahrenheit or colder. If the utility has properly posted a disconnect notice but is precluded from disconnecting service because of severe cold weather, the utility may immediately proceed with appropriate disconnection procedures, without further notice, when the temperature in the residence's area rises above 20 degrees Fahrenheit and is forecasted to remain above 20 degrees Fahrenheit for at least 24 hours, unless the customer has paid in full the past due amount or is otherwise entitled to postponement of disconnection.

(9) Health of a resident. Disconnection of a residential customer shall be postponed if the disconnection of service would present an especial danger to the health of any permanent resident of the premises. An especial danger to health is indicated if a person appears to be seriously impaired and may, because of mental or physical problems, be unable to manage the person's own resources, to carry out activities of daily living or to be protected from neglect or hazardous situations without assistance from others. Indicators of an especial danger to health include but are not limited to: age, infirmity, or mental incapacitation; serious illness; physical disability, including blindness and limited mobility; and any other factual circumstances that indicate a severe or hazardous health situation.

The utility may require written verification of the especial danger to health by a physician or a public health official, including the name of the person endangered; a statement that the person is a resident of the premises in question; the name, business address, and telephone number of the certifying party; the nature of the health danger; and approximately how long the danger will continue. Initial verification by the verifying party may be by telephone if written verification is forwarded to the utility within five days.

Verification shall postpone disconnection for 30 days. In the event service is terminated within 14 days prior to verification of illness by or for a qualifying resident, service shall be restored to that residence if a proper verification is thereafter made in accordance with the foregoing provisions. If the customer does not enter into a reasonable payment agreement for the retirement of the unpaid balance of the account within the first 30 days and does not keep the current

account paid during the period that the unpaid balance is to be retired, the customer is subject to disconnection pursuant to paragraph 20.4(15)*"f."*

(10) Winter energy assistance (November 1 through April 1). If the utility is informed that the customer's household may qualify for winter energy assistance or weatherization funds, there shall be no disconnection of service for 30 days from the date the utility is notified to allow the customer time to obtain assistance. Disconnection shall not take place from November 1 through April 1 for a resident who is a head of household and who has been certified to the public utility by the community action agency as eligible for either the low-income home energy assistance program or weatherization assistance program, as well as members of the household named in the application. A utility may develop an incentive program to delay disconnection on April 1 for customers who make payments throughout the November 1 through April 1 period. All such incentive programs shall be set forth in tariffs approved by the commission.

(11) Deployment. If the utility is informed that one of the heads of household as defined in Iowa Code section 476.20 is a service member deployed for military service, as defined in Iowa Code section 29A.90, disconnection cannot take place at the residence during the deployment or prior to 90 days after the end of the deployment.

e. Abnormal electric consumption. A customer who is subject to disconnection for nonpayment of bill, and who has electric consumption that appears to the customer to be abnormally high, may request the utility to assist in identifying the factors contributing to this usage pattern and to suggest remedial measures. The utility shall assist by discussing patterns of electric usage that may be readily identifiable, suggesting that an energy audit be conducted, and identifying sources of energy conservation information and financial assistance that may be available to the customer.

f. A utility may disconnect electric service after 24-hour notice (and without the written 12-day notice) for failure of the customer to comply with the terms of a payment agreement.

g. The utility shall, prior to November 1, mail customers a notice describing the availability of winter energy assistance funds and the application process. The notice must be of a type size that is easily legible and conspicuous and must contain the information set out by the state agency administering the assistance program. A utility serving fewer than 25,000 customers may publish the notice in a customer newsletter in lieu of mailing. A utility serving fewer than 6,000 customers may publish the notice in an advertisement in a local newspaper of general circulation or shopper's guide.

20.4(15) *Insufficient reasons for denying service.* The following shall not constitute sufficient cause for refusal of service to a customer:

a. Delinquency in payment for service by a previous occupant of the premises to be served.

b. Failure to pay for merchandise purchased from the utility.

c. Failure to pay for a different type or class of public utility service.

d. Failure to pay the bill of another customer as guarantor thereof.

e. Failure to pay the back bill provided in accordance with paragraph 20.4(14)*"d"* (slow meters).

f. Failure to pay a bill provided in accordance with paragraph 20.4(14)*"f."*

g. Failure of a residential customer to pay a deposit during the period November 1 through April 1 for the location at which the customer has been receiving service in the customer's name.

h. Delinquency in payment for service by an occupant if the customer applying for service is creditworthy and able to satisfy any deposit requirements.

i. Delinquency in payment for service arising more than ten years prior, as measured from the most recent of:

(1) The last date of service for the account giving rise to the delinquency,

(2) Physical disconnection of service for the account giving rise to the delinquency, or

(3) The last voluntary payment or voluntary written promise of payment made by the customer, if made before the ten-year period described in this paragraph has otherwise lapsed.

j. Delinquency in payment for service that arose on or before September 4, 2010, pursuant to an oral contract, except in cases of fraud or deception that prevented the utility from timely addressing such delinquencies with the customer.

20.4(16) *When disconnection prohibited.*

a. No disconnection may take place from November 1 through April 1 for a resident who has been certified to the public utility by the local community action agency as being eligible for either the low-income home energy assistance program or weatherization assistance program.

b. If the utility is informed that one of the heads of household as defined in Iowa Code section 476.20 is a service member deployed for military service, as defined in Iowa Code section 29A.90, disconnection cannot take place at the

residence during the deployment or prior to 90 days after the end of the deployment.

20.4(17) *Estimated demand.* Upon request of the customer and provided the customer's demand is estimated for billing purposes, the utility shall measure the demand during the customer's normal operation and use the measured demand for billing.

20.4(18) *Servicing utilization control equipment.* Each utility shall service and maintain any equipment it uses on customer's premises and shall correctly set and keep in proper adjustment any thermostats, clocks, relays, time switches, or other devices that control the customer's service in accordance with the provisions in the utility's rate schedules.

20.4(19) *Customer complaints.* Complaints concerning the charges, practices, facilities, or service of the utility shall be investigated promptly and thoroughly. The utility shall keep such records of customer complaints as will enable it to review and analyze its procedures and actions.

a. Each utility shall provide in its filed tariff a concise, fully informative procedure for the resolution of customer complaints.

b. The utility shall take reasonable steps to ensure that customers unable to travel shall not be denied the right to be heard.

c. The final step in a complaint hearing and review procedure shall be a filing for commission resolution of the issues.

20.4(20) *Change in type of service.* If a change in the type of service or a change in voltage to a customer's substation is effected at the insistence of the utility and not solely by reason of increase in the customer's load or change in the character thereof, the utility shall share equitably in the cost of changing the equipment of the customer affected as determined by the commission in the absence of agreement between utility and customer. In general, the customer should be protected against or reimbursed for the following losses and expenses to an appropriate degree:

a. Loss of value in electrical power utilization equipment,

b. Cost of changes in wiring, and

c. Cost of removing old and installing new utilization equipment.

20.4(21) *Limitation of service.* The utility shall have the option of adopting a policy for service limitation at a customer's residence as a measure to be taken in lieu of disconnection of service to the customer. The service limiter policy shall be set out in the utility's tariff and contain the following conditions:

a. A service limitation device shall not be activated without the customer's agreement.

b. A service limitation device shall not be activated unless the customer has defaulted on all payment agreements for which the customer qualifies under the commission's rules and the customer has agreed to a subsequent payment agreement.

c. The service limiter shall provide for usage of a minimum of 3,600 watts. If the service limiter policy provides for different usage levels for different customers, the tariff shall set out specific nondiscriminatory criteria for determining the usage levels. Electric-heating residential customers may have their service limited if otherwise eligible, but such customers shall have consumption limits set at a level that allows them to continue to heat their residences. For purposes of this subrule, "electric heating" means heating by means of a fixed-installation electric appliance that serves as the primary source of heat and not, for example, one or more space heaters.

d. A provision that, if the minimum usage limit is exceeded such that the limiter function interrupts service, the service limiter function must be capable of being reset manually by the customer, or the service limiter function must reset itself automatically within 15 minutes after the interruption. In addition, the service limiter function may also be capable of being reset remotely by the utility. If the utility chooses to use the option of resetting the meter remotely, the utility shall provide a 24-hour toll-free number for the customer to notify the utility that the limiter needs to be reset and the meter shall be reset immediately following notification by the customer. If the remote reset option is used, the meter must still be capable of being reset manually by the customer or the service limiter function must reset itself automatically within 15 minutes after the interruption.

e. There shall be no disconnect, reconnect, or other charges associated with service limiter interruptions or restorations.

f. A provision that, upon installation of a service limiter or activation of a service limiter function on the meter, the utility shall provide the customer with information on the operation of the limiter, including how it can be reset, and information on what appliances or combination of appliances can generally be operated to stay within the limits imposed by the limiter.

g. A provision that the service limiter function of the meter shall be disabled no later than the next working day after the residential customer has paid the delinquent balance in full.

h. A service limiter customer that defaults on the payment agreement is subject to disconnection after a 24-hour notice pursuant to paragraph 20.4(15)*"f."*

These rules are intended to implement Iowa Code sections 476.6, 476.8, 476.20, and 476.54.

199—20.5(476) Engineering practice.

20.5(1) *Requirement for good engineering practice.* The electric plant of the utility shall be constructed, installed, maintained, and operated in accordance with accepted good engineering practice in the electric industry to assure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.

20.5(2) *Standards incorporated by reference.* The utility shall use the applicable provisions in the publications listed below as standards of accepted good practice, unless otherwise ordered by the commission.

a. Iowa Electrical Safety Code, as defined in 199—Chapter 25(478).

b. National Electrical Code, ANSI/NFPA 70-2020, as amended on April 1, 2021.

c. American National Standard Requirements for Instrument Transformers, ANSI/IEEE C57.13.1-2016, as approved August 21, 2017; and C57.13.3-2016, as approved August 21, 2017.

d. American National Standard for Electric Power Systems and Equipment Voltage Ratings (60 Hertz), ANSI C84.1-2020, as published September 3, 2020.

e. Recommended Practice for Grounding of Industrial and Commercial Power Systems, IEEE 3003.1-2019, as approved June 13, 2019.

f. IEEE Standard 1159-2019, IEEE Recommended Practice for Monitoring Electric Power Quality or any successor standard, as approved June 13, 2019.

g. IEEE Standard 519-2014, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems as approved March 27, 2014.

h. At railroad crossings, 199—42 (476), "Engineering standards for electric and communications lines" subrule.

20.5(3) *Adequacy of supply and reliability of service.* The generating capacity of the utility's plant, supplemented by the electric power regularly available from other sources, must be sufficiently large to meet all normal demands for service and provide a reasonable reserve for emergencies.

In appraising adequacy of supply the commission will segregate electric utilities into two classes viz., those having high capacity transmission interconnections with other electrical utilities and those that lack such interconnection and are therefore completely dependent upon the firm generating capacity of the utility's own generating facilities.

a. In the case of utilities having interconnecting ties with other utilities, the commission will, upon appraising adequacy of supply, take appropriate notice of the utility's recent past record, as of the date of appraisal, of any widespread service interruptions and any capacity shortages along with the consideration of the supply regularly available from other sources, the normal demands, and the required reserve for emergencies.

b. In the case of noninterconnected utilities, the commission will give attention to the maximum total coincident customer demand that could be satisfied without the use of the single element of plant equipment, the disability of which would produce the greatest reduction in total net plant productive capacity and also give attention to the normal demands for service and to the reasonable reserve for emergencies.

This rule is intended to implement Iowa Code sections 476.8 and 478.18.

199—20.6(476) Metering.

20.6(1) *Inspection and testing program.* Each utility shall adopt a written program for the inspection and testing of its meters to determine the necessity for adjustment, replacement, or repair. The frequency of inspection and methods of testing shall be based on the utility's experience, manufacturer's recommendations, and accepted good practice. The publications listed in subrule 20.6(3) are representative of accepted good practice. Each utility shall maintain inspecting and testing records for each meter and associated device until three years after its retirement.

20.6(2) *Program content.* The written program shall, at minimum, address the following subject areas:

a. Classification of meters by capacity, type, and any other factor considered pertinent.

b. Checking of new meters for acceptable accuracy before being placed in service.

c. Testing of in-service meters, including any associated instruments or corrective devices, for accuracy, adjustments, or repairs. This may be accomplished by periodic tests at specified intervals or on the basis of a statistical sampling plan, but

shall include meters removed from service for any reason.

d. Periodic calibration or testing of devices or instruments used by the utility to test meters.

e. The limits of meter accuracy considered acceptable by the utility.

f. The nature of meter and meter test records that will be maintained by the utility.

20.6(3) *Accepted good practice.* The American National Standard Code for Electricity Metering, ANSI C12.1-2022, as approved June 9, 2022, is considered to be representative of accepted good practice in matters of metering and meter testing.

20.6(4) *Meter adjustment.* All meters and associated metering devices shall, when tested, be adjusted as closely as practicable to the condition of zero error.

20.6(5) *Request tests.* Upon request by a customer, a utility shall test the meter servicing for that customer but it need not be more frequently than once in 18 months.

A written report of the test results shall be mailed to the customer within ten days of the completed test and a record of each test shall be kept and made available upon request. The utility shall give the customer or a representative of the customer the opportunity to be present while the test is conducted.

If the test finds the meter is accurate within the limits accepted by the utility in its meter inspection and testing program, the utility may charge the customer $25 or the cost of conducting the test, whichever is less. The customer shall be advised of any potential charge before the meter is removed for testing.

20.6(6) *Referee tests.* Upon written request by a customer or utility, the commission will conduct a referee test of a meter but it need not be more frequently than once in 18 months. The customer request shall be accompanied by a $30 deposit made payable to the utility.

Within five days of receipt of the written request and payment, the commission shall forward the deposit to the utility and notify the utility of the requirement for a test. The utility shall, within 30 days after notification of the request, schedule the date, time, and place of the test with the commission and customer. The meter shall not be removed or adjusted before the test. The utility shall furnish all testing equipment and facilities for the test. If the tested meter is found to be more than 2 percent fast or 2 percent slow, the deposit will be returned to the party requesting the test and billing adjustments shall be made as required in subrule 20.4(13). The commission shall issue its report within 15 days after the test is conducted, with a copy to the customer and the utility.

20.6(7) *Condition of meter.* No meter that is known to be mechanically or electrically defective, or to have incorrect constants, or that has not been tested and adjusted if necessary in accordance with these rules shall be installed or continued in service. The capacity of the meter and the index mechanism shall be consistent with the electricity requirements of the customer.

20.6(8) *Comprehensive meter upgrade programs.*

a. A utility may forgo the meter testing procedures required under the utility's own inspection and testing program and subrule 20.6(2) if:

(1) The meters are removed or scheduled to be removed as part of a comprehensive meter upgrade program over a specified period not to exceed three years;

(2) The meters being removed have not previously been shown to be inaccurate or otherwise faulty;

(3) The utility either retains the removed meters for a period of one year from the removal date to allow customers the opportunity to challenge a meter's accuracy or tests a representative statistical sample based upon an industry standard such as ANSI C12.1-2022 of each type of meter being removed as part of the program and maintains the removed meters for a period of at least six months; and

(4) The utility tests any meter upon request of a customer based upon the customer's experience comparing the replaced and replacement meters.

b. Prior to forgoing its testing procedures under this subrule, a utility shall notify the commission that the utility is engaging in a comprehensive meter upgrade program. The notice shall state the option the utility is electing to pursue under subparagraph 20.6(8)*"a"*(3), the specified period of the program, and the expected number of meters to be upgraded. A utility electing to test a statistical sample of removed meters under subparagraph 20.6(8)*"a"*(3) shall also state the industry standard it will use to determine the sample size and provide the full text of the standard to the commission upon request.

c. A utility shall continue to follow the meter testing procedures for meters removed for any reason unrelated to the comprehensive meter upgrade program.

d. A utility shall resume the meter testing procedures required under the utility's own inspection and testing program

and subrule 20.6(2) upon completion of the comprehensive meter upgrade program or the end of the specified period, whichever occurs first.

199—20.7(476) Standards of quality of service.

20.7(1) Standard frequency. The standard frequency for alternating current distribution systems shall be 60 cycles per second. The frequency shall be maintained within limits that will permit the satisfactory operation of customer's clocks connected to the system.

20.7(2) Voltage limits retail. Each utility supplying electric service to ultimate customers shall provide service voltages in conformance with the standard at paragraph 20.5(2)*"d."*

20.7(3) Voltage balance. Where three-phase service is provided the utility shall exercise reasonable care to assure that the phase voltages are in balance. In no case shall the ratio of maximum voltage deviation from average to average voltage exceed .02.

20.7(4) Voltage limits, service for resale. The nominal voltage shall be as mutually agreed upon by the parties concerned. The allowable variation shall not exceed 7.5 percent above or below the agreed-upon nominal voltage without the express approval of the commission.

20.7(5) Exceptions to voltage requirements. Voltage outside the limits specified will not be considered a violation when the variations:

a. Arise from the action of the elements.

b. Are infrequent fluctuations not exceeding five minutes in duration.

c. Arise from service interruptions.

d. Arise from temporary separation of parts of the system from the main system.

e. Are from causes beyond the control of the utility.

f. Do not exceed 10 percent above or below the standard nominal voltage, and service is at a distribution line or transmission line voltage with the retail customer providing voltage regulators.

20.7(6) Voltage surveys and records. Voltage measurements shall be made at the customer's entrance terminals. For single-phase service the measurement shall be made between the grounded conductor and the ungrounded conductors. For three-phase service the measurement shall be made between the phase wires.

20.7(7) Each utility shall make a sufficient number of voltage measurements in order to determine if voltages are in compliance with the requirements as stated in subrules 20.7(2), 20.7(3), and 20.7(4). All records obtained under this subrule shall be retained by the utility for at least two years and shall be available for inspection by the commission's representatives. Notations on each chart shall indicate the following:

a. The location where the voltage was taken.

b. The time and date of the test.

c. The results of the comparison with a working standard indicating voltmeter.

20.7(8) Equipment for voltage measurements.

a. Secondary standard indicating voltmeter. Each utility shall have available at least one indicating voltmeter maintained with error no greater than 0.25 percent of full scale.

b. Working standard indicating voltmeters. Each utility shall have at least two indicating voltmeters maintained so as to have as-left errors of no greater than 1 percent of full scale.

c. Recording voltmeters. Each utility must have readily available at least two portable recording voltmeters with a rated accuracy of 1 percent of full scale.

20.7(9) Extreme care must be exercised in the handling of standards and instruments to assure that their accuracy is not disturbed. Each standard shall be accompanied at all times by a certificate or calibration card, duly signed and dated, on which are recorded the corrections required to compensate for errors found at the customary test points at the time of the last previous test.

20.7(10) Planned interruptions shall be made at a time that will not cause unreasonable inconvenience to customers, and interruptions planned for longer than one hour shall be preceded by adequate notice to those who will be affected.

20.7(11) Power quality monitoring. Each utility shall investigate power quality complaints from its customers and determine if the cause of the problem is on the utility's systems. In addressing these problems, each utility shall implement to the extent reasonably practical the practices outlined in the standard given at paragraph 20.5(2)*"f."*

20.7(12) Harmonics. A harmonic is a sinusoidal component of the 60 cycles per second fundamental wave having a

frequency that is an integral multiple of the fundamental frequency. When excessive harmonics problems arise, each electric utility shall investigate and take actions to rectify the problem. In addressing harmonics problems, the utility and the customer shall implement to the extent practicable and in conformance with prudent operation the practices outlined in the standard at paragraph 20.5(2)*"g."*

This rule is intended to implement Iowa Code sections 476.2 and 476.8.

199—20.8(476) Safety.

20.8(1) *Protective measures.* Each utility shall exercise reasonable care to reduce those hazards inherent in connection with its utility service and to which its employees, its customers, and the general public may be subjected and shall adopt and execute a safety program designed to protect the public and fitted to the size and type of its operations. A utility shall include in its safety program procedures for notifying the commission and the public of an incident involving a component of a wind turbine, solar facility, storage facility, or any other generating facility where the incident has resulted in damage to adjacent property or members of the public.

20.8(2) *Accident investigation and prevention.* The utility shall give reasonable assistance to the commission in the investigation of the cause of accidents and in the determination of suitable means of preventing accidents.

20.8(3) *Reportable accidents.* Each utility shall maintain a summary of all reportable accidents, as defined in the "Accident reports" rule of 199—Chapter 25(476,478), arising from its operations.

20.8(4) *Grounding of secondary distribution system.* Unless otherwise specified by the commission, each utility shall comply with, and encourage its customers to comply with, the applicable provisions of the acceptable standards listed in subrule 20.5(2) for the grounding of secondary circuits and equipment.

Ground connections should be tested for resistance at the time of installation. The utility shall keep a record of all ground resistance measurements.

The utility shall establish a program of inspection so that all artificial grounds installed by it shall be inspected within reasonable periods of time.

199—20.9(476) Electric energy automatic adjustment. The electric energy cost adjustment of the unit charge shall be an energy adjustment clause.

20.9(1) *Applicability.* A utility's electric energy adjustment shall recover from consumers only those costs which:

a. Are incurred in supplying energy;

b. Are beyond direct control of management;

c. Are subject to sudden important change in level;

d. Are an important factor in determining the total cost to serve; and

e. Are readily, precisely, and continuously segregated in the accounts of the utility.

20.9(2) *Energy adjustment clause.* Prior to any period in which a utility proposes to change the adjustment amount for each energy unit delivered to the customer, the utility shall determine and file for commission approval the adjustment amount to be charged for each energy unit delivered under rates set by the commission. The energy adjustment clause factors shall be printed on the customer's bill. The filing shall include all invoices (except invoices for fuel, freight, and transportation), worksheets, and detailed supporting data used to determine the amount of the adjustment. Spreadsheets, workbooks, and databases included in filings shall include all cell formulae and cell references. Utilities that participate in a wholesale energy market and use a forecasted energy adjustment clause shall provide information about key inputs and assumptions and explain the differences between the forecast and actual fuel costs. The estimated amount of fossil fuel should be detailed to reflect the amount of fuel, transportation, emission allowances, and other costs.

a. The utility shall keep and maintain journal entries to reflect a breakdown for each type of fuel: actual cost of fuel, transportation costs, and other costs. Items identified as other costs should be described and their inclusion as fuel costs shall be approved by the commission. The commission may direct that journal entries be filed. The utility shall also file detailed supporting data:

(1) To show the actual amount of sales of energy by month for which an adjustment was utilized, and

(2) To support the energy cost adjustment balance utilized in the monthly energy adjustment clause filings.

b. The energy adjustment shall provide for change of the price per kWh delivered under rates set by the commission based upon the formulas provided in the utility's tariff. The energy adjustment factor shall be rounded on a consistent basis to either the nearest 0.01¢/kWh or 0.001¢/kWh. The tariff shall define the components of the formula(s) and shall include

reference to the specific accounts of the Uniform System of Accounts for each component.

(1) For each period as specified in the tariff, the calculation shall include but not be limited to:

1. The estimated energy cost and revenues;

2. The estimated electric energy to be delivered and entered in accounts 440, 442, and 444-7, excluding energy from distinct interchange deliveries entered into account 447, and including intrautility energy service as included in accounts 448 and 929 of the Uniform System of Accounts during the month in which the energy adjustment charge will be used; and

3. The energy cost adjustment account balance.

(2) The base formula for the energy adjustment factor shall be:

Energy adjustment factor = (energy cost adjustment account balance + estimated energy costs and revenues) / estimated energy delivered

c. The estimated energy cost and revenues shall be the estimated cost and revenues associated with:

(1) Fossil and nuclear fuel consumed in the utility's own plants and the utility's share of fossil and nuclear fuel consumed in jointly owned or leased plants. Fossil fuel shall include natural gas used for electric generation and the cost of fossil fuel transferred from account 151 to account 501 or 547 of the Uniform System of Accounts. Nuclear fuel shall be that shown in account 518 of the Uniform System of Accounts except that if account 518 contains any expense for fossil fuel that has already been included in the cost of fossil fuel, it shall be deducted from the account. (Paragraph C of account 518 includes the cost of other fuels used for ancillary steam facilities.)

(2) The cost of steam purchased, or transferred from another department of the utility or from others under a joint facility operating agreement, for use in prime movers producing electric energy (accounts 503 and 521).

(3) A deduction shall be made of the expenses of producing steam chargeable to others, to other utility departments under a joint operating agreement, or to other electric accounts outside the steam generation group of accounts (accounts 504 and 522).

(4) The cost of water used for hydraulic power generation. Water cost shall be limited to items of account 536 of the Uniform System of Accounts. For pumped storage projects, the energy cost of pumping is included. Pumping energy cost shall be determined from the applicable costs of paragraph 20.9(2)*"c."*

(5) The energy costs paid for energy purchased under arrangements or contracts, as entered into account 555 of the Uniform System of Accounts, less the energy revenues to be recovered from corresponding sales, as entered in account 447 of the Uniform System of Accounts.

(6) Purchases from alternative energy production facilities under the commission's "Additional rate-regulated utility obligations regarding AEP facilities" rule at 199—Chapter 15(476).

(7) The weighted average costs of inventoried allowances used in generating electricity.

(8) The gains and losses, as described in subrule 20.17(9), from allowance transactions occurring during the month. Allowance transactions shall include vintage trades and emission for emission trades.

(9) Eligible costs or credits associated with the utility's annual reconciliation of its alternate energy purchase program under the "Alternate energy purchase programs" rule of 199—Chapter 15(476).

(10) Federal production tax credits unless the commission approves different ratemaking treatment.

(11) Other costs and revenues as specified in the utility's tariff and approved by the commission. For all other costs and revenues, the utility shall provide the type of cost, the dollar amount, and reference to the commission order approving the cost to be included in the energy adjustment clause.

d. The energy cost adjustment account balance shall be the cumulative balance of any excess or deficiency that arises out of the difference between commission recognized energy cost recovery and the amount recovered through application of energy charges to consumption under rates set by the commission. The calculation for the energy cost adjustment account balances shall include but is not limited to:

(1) The actual energy expense for the prior period and recorded in accounts 440, 442, and 444-6 of the Uniform System of Accounts;

(2) The actual electric energy delivered for the prior period and recorded in accounts 440, 442, and 444-7, excluding energy from distinct interchange deliveries entered into account 447, and including intrautility energy service as included in accounts 448 and 929 of the Uniform System of Accounts; and

(3) The beginning energy cost adjustment account balance (overrecovered or underrecovered amount) for the current period.

e. Reserve account for nuclear generation. A rate-regulated utility owning nuclear generation or purchasing energy under a participation power agreement on nuclear generation may establish a reserve account. The reserve account will spread the higher cost of energy used to replace the energy normally received from nuclear sources. A surcharge would be added to each kWh from the nuclear source. The surcharges collected are credited to the reserve account. During an outage or reduced level of operation, replacement energy cost would be offset through debit to the reserve account. The debit would be based upon the cost differential between replacement energy cost and the average cost (including the surcharge) of energy from the nuclear capacity. A reserve account shall have credit and debit limitations equal in dollar amounts to the total cost differential for replacement energy during a normal refueling outage.

f. A rate-regulated utility desiring to collect expensed allowance costs and the gains and losses from allowance transactions through the energy adjustment must file with the commission monthly reports including:

(1) The number and weighted average unit cost of allowances used during the month to offset emissions from the utility's affected units;

(2) The number and unit price of allowances purchased during the month;

(3) The number and unit price of allowances sold during the month;

(4) The weighted average unit cost of allowances remaining in inventory;

(5) The dollar amount of any gain from an allowance sale occurring during the month;

(6) The dollar amount of any loss from an allowance sale occurring during the month; and

(7) Documentation of any gain or loss from an allowance sale occurring during the month.

g. The energy adjustment clause factor may include other automatic adjustment mechanisms as approved by the commission.

20.9(3) *Utilities not making monthly changes to the adjustment amount.* Utilities that do not file monthly adjustments shall:

a. File the information pursuant to subrule 20.9(2) on a quarterly basis.

b. File an annual reconciliation of the EAC factor and an update to the EAC factor. The date of the annual reconciliation and update shall be specified in the utility's tariff. The reconciliation shall follow the requirements of subrule 20.9(2).

c. Include a semiannual adjustment if the absolute value of the cumulative over recovery or under recovery amount is greater than 20 percent of the forecasted net recoverable energy costs for the EAC year. The semiannual adjustment filing shall be filed six months after the annual reconciliation and update filing and shall follow the requirements of subrule 20.9(2), but will be limited to the remaining months of the year. The semiannual factor updates may utilize updated forecasts for the costs and sales for the remainder of the year.

20.9(4) *Review of energy adjustment clause.* At least biennially, but no more than annually, the commission shall require each utility that owns generation and utilizes an energy adjustment clause to provide fuel, freight, and transportation invoices from two months of the previous calendar year. The utility shall include an explanation of and demonstrate how these invoices correspond to the energy adjustment clause calculations. The explanation shall include inventory accounting information and average cost of fuel and transportation included in the energy adjustment clause calculations. The commission will notify each utility by May 1 as to which two months' invoices will be required. These invoices shall be filed with the commission no later than the subsequent November 1.

20.9(5) *Annual reports.* With the first filing of the utility's EAC year, each utility participating in a wholesale market shall file a report explaining how participation results in reduced customer rates or reduces increases in customer rates, identifying current and evolving market issues that are expected to impact rates, and describing the utility's efforts to influence market issues for the benefit of customers.

199—20.10(476) Ratemaking standards.

20.10(1) *Coverage.* Standards for ratemaking shall apply to all rate-regulated utilities in the state of Iowa. The commission may, by rule or by order in specific cases, exempt a utility or class of utilities from any or all ratemaking standards. The standards are recommended to all service-regulated utilities in this jurisdiction.

20.10(2) *Cost of service.* Rates charged by an electric utility for providing electric service to each class of electric consumers shall be designed, to the maximum extent practicable, to reasonably reflect the costs of providing electric service to the class. The methods used to determine class costs of service shall to the maximum extent practical permit identification of differences in cost-incurrence, for each class of electric consumers, attributable to daily and seasonal time of use of

service, and permit identification of differences in cost-incurrence attributable to differences in demand, energy, and customer components of cost.

The design of rates should reasonably approximate a pricing methodology for any individual utility that would reflect the price system that would exist in a competitive market environment. For purposes of determining revenue requirements among customer classes, embedded costs shall be preferred. For purposes of determining rate designs within customer classes, long-run marginal cost approaches are preferred although embedded cost approaches may be considered reasonable.

Nothing in this rule shall authorize or require the recovery by an electric utility of revenues in excess of, or less than, the amount of revenues otherwise determined to be lawful by the commission.

Guidelines for use in evaluating the acceptability of methods of class cost of service estimation include, but are not limited to, the following:

a. All usage of customer, demand, and energy components of service shall be considered new usage.

b. Customer classes shall be established on the primary basis of reasonably similar usage patterns within classes, even if this requires disaggregation or recombination of traditional customer classes.

c. Generating capacity estimates or allocations among and within classes shall recognize that utility systems are designed to serve both peak and off-peak demand, and shall attribute costs based upon both peak period demand and the contribution of off-peak period demand in determining generation mix. Generating capacity estimates and allocations among and within classes shall be based on load data for each class as described in paragraph "Class load data" of 199—Chapter 35(476).

d. Transmission and distribution capacity estimates or allocations among and within classes shall be demand-related based upon system usage patterns, and the load imposed by a class on the transmission or distribution capacity in question.

e. Customer cost component estimates or allocations shall include only costs of the distribution system from and including transformers, meters, and associated customer service expenses.

f. Methods of cost estimates or allocations among customer classes shall recognize the differences in voltage levels and other service characteristics, and line losses among customer classes.

g. Methods of class cost of service determination that are consistent with zero customer, demand, or energy component costs or major categories of these, such as generation, transmission, or distribution, shall be considered unacceptable methods.

h. Long-run marginal cost methods of class cost of service determination shall clearly reflect changes in total costs to the utility with respect to changes in the outputs of customer, demand, or energy components of electric services.

i. The use of an inverse elasticity approach to adjust long-run marginal cost-based rates to the revenue requirement shall be unacceptable. Other approaches will be considered on a case-by-case basis.

20.10(3) *Declining block rates.* The energy-related cost component of a rate, or the amount attributable to the energy-related cost component of a rate, charged by an electric utility for providing electric service during any period to any class of electric consumers, shall not decrease as kWh consumption by such class increases during the period except to the extent that the utility demonstrates that the energy costs of providing electric service to such class decrease as consumption increases during the period.

20.10(4) *Time-of-day rates.* The rates charged by any electric utility for providing electric service to each class of electric consumers shall be on a time-of-day basis that reflects the cost of providing electric service to that class of electric consumers at different times of the day unless such rates are not cost-effective with respect to the class. These rates are cost-effective with respect to a class if the long-run benefits of the rate to the electric utility and its electric consumers in the class concerned are likely to exceed the metering costs and other costs associated with the use of the rates. Cost-based time-of-day rates shall be offered on an optional basis to electric consumers who do not otherwise qualify for the rates if consumers agree to pay the additional metering costs and other costs associated with the use of the rates.

20.10(5) *Seasonal rates.* The rates charged by an electric utility for providing electric service to each class of electric consumers may be on a seasonal basis that reflects the costs of providing service to the class of consumers at different seasons of the year to the extent that costs vary seasonally for the utility, if the commission determines that seasonal rates are appropriate in an individual case.

20.10(6) *Interruptible rates.* Each electric utility shall offer an interruptible rate that reflects the cost of providing interruptible service to the class of which the consumer is a member and the eligibility requirements for that interruptible service.

199—20.11(476) Customer notification of peaks in electric energy demand.

20.11(1) Pursuant to Iowa Code section 476.17, each investor-owned utility shall have a plan to notify its customers of an approaching peak demand on the day when peak demand is likely to occur. The plan shall be made available to the commission upon request.

20.11(2) The plan shall include, at a minimum, the following:

a. A description and explanation of the condition(s) that will prompt a peak alert.

b. A provision for a general notice to be given to customers prior to the time when peak demand is likely to occur and an explanation of when and how notice of an approaching peak in electric demand will be given to customers.

c. The text of the message or messages to be given in the general notice to customers. The message shall include the name of the utility providing the notice, an explanation that conditions exist that indicate a peak in electric demand is approaching, and an explanation of the significance of reductions in electricity use during a period of peak demand and the potential benefits of energy efficiency.

199—20.13(476) Periodic electric energy supply and cost review [476.6(12)].

Pursuant to Iowa Code section 476.6(12), the commission shall periodically conduct a contested case proceeding for the purpose of evaluating the reasonableness and prudence of a rate-regulated public utility's practices related to procurement of and contracting for fuel used in generating electricity. When it determines to conduct a contested case proceeding, the commission shall notify a rate-regulated utility that it will be required to file an electric fuel procurement plan. The notification to the utility shall include a detailed list of what the commission will be examining as part of the review. The utility shall file its plan no later than 105 days after notification unless otherwise directed by the commission. A utility's procurement plan shall be organized to include information as follows:

20.13(1) *Index.* The plan shall include an index of all documents and information required to be filed in the plan, and the identification of the commission files in which the documents incorporated by reference are located.

20.13(2) *Purchase contracts and arrangements.* A utility's procurement plan shall include detailed summaries of the following types of contracts and agreements executed since the last procurement review:

a. All contracts and fuel supply arrangements for obtaining fuel for use by any unit in generation;

b. All contracts and arrangements for transporting fuel from point of production to the site where placed in inventory, including any unit generating electricity for the utility;

c. All contracts and arrangements for purchasing or selling allowances;

d. Purchased power contracts or arrangements, including sale-of-capacity contracts, involving over 25 MW of capacity;

e. Pool interchange agreements;

f. Multiutility transmission line interchange agreements; and

g. Interchange agreements between investor-owned utilities, generation and transmission cooperatives, or both, not required to be filed above, which were entered into or in effect since the last filing, and all such contracts or arrangements that will be entered into or exercised by the utility during the prospective 12-month period.

All procurement plans filed by a utility shall include all of the types of contracts and arrangements listed in subparagraphs (1) and (2) of this paragraph that will be entered into or exercised by the utility during the prospective 12-month period. In addition, the utility shall file an updated list of contracts that are or will become subject to renegotiation, extension, or termination within five years. The utility shall also update any price adjustment affecting any of the filed contracts or arrangements.

20.13(3) *Other contract offers.* The procurement plan shall include a list and description of those types of contracts and arrangements listed in paragraph 20.13(1)*"b"* offered to the utility since the last filing into which the utility did not enter. In addition, the procurement plan shall include a list of those types of contracts and arrangements listed in paragraph 20.13(1)*"b"* that were offered to the utility for the prospective 12-month period and into which the utility did not enter.

20.13(4) *Studies or investigation reports.* The procurement plans shall include all studies or investigation reports that have been considered by the utility in deciding whether to enter into any of those types of contracts or arrangements listed in paragraphs 20.13(1)*"b"* and *"c"* that will be exercised or entered into during the prospective 12-month period.

20.13(5) *Price hedge justification.* The procurement plan shall justify purchasing allowance futures contracts as a hedge against future price changes in the market rather than for speculation.

20.13(6) *Actual and projected costs.* The procurement plan shall include an accounting of the actual costs incurred in the

purchase and transportation of fuel and the purchase of allowances for use in generating electricity associated with each contract or arrangement filed in accordance with paragraph 20.13(1)*"b"* for the previous 12-month period.

The procurement plan also shall include an accounting of all costs projected to be incurred by the utility in the purchase and transportation of fuel and the purchase of allowances for use in generating electricity associated with each contract or arrangement filed in accordance with paragraph 20.13(1)*"b"* in the prospective 12-month period.

If applicable, the reporting of transportation costs in the procurement plan shall include all known liabilities, including all unit train costs.

20.13(7) *Costs directly related to the purchase of fuel.* The utility shall provide a list and description of all other costs directly related to the purchase of fuels for use in generating electricity not required to be reported by paragraph *"f."*

20.13(8) *Compliance plans.* Each utility shall file its emissions compliance plan as submitted to the EPA. Revisions to the compliance plan shall be filed with each subsequent procurement plan.

20.13(9) *Evidence submitted.* Each utility shall submit all factual evidence and written argument in support of its evaluation of the reasonableness and prudence of the utility's procurement practice decisions in the manner described in its procurement plan. The utility shall file data sufficient to forecast fuel consumption at each generating unit or power plant for the prospective 12-month period. The commission may require the submission of machine-readable data for selected computer codes or models.

20.13(10) *Additional information.* Each utility shall file additional information as ordered by the commission.

199—20.14(476) Flexible rates.

20.14(1) *Purpose.* This rule is intended to allow electric utility companies to offer, at their option, incentive or discount rates to their customers.

20.14(2) *General criteria.*

a. Electric utility companies may offer discounts to individual customers, to selected groups of customers, or to an entire class of customers. However, discounted rates must be offered to all directly competing customers in the same service territory. Customers are direct competitors if they make the same end product (or offer the same service) for the same general group of customers. Customers that only produce component parts of the same end product are not directly competing customers.

b. In deciding whether to offer a specific discount, the utility shall evaluate the individual customer's, group's, or class's situation and perform a cost-benefit analysis before offering the discount.

c. Any discount offered should be such as to significantly affect the customer's or customers' decision to stay on the system or to increase consumption.

d. The consequences of offering the discount should be beneficial to all customers and to the utility. Other customers should not be at risk of loss as a result of these discounts; in addition, the offering of discounts shall in no way lead to subsidization of the discounted rates by other customers in the same or different classes.

20.14(3) *Tariff requirements.* If a company elects to offer flexible rates, the utility shall file for review and approval tariff sheets specifying the general conditions for offering discounted rates. The tariff sheets shall include, at a minimum, the following criteria:

a. The cost-benefit analysis must demonstrate that offering the discount will be more beneficial than not offering the discount.

b. The ceiling for all discounted rates shall be the approved rate on file for the customer's rate class.

c. The floor for the discount rate shall be equal to the energy costs and customer costs of serving the specific customer.

d. No discount shall be offered for a period longer than five years, unless the commission determines upon good cause shown that a longer period is warranted.

e. Discounts should not be offered if they will encourage deterioration in the load characteristics of the customer receiving the discount.

20.14(4) *Reporting requirements.* Each rate-regulated electric utility electing to offer flexible rates shall file annual reports with the commission within 30 days of the end of each 12 months. Reports shall include the following information:

a. For all discounts initiated in the last 12 months, Section 1 of the report shall include:

(1) The identity of the new customers (by account number, if necessary);

(2) The value of the discount offered;

(3) The cost-benefit analysis results;

(4) The end-use cost of alternate fuels or energy supplies available to the customer, if relevant;

(5) The energy and demand components by month of the amount of electricity sold to the customer in the preceding 12 months.

b. Section 2 of the report relates to overall program evaluation. Amount of electricity refers to both energy and demand components when the customer is billed for both elements. For all discounts currently being offered, Section 2 of the report shall include:

(1) The identity of each customer (by account number, if necessary);

(2) The amount of electricity sold in the last 12 months to each customer at discounted rates, by month;

(3) The amount of electricity sold to each customer in the same 12 months of the preceding year, by month;

(4) The dollar value of the discount in the last 12 months to each customer, by month; and

(5) The dollar value of sales to each customer for each of the previous 12 months.

c. For all customers specifically evaluated and denied or having a discount terminated in the last 12 months, Section 3 of the report shall include:

(1) Customer identification (by account number, if necessary);

(2) The amount of electricity sold in the last 12 months to each customer, by month;

(3) The amount of electricity sold to each customer in the same 12 months of the preceding year, by month; and

(4) The dollar value of sales to each customer for each of the past 12 months.

d. No monthly report is required if the utility had no customers receiving a discount during the relevant period and had no customers that were evaluated for the discount and rejected during the relevant period.

20.14(5) *Rate case treatment.* In a rate case, 50 percent of any identifiable increase in net revenues will be used to reduce rates for all customers; the remaining 50 percent of the identifiable increase in net revenues may be kept by the utility. If there is a decrease in revenues due to the discount, the utility's test year revenues will be adjusted to remove the effects of the discount by assuming that all sales were made at full tariffed rates for the customer class. Determining the actual amount will be a factual determination to be made in the rate case.

199—20.15(476) Customer contribution fund.

20.15(1) *Applicability and purpose.* This rule applies to each electric public utility, as defined in Iowa Code sections 476.1, 476.1A, and 476.1B. Pursuant to Iowa Code section 476.66, each utility shall maintain a program plan to assist the utility's low-income customers with weatherization and to supplement assistance received under the federal low-income home energy assistance program for the payment of winter heating bills.

20.15(2) *Notification.* Each utility shall notify all customers of the customer contribution fund at least twice a year. The method of notice that will ensure the most comprehensive notification to the utility's customers shall be employed. Upon commencement of service and at least once a year, the notice shall be mailed or personally delivered to all customers, or provided by electronic means to those customers who have consented to receiving electronic notices. The other required notice may be published in a local newspaper(s) of general circulation within the utility's service territory. A utility serving fewer than 6,000 customers may publish its semiannual notices locally in a free newspaper, utility newsletter, or shopper's guide instead of a newspaper. At a minimum, the notice shall include:

a. A description of the availability of the fund;

b. A description of the purpose of the fund; and

c. A customer authorization form. This form shall include a monthly billing option and any other methods of contribution.

20.15(3) *Methods of contribution.* The utility shall provide for contributions as monthly pledges, as well as one-time or periodic contributions. A pledge by a customer or other party shall not be construed to be a binding contract between the utility and the pledger. The pledge amount shall not be subject to delayed payment charges by the utility. Each utility may allow persons or organizations to contribute matching funds.

20.15(4) *Annual report.* On or before September 30 of each year, each utility shall file with the commission a report of all the customer contribution fund activity for the previous fiscal year beginning July 1 and ending June 30. The report shall be in a form provided by the commission, contain an accounting of the total revenues collected and all distributions of the fund, and report all utility expenses directly related to the customer contribution fund.

199—20.16(476) Exterior flood lighting.

20.16(1) *Newly installed lighting.* All newly installed public utility-owned exterior flood lighting shall be solid-state lighting or lighting with equivalent or better energy efficiency.

20.16(2) *In-service lighting replacement schedule.* In-service lighting shall be replaced with solid-state lighting or lighting with equivalent or better energy efficiency when worn out due to ballast, lamp, or fixture failure for any other reason, such as vandalism or storm damage. A utility shall file with the commission as part of the utility's annual report required in 199—Chapter 23(476,546) a report stating the progress in converting to higher pressure sodium lighting or lighting with equivalent or higher energy efficiency.

20.16(3) *Efficacy standards.* Lighting other than solid-state has equivalent or better efficacy if one or more of the following can be established:

a. For fixtures, the mean lumens-per-watt lamp rating is greater than 100;

b. The new lighting uses no more energy per installation than comparable, suitably sized solid-state; or

c. The new lighting luminaries have a mean efficacy rating equal to or greater than 100 lumens per watt according to a DOE Lighting Facts label, testing under the DOE Commercially Available LED Product Evaluation and Reporting Program (CALiPER), Design Lights Consortium (DLC) or any other testing agency that follows Illuminating Engineering Society of North America LM-79-19, as approved May 14, 2019, test procedures.

199—20.17(476) Ratemaking treatment of emission allowances.

20.17(1) *Applicability and purpose.* This rule applies to all rate-regulated utilities providing electric service in Iowa. Under the Act, each electric utility is required to hold sufficient emission allowances to offset emissions at all affected and new units. The acquisition and disposition of emission allowances will be treated for ratemaking purposes as defined in this rule.

20.17(2) *Definitions.* The following words and terms, when used in this rule, shall have the meaning indicated below:

"*Auction allowances*" are allowances acquired or sold through EPA's annual allowance auction.

"*Boot*" means something acquired or forfeited to equalize a trade.

"*Direct sale allowances*" are allowances purchased from the EPA in its annual direct sale.

"*Fair market value*" is the amount at which an allowance could reasonably be sold in a transaction between a willing buyer and a willing seller other than in a forced or liquidation sale.

"*Historical cost*" is the amount of cash or its equivalent paid to acquire an asset, including any direct acquisition expenses. Any commissions paid to brokers shall be considered a direct acquisition expense.

"*Original cost*" is the historical cost of an asset to the person first devoting the asset to public service.

"*Statutory allowances*" are allowances allocated by the EPA at no cost to affected units under the Act either through annual allocations as a matter of statutory right and those for which a utility may qualify by using certain compliance options or effective use of conservation and renewables.

20.17(3) *Valuing allowances for ratemaking purposes.*

a. Statutory allowances. Valued at zero cost to electric utility.

b. Direct sale allowances. Valued at historical cost.

c. Auction allowances. Valued at historical cost.

d. Purchased allowances. Valued at historical cost.

20.17(4) *Valuing allowance inventory accounts.* Allowance inventory accounts shall be valued at the weighted average cost of all allowances eligible for use during that year.

20.17(5) *Valuing allowances acquired as part of a package.* Allowances acquired as part of a package with equipment, fuel, or electricity shall be valued at their fair market value at the time the allowances were acquired.

20.17(6) *Valuing allowances acquired through exchanges.*

a. Exchanges without boot. Electric utilities shall value allowances received in exchanges based on the recorded inventory value of the allowances relinquished.

b. Exchanges with boot. Electric utilities shall value allowances as the sum of the inventory cost of the allowances given up and the monetary consideration paid in boot for the newly acquired allowances. In determining the historical cost of allowances received, a gain (or loss) shall be recorded to the extent that the amount of boot received exceeds a proportionate share of the recorded weighted average inventory cost of the allowance surrendered. The proportionate share shall be based upon the ratio of the monetary consideration received (i.e., boot) to the total consideration received (monetary consideration plus the fair market value of the allowances received). The historical cost of the allowances received shall be equal to the

amount derived by subtracting the difference between the boot received and the gain from the old inventory cost.

20.17(7) *Valuing allowances transferred among affiliates.*

a. Allowances transferred from a utility to a parent or unregulated subsidiary shall be transferred at the higher of historical cost or fair market value.

b. Allowances transferred from an unregulated subsidiary or parent to a utility shall be transferred at the lesser of original cost or fair market value.

c. Allowances transferred from a utility to an affiliated utility shall be transferred at fair market value.

20.17(8) *Expense recognition and recovery of allowance costs.*

a. Expense recognition. Electric utilities shall charge allowances (including fractional amounts) to expense in the month in which related emissions occur.

b. Expense recovery. The expense associated with allowances used for compliance shall be passed through the energy adjustment as specified in rule 199—20.9(476). The expense associated with allowances used for compliance shall include expenses associated with vintage trades and emission for emission trades.

c. Allowance inventory shortage. If a utility emits more emissions in a month than it has allowances in inventory, the utility shall pass the estimated cost of acquiring the needed allowances through the energy adjustment. When the needed allowances are acquired, any difference between the estimated and actual cost of the allowances shall be passed through the energy adjustment as specified in rule 199—20.9(476).

20.17(9) *Gains/losses from allowance transactions.* The gains and losses, including net gains and losses, from allowance transactions shall be passed through the energy adjustment as specified in rule 199—20.9(476). Allowance transactions shall include vintage trades and emission for emission trades.

20.17(10) *Allowance futures or option contracts.*

a. Price hedging. Electric utilities shall defer the costs or benefits from hedging transactions and include such amounts in inventory values when the related allowances are acquired, sold, or otherwise disposed of. Where the costs or benefits of hedging transactions are not identifiable with specific allowances, the amounts shall be included in inventory values when the futures contract is closed.

b. Speculation. Allowance transactions entered into for the purpose of speculation shall not affect allowance inventory pricing.

20.17(11) *Working capital reserve of allowances.* A working capital reserve of allowances shall be established in each utility's rate case proceeding based on the probability of forced outages, fuel quality variability, variability in load growth, nuclear exposure, the price and availability of allowances on the national market, and any other factors that the commission deems appropriate. The working capital reserve will earn at the utility's authorized rate of return.

20.17(12) *Allowances banked for future use.* Allowances banked for future use shall be considered plant held for future use in utility rate proceedings if a definitive plan and schedule for use of the allowances is deemed adequate by the commission.

20.17(13) *Prudence of allowance transactions.* The prudence of allowance transactions shall be determined by the commission in the periodic electric energy supply and cost review. The prudency review of allowance transactions and accompanying compliance plans shall be based on information available at the time the options or plans were developed. Costs recovered from ratepayers through the energy adjustment that are deemed imprudent by the commission shall be refunded with interest to ratepayers through the energy adjustment as specified in rule 199—20.9(476).

199—20.18(476,478) Service reliability requirements for electric utilities.

20.18(1) *Applicability.* This rule is applicable to investor-owned electric utilities and electric cooperative corporations and associations operating within the state of Iowa subject to Iowa Code chapter 476 and to the construction, operation, and maintenance of electric transmission lines by electric utilities as defined in subrule 20.18(4) to the extent provided in Iowa Code chapter 478.

20.18(2) *Purpose and scope.* Reliable electric service is of high importance to the health, safety, and welfare of the citizens of Iowa. The purpose of this rule is to establish requirements for assessing the reliability of the transmission and distribution systems and facilities that are under the commission's jurisdiction. This rule establishes reporting requirements to provide consumers, the commission, and electric utilities with methodology for monitoring reliability and ensuring quality of electric service within an electric utility's operating area. This rule provides definitions and requirements for maintenance of interruption data, retention of records, and report filing.

20.18(3) *General obligations.*

a. Each electric utility shall make reasonable efforts to avoid and prevent interruptions of service. However, when interruptions occur, service shall be reestablished within the shortest time practicable, consistent with safety.

b. The electric utility's electrical transmission and distribution facilities shall be designed, constructed, maintained, and electrically reinforced and supplemented as required to reliably perform the power delivery burden placed upon them in the storm and traffic hazard environment in which they are located.

c. Each electric utility shall carry on an effective preventive maintenance program and be capable of emergency repair work on a scale that its storm and traffic damage record indicates as appropriate to its scope of operations and to the physical condition of its transmission and distribution facilities.

d. In appraising the reliability of the electric utility's transmission and distribution system, the commission will consider the condition of the physical property and the size, training, supervision, availability, equipment, and mobility of the maintenance forces, all as demonstrated in actual cases of storm and traffic damage to the facilities.

e. Each electric utility shall keep records of interruptions of service on its primary distribution system and make an analysis of the records for the purpose of determining steps to be taken to prevent recurrence of such interruptions.

f. Each electric utility shall make reasonable efforts to reduce the risk of future interruptions by taking into account the age, condition, design, and performance of transmission and distribution facilities and providing adequate investment in the maintenance, repair, replacement, and upgrade of facilities and equipment.

20.18(4) *Definitions.* Terms and formulas when used in this rule are defined as follows:

"Customer" means (1) any person, firm, association, or corporation, (2) any agency of the federal, state, or local government, or (3) any legal entity responsible by law for payment of the electric service from the electric utility which has a separately metered electrical service point for which a bill is provided. Each meter equals one customer. Retail customers are end-use customers who purchase and ultimately consume electricity.

"Customer average interruption duration index (CAIDI)" means the average interruption duration for those customers who experience interruptions during the year. It is calculated by dividing the annual sum of all customer interruption durations by the total number of customer interruptions.

$$\text{CAIDI} = \frac{\text{Sum of All Customer Interruption Durations}}{\text{Total Number of Customer Interruptions}}$$

"Distribution system" means that part of the electric system owned or operated by an electric utility and designed to operate at a nominal voltage of 25,000 volts or less.

"Electric utility" means investor-owned electric utilities and electric cooperative corporations and associations owning, controlling, operating, or using transmission and distribution facilities and equipment subject to the commission's jurisdiction.

"Electrical service point" means the point of connection between the electric utility's equipment and the customer's equipment.

"GIS" means a geospatial information system. This is an information management framework that allows the integration of various data and geospatial information.

"Interrupting device" means a device capable of being reclosed whose purpose is to interrupt faults and restore service or disconnect loads. These devices can be manual, automatic, or motor-operated. Examples may include transmission breakers, feeder breakers, line reclosers, motor-operated switches, fuses, or other devices.

"Interruption" means a loss of service to one or more customers or other facilities and is the result of one or more component outages. The types of interruption include momentary event, sustained, and scheduled. The following interruption causes shall not be included in the calculation of the reliability indices:

1. Interruptions intentionally initiated pursuant to the provisions of an interruptible service tariff or contract and affecting only those customers taking electric service under such tariff or contract;
2. Interruptions due to nonpayment of a bill;
3. Interruptions due to tampering with service equipment;
4. Interruptions due to denied access to service equipment located on the affected customer's private property;
5. Interruptions due to hazardous conditions located on the affected customer's private property;

6. Interruptions due to a request by the affected customer;
7. Interruptions due to a request by a law enforcement agency, fire department, other governmental agency responsible for public welfare, or any agency or authority responsible for bulk power system security; or
8. Interruptions caused by the failure of a customer's equipment; the operation of a customer's equipment in a manner inconsistent with law, an approved tariff, rule, regulation, or an agreement between the customer and the electric utility; or the failure of a customer to take a required action that would have avoided the interruption, such as failing to notify the company of an increase in load when required to do so by a tariff or contract.

"*Interruption duration*" as used herein in regard to sustained outages means a period of time measured in one-minute increments that starts when an electric utility is notified or becomes aware of an interruption and ends when an electric utility restores electric service, as long as the duration is not less than five minutes long.

"*Interruption, momentary*" means single operation of an interrupting device that results in a voltage of zero. For example, two breaker or recloser operations equals two momentary interruptions. A momentary interruption is one in which power is restored automatically.

"*Interruption, momentary event*" means an interruption of electric service to one or more customers of duration limited to the period required to restore service by an interrupting device. Note: Such switching operations must be completed in a specified time not to exceed five minutes. This definition includes all reclosing operations that occur within five minutes of the first interruption. For example, if a recloser or breaker operates two, three, or four times and then holds, the event shall be considered one momentary event interruption.

"*Interruption, scheduled*" means an interruption of electric power that results when a transmission or distribution component is deliberately taken out of service at a selected time, usually for the purposes of construction, preventive maintenance, or repair. If it is possible to defer the interruption, the interruption is considered a scheduled interruption.

"*Interruption, sustained*" means any interruption not classified as a momentary event interruption. It is an interruption of electric service that is not automatically or instantaneously restored, with duration of greater than five minutes.

"*Loss of service*" means the loss of electrical power, or a complete loss of voltage, to one or more customers. This does not include any of the power quality issues such as sags, swells, impulses, or harmonics. Also see definition of "interruption."

"*Major event*" will be declared whenever extensive physical damage to transmission and distribution facilities has occurred within an electric utility's operating area due to unusually severe and abnormal weather or event and:

1. Wind speed exceeds 90 mph for the affected area,
2. One-half inch of ice is present and wind speed exceeds 40 mph for the affected area,
3. Ten percent of the affected area total customer count is incurring a loss of service for a length of time to exceed five hours, or
4. 20,000 customers in a metropolitan area are incurring a loss of service for a length of time to exceed five hours.

"*Metropolitan area*" means any community, or group of contiguous communities, with a population of 20,000 individuals or more.

"*Momentary average interruption frequency index (MAIFI)*" means the average number of momentary electric service interruptions for each customer during the year. It is calculated by dividing the total number of customer momentary interruptions by the total number of customers served.

$$\text{MAIFI} = \frac{\text{Total Number of Customer Momentary Interruptions}}{\text{Total Number of Customer Interruptions}}$$

"*OMS*" is a computerized outage management system.

"*Operating area*" means a geographical area defined by the electric utility that is a distinct area for administration, operation, or data collection with respect to the facilities serving, or the service provided within, the geographical area.

"*Outage*" means the state of a component when it is not available to perform its intended function due to some event directly associated with that component. An outage may or may not cause an interruption of service to customers, depending on system configuration.

"*Power quality*" means the characteristics of electric power received by the customer, with the exception of sustained

interruptions and momentary event interruptions. Characteristics of electric power that detract from its quality include waveform irregularities and voltage variations, either prolonged or transient. Power quality problems shall include, but are not limited to, disturbances such as high or low voltage, voltage spikes and transients, flickers and voltage sags, surges, and short-time overvoltages, as well as harmonics and noise.

"Rural circuit" means a circuit not defined as an urban circuit.

"System average interruption duration index (SAIDI)" means the average interruption duration per customer served during the year. It is calculated by dividing the sum of the customer interruption durations by the total number of customers served during the year.

$$SAIDI = \frac{\text{Sum of All Customer Interruption Durations}}{\text{Total Number of Customers Served}}$$

"System average interruption frequency index (SAIFI)" means the average number of interruptions per customer during the year. It is calculated by dividing the total annual number of customer interruptions by the total number of customers served during the year.

$$SAIFI = \frac{\text{Total Number of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

"Total number of customers served" means the total number of customers served on the last day of the reporting period.

"Urban circuit" means a circuit where both 75 percent or more of its customers and 75 percent or more of its primary circuit miles are located within a metropolitan area.

20.18(5) *Record-keeping requirements.*

a. Required records for electric utilities.

(1) Each electric utility shall maintain a geospatial information system (GIS) and an OMS sufficient to determine a history of sustained electric service interruptions experienced by each customer. The OMS shall have the ability to access data for each customer in order to determine a history of electric service interruptions. Data shall be sortable by each of, and in any combination with, the following factors:

1. State jurisdiction;
2. Operating area (if any);
3. Substation;
4. Circuit;
5. Number of interruptions in reporting period; and
6. Number of hours of interruptions in reporting period.

(2) Records on interruptions shall be sufficient to determine the following:

1. Starting date and time the utility became aware of the interruption;
2. Duration of the interruption;
3. Date and time service was restored;
4. Number of customers affected;
5. Description of the cause of the interruption;
6. Operating areas affected;
7. Circuit number(s) of the distribution circuit(s) affected;
8. Service account number or other unique identifier of each customer affected;
9. Address of each affected customer location;
10. Weather conditions at time of interruption;
11. System component(s) involved (e.g., transmission line, substation, overhead primary main, underground primary main, transformer); and
12. Whether the interruption was planned or unplanned.

(3) Each electric utility shall maintain as much information as feasible on momentary interruptions.

(4) Each electric utility shall keep information on cause codes, weather codes, isolating device codes, and equipment failed codes.

1. The minimum interruption cause code set should include: animals, lightning, major event, scheduled, trees, overload, error, supply, equipment, other, unknown, and earthquake.
2. The minimum interruption weather code set should include: wind, lightning, heat, ice/snow, rain, clear day, and tornado/hurricane.
3. The minimum interruption isolating device set should include: breaker, recloser, fuse, sectionalizer, switch, and elbow.
4. The minimum interruption equipment failed code set should include: cable, transformer, conductor, splice, lightning arrester, switches, cross arm, pole, insulator, connector, other, and unknown.
5. Utilities may augment the code sets listed above to enhance tracking.

(5) An electric utility shall retain for seven years the records required by 20.18(5)*"a"*(1) through (4).

(6) Each electric utility shall record the date of installation of major facilities (poles, conductors, cable, and transformers) installed on or after April 1, 2003, and integrate that data into its GIS database.

20.18(6) *Notification of major events.* Notification of major events as defined in subrule 20.18(4) shall comply with the requirements of rule 199—20.19(476,478).

20.18(7) *Annual reliability and service quality report for.* Each electric utility shall submit to the commission on or before May 1 of each year an annual reliability report for the previous calendar year for the Iowa jurisdiction. The report shall include the following information:

a. Description of service area. Urban and rural Iowa service territory customer count, Iowa operating area customer count, if applicable, and major communities served within each operating area.

b. System reliability performance.

(1) An overall assessment of the reliability performance, including the urban and rural SAIFI, SAIDI, and CAIDI reliability indices for the previous calendar year for the Iowa service territory and each defined Iowa operating area, if applicable. This assessment shall include outages at the substation, transmission, and generation levels of the system that directly result in sustained interruptions to customers on the distribution system. These indices shall be calculated twice, once with the data associated with major events and once without. This assessment should contain tabular and graphical presentations of the trend for each index as well as the trends of the major causes of interruptions.

(2) The urban and rural SAIFI, SAIDI, and CAIDI reliability average indices for the previous five calendar years for the Iowa service territory and each defined Iowa operating area, if applicable. The reliability average indices shall include outages at the substation, transmission, and generation levels of the system that directly result in sustained interruptions to customers on the distribution system. Calculation of the five-year average shall start with data from the year covered by the first Annual Reliability Report submittal so that by the fifth Annual Reliability Report submittal a complete five-year average shall be available. These indices shall be calculated twice, once with the data associated with major events and once without.

(3) The MAIFI reliability indices for the previous five calendar years for the Iowa service territory and each defined Iowa operating area for which momentary interruptions are tracked. The first annual report should specify which portions of the system are monitored for momentary interruptions, identify and describe the quality of data used, and update as needed in subsequent reports.

c. Reporting on customer outages.

(1) The reporting electric utility shall provide tables and graphical representations showing, in ascending order, the total number of customers that experienced set numbers of sustained interruptions during the year (i.e., the number of customers who experienced zero interruptions, the number of customers who experienced one interruption, two interruptions, three interruptions, and so on). The utility shall provide this for each of the following:

1. All Iowa customers, excluding major events.
2. All Iowa customers, including major events.

(2) The reporting electric utility shall provide tables and graphical representations showing, in ascending order, the total number of customers that experienced a set range of total annual sustained interruption duration during the year (i.e., the number of customers who experienced zero hours total duration, the number of customers who experienced greater than 0.0833 but less than 0.5 hour total duration, the number of customers who experienced greater than 0.5 but less than 1.0 hour total duration, and so on, reflecting half-hour increments of duration). The utility shall provide this for each of the following:

1. All Iowa customers, excluding major events.
2. All Iowa customers, including major events.

d. Major event summary. For each major event that occurred in the reporting period, the following information shall be provided:

(1) A description of the area(s) impacted by each major event;
(2) The total number of customers interrupted by each major event;
(3) The total number of customer-minutes interrupted by each major event; and
(4) Updated damage cost estimates to the electric utility's facilities.

e. Information on transmission and distribution facilities.

(1) Total circuit miles of electric distribution line in service at year's end, segregated by voltage level. Reasonable groupings of lines with similar voltage levels, such as but not limited to 12,000- and 13,000-volt three-phase facilities, are acceptable.

(2) Total circuit miles of electric transmission line in service at year's end, segregated by voltage level.

f. Plans and status report. A plan for service quality improvements, including costs, for the electric utility's transmission and distribution facilities that will ensure quality, safe, and reliable delivery of energy to customers.

g. Capital expenditure information. Reporting of capital expenditure information shall start with data from the year covered by the first Annual Reliability Report submittal so that by the fifth Annual Reliability Report submittal five years of data shall be available in each subsequent annual report.

(1) Each electric utility shall report on an annual basis the total of:

1. Capital investment in the electric utility's Iowa-based transmission and distribution infrastructure approved by its commission of directors or other appropriate authority. If any amounts approved by the commission of directors are designated for use in a recovery from a major event, those amounts shall be identified in addition to the total.
2. Capital investment expenditures in the electric utility's Iowa-based transmission and distribution infrastructure. If any expenditures were utilized in a recovery from a major event, those amounts shall be identified in addition to the total.

(2) Each electric utility shall report the same capital expenditure data from the past five years in the same fashion as in subparagraph 20.18(7)*"g"*(1).

h. Maintenance. Reporting of maintenance information shall start with data from the year covered by the first Annual Reliability Report submittal so that by the fifth Annual Reliability Report submittal five years of data shall be available in each subsequent annual report.

(1) Total maintenance budgets and expenditures for distribution, and for transmission, for each operating area, if applicable, and for the electric utility's entire Iowa system for the past five years. If any maintenance budgets and expenditures are designated for use in a recovery from a major event, or were used in a recovery from a major event, respectively, those amounts shall be identified in addition to the totals.

(2) Tree trimming.

1. The budget and expenditures described in subparagraph 20.18(7)*"h"*(1) shall be stated in such a way that the total annual tree trimming budget expenditures shall be identifiable for each operating area and for the electric utility's entire Iowa system for the past five years.
2. Total annual projected and actual miles of transmission line and of distribution line for which trees were trimmed for the reporting year for each operating area and for the electric utility's entire Iowa system for the reporting year, compared to the past five years. If the utility has utilized, or would prefer to utilize, an alternative method or methods of tracking physical tree trimming progress, it may propose the use of that method or methods to the commission in a request for waiver.
3. In the event the utility's actual tree trimming performance, based on how the utility tracks its tree trimming as described in numbered paragraph 20.18(7)*"h"*(2)"1," lags behind its planned trimming schedule by more than six months, the utility shall be required to file for the commission's approval additional tree trimming status reports on a quarterly basis. Such reports shall describe the steps the utility will take to remediate its tree trimming performance and backlog. The additional quarterly reports shall continue until the utility's backlog has been reduced to zero.

i. The annual reliability report shall include the number of poles inspected, the number rejected, and the number replaced.

20.18(8) *Inquiries about electric service reliability.*

A customer may request a report from an electric utility about the service reliability of the circuit supplying the

customer's own meter. Within 20 working days of receipt of the request, the electric utility shall supply the report to the customer at a reasonable cost. The report should identify which interruptions (number and durations) are due to major events.

199—20.19(476,478) Notification of outages.

20.19(1) *Notification.* The notification requirements in rule 20.19 are for the timely collection of electric outage information that may be useful to emergency management agencies in providing for the welfare of individual Iowa citizens. Each electric utility shall notify the commission when it is projected that an outage may result in a loss of service for more than six hours and the outage meets one of the following criteria:

a. Loss of service for more than six hours to substantially all of a municipality, including the surrounding area served by the same utility. A utility may use loss of service to 75 percent or more of customers within a municipality, including the surrounding area served by the utility, to meet this criterion;

b. Loss of service for more than six hours to 20 percent of the customers in a utility's established zone or loss of service to more than 5,000 customers in a metropolitan area, whichever is less;

c. A major event as defined in subrule 20.18(4); or

d. Any other outage considered significant by the electric utility. This includes loss of service for more than six hours to significant public health and safety facilities known to the utility at the time of the notification, even when the outage does not meet the criteria in paragraphs 20.19(1)*"a"* and *"b."*

20.19(2) *Information required.*

a. Notification shall be provided regarding outages that meet the requirements of subrule 20.19(1) by notifying the commission duty officer by email at dutyofficer@iuc.iowa.gov or, in appropriate circumstances, by telephone at 515.745.2332. Notification shall be made at the earliest possible time after it is determined the event may be reportable and should include the following information, as available:

(1) The general nature or cause of the outage;

(2) The area affected;

(3) The approximate number of customers that have experienced a loss of electric service as a result of the outage;

(4) The time when service is estimated to be restored; and

(5) The name of the utility, the name and telephone number of the person making the report, and the name and telephone number of a contact person knowledgeable about the outage.

The notice should be supplemented as more complete or accurate information is available.

b. The utility shall provide to the commission updates of the estimated time when service will be restored to all customers able to receive service or of significant changed circumstances, unless service is restored within one hour of the time initially estimated.

c. The utility shall notify the commission once service is fully restored to all customers after an outage meeting the requirements of subrule 20.19(1).

199—20.20(476) Electric vehicle charging service.

20.20(1) A commercial or public electric vehicle charging station is not a public utility under Iowa Code section 476.1 if the charging station receives all electric power from the electric utility in whose service area the charging station is located. If an electric vehicle charging station obtains electric power from a source other than the electric utility, the determination of whether the commercial or public electric vehicle charging station is a public utility shall be resolved by the commission.

20.20(2) A person, partnership, business association, or corporation, foreign or domestic, furnishing electricity to a commercial or public electric vehicle charging station shall comply with Iowa Code section 476.25 and, if applicable, with the terms and conditions of the public utility's tariffs or service rules.

20.20(3) A rate-regulated public utility shall not, through its filed tariff, prohibit electric vehicle charging or restrict the method of sale of electric vehicle charging at a commercial or public electric vehicle charging station.

20.20(4) Electric utilities and entities providing commercial or public electric vehicle charging service shall comply with all applicable statutes and regulations governing the provision of electric vehicle charging service, including but not limited to all taxing requirements, and shall, if necessary, file all appropriate tariffs.

199—20.21(476) Transmission cost adjustment (TCA).

20.21(1) *Transmission cost adjustment.* Pursuant to Iowa Code section 476.6(8)*"b,"* public utilities may automatically

adjust rates and charges to recover transmission-related costs incurred by or charged to the public utility consistent with a tariff or agreement that is subject to the jurisdiction of FERC, provided that a schedule showing the automatic adjustment of rates and charges is first filed with and approved by the commission. The public utilities shall also file accounting information and invoices for any expenses incurred for construction and maintenance, along with any other documents filed with the respective regional transmission organization or the FERC, regarding these qualifying transmission-related costs. Transmission cost adjustments shall be computed and tracked separately for each customer classification or grouping previously approved by the commission and shall use the same unit of measure as the utility's tariffed rates. Changes in the customer classification and grouping on file are not automatic and require prior approval by the commission. If any eligible cost is recovered outside of the TCA, the cost may not be recovered through the TCA until the cost is removed from its current recovery mechanism. If any eligible cost is recovered outside of the TCA, the cost may not be recovered through the TCA until the cost is removed from base rates during a utility's rate case. The TCA factor shall be included as a separate line item on the customer's bill.

20.21(2) *TCA annual factor.* An annual TCA factor update shall be filed as a TF docket at least 30 days prior to the beginning of the utility's TCA year. The TCA update shall include information describing which eligible TCA costs are being recovered through the TCA and, if not recovered through the TCA, where eligible costs are being recovered. The annual TCA factors for each customer classification or grouping shall be based upon forecasted transmission costs allocated to Iowa retail customers, forecasted Iowa sales or demand, and allocation factors approved by the commission. The forecasted allocation factors shall be based on a three-year average of the actual allocation factors for each of the three previous calendar years. For customers billed by kWh, the factors shall be developed on a kWh basis. For customers billed by kW, the factors shall be developed on a kilowatt basis. In addition, the following is required to be included with this filing:

a. A listing of all transmission costs that are incurred by or charged to the public utility and are consistent with a tariff or agreement that is subject to the jurisdiction of the FERC, detailing where each transmission cost is currently being recovered (e.g., base rates, TCA).

b. A time series chart of each transmission cost eligible for inclusion in the TCA for the previous three calendar years.

20.21(3) *Annual reconciliation.* Within four months after the effective date of annual TCA factors, a utility shall file an annual reconciliation based upon actual costs and revenues attributed to Iowa customers for the prior calendar year. The annual reconciliation shall be filed in the same TF docket identified for the annual filing required in subrule 20.21(2). The reconciliation shall include updated allocators for each customer classification or grouping based on actual load data from the prior calendar year. The actual costs for the prior calendar year shall be allocated to each customer class based upon the updated allocation factors. The utility shall compare the actual transmission costs allocated to each customer class with the actual revenue billed through the TCA by customer class net of the prior year's reconciliation dollar amount for each customer class. Any resulting overcollection or undercollection for each class shall be divided by the forecasted sales or demand for each customer class for the remainder of the TCA period. The resulting adjustments shall be added to the effective TCA factors that were approved in the TCA annual factor filing under subrule 20.21(2). The adjusted TCA factor for customers billed by kWh shall be developed on a kWh basis, and for customers billed on a kilowatt basis, the adjusted TCA factor shall be developed on a kilowatt basis.

20.21(4) *Other adjustments to the TCA factor.* A utility may propose other adjustments to the TCA factor throughout the 12-month TCA period to assist with accurate recovery of forecasted costs and revenues, subject to commission approval. Any midyear adjustments shall be filed in the same TF docket as the annual filing. If a utility proposes an adjustment to the TCA factor, other than the reconciliation required in subrule 20.21(3), the utility shall provide an explanation for the proposed adjustment and provide information to support the proposed adjustment. For any customer billed by kWh, the proposed adjustment shall be developed on a kWh basis. For any customer billed on a kilowatt basis, the proposed adjustment shall be developed on a kilowatt basis.

20.21(5) *Quarterly informational filings.* By the end of the month following the end of each calendar quarter, the utility shall file a report containing, at minimum, the current cumulative overcollection or undercollection balance, support for the overcollection or undercollection calculation, the total transmission cost for the current calendar year by category, and the supporting invoices and documentation for the most recent calendar quarter. The reports shall be filed in the same TF docket as the annual TCA filing.

20.21(6) *Semiannual transmission reports.* Each year at the beginning, and midpoint of a utility's TCA year, each utility

shall file a report detailing the utility's transmission-related activities. These reports shall detail the utility's recent efforts to mitigate transmission costs and influence policy to the benefit of the utility and its ratepayers.

20.21(7) *Midcontinent Independent System Operator, Inc. (MISO) refunds.* Any utility utilizing a TCA mechanism that receives transmission-related refunds from MISO shall file a refund plan for commission approval, detailing how the utility will distribute the refund to customers. The refund plan must be filed once the amount and timing of the refund is known to the utility. The refund plan shall include an applicable interest rate for refund amounts held more than 30 days, the method of distributing the refund to customers, and the timing of distributing the refund to customers.

These rules are intended to implement Iowa Code sections 17A.3, 364.23, 474.5, 476.1, 476.2, 476.6, 476.8, 476.20, 476.54, 476.66, 478.18, and 546.7.

For rules being re-promulgated with changes, you may attach a document with suggested changes.

METRICS

Total number of rules repealed:	1
Proposed word count reduction after repeal and/or re-promulgation	2507
Proposed number of restrictive terms eliminated after repeal and/or re-promulgation	50

ARE THERE ANY STATUTORY CHANGES YOU WOULD RECOMMEND INCLUDING CODIFYING ANY RULES?

There are no changes recommended at this time.

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TEXT BOXES WILL EXPAND AS YOU TYPE

Agency Name Iowa Utilities Board **Rule #** 199 IAC Chapter 20

Iowa Code Section Authorizing Rule Iowa Code §§ 476.1, 476.1B, 476.2, 478.19, and 478.20

State or Federal Law(s) Implemented by the Rule Iowa Code §§ 17A.3, 364.23, 474.5, 476.1, 476.2, 476.6, 476.8, 476.20, 476.54, 476.66, 478.18, and 546.7

Public Hearing

A public hearing at which persons may present their views orally or in writing will be held as follows:

Date/Time: August/1/2024 9:00 AM

Location: Board Hearing Room, 1375 E. Court Ave., Des Moines, Iowa

Any interested person may submit written comments concerning this regulatory analysis. Written comments in response to this regulatory analysis must be received by the Department no later than 4:30 p.m. on the date of the public hearing. Comments should be directed to:

Contact Name

IT Support

Address

Iowa Utilities Board

Email and/or phone number

515.725.7300 / ITsupport@iub.iowa.gov

Purpose and summary of proposed rule:

Chapter 20 promotes safe and adequate service to the public, provides standards for uniform and reasonable practices by rate-regulated utilities, and establishes a basis for determining the reasonableness of such demands as may be made by the public upon the utilities.

Analysis of Impact of Proposed Rule

1. Persons affected by the proposed rule
    - Classes of persons that will bear the costs of the proposed rule:

Because the proposed rule provides standards for practices by rate-regulated utilities and actions the utility must be prepared to respond to, the costs are paid for by the utilities. Dependent upon the type of costs, the costs may be passed on to ratepayers,

    - Classes of persons that will benefit from the proposed rule:

All persons benefit from the provision of safe and adequate service to the public as well as standardized practices by utilities to ensure they are receiving adequate and similar service regardless of the utility that is providing the service.

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2. Impact of the proposed rule, economic or otherwise, including the nature and amount of all the different kinds of costs that would be incurred
    - Quantitative description of impact:

There are additional costs to the utilities related to these service requirements and standards and practices that must be followed. Additional costs include personnel time to ensure that the standards are being followed and any required filings are made to the Board in a timely manner. If ratepayers need assistance there is also a temporal cost.

    - Qualitative description of impact:

These standards and service requirements help ensure that electric customers are provided with adequate and consistent service regardless of which electric utility is providing their service and that the service is being provided in a safe manner to protect customers and those around the facilities.

3. Costs to the state
    - Implementation and enforcement costs borne by the agency or any other agency:

There are no additional costs to any agency other than the normal costs the Board has for standard operations of the Board.

    - Anticipated effect on state revenues:

There are no anticipated effects on state revenues.

4. Comparison of the costs and benefits of the proposed rule to the costs and benefits of inaction

Inaction would have increased costs of not providing the service requirements and standards for reasonable practices by utilities in that there would be no consistent and ensured electric service for the customers throughout Iowa. The benefits of ensuring safe and reliable electric service and reasonable practices by electric utilities outweigh the costs of the proposed rule.

5. Determination if less costly methods or less intrusive methods exist for achieving the purpose of the proposed rule

The provisions of these standards for uniform and reasonable utility practices, the demands that utilities can have placed on them, and the service requirements are the least costly and intrusive method for achieving the purpose of the rules.

6. Alternative methods considered by the agency
    - Description of any alternative methods that were seriously considered by the agency:

The alternative method to achieve these purposes would be to use and follow national standards referenced within the chapter.

    - Reasons why they were rejected in favor of the proposed rule:

These national standards are effective reference material, but do not have sufficient specificity to cover all issues and concerns relating to the electric utility service within Iowa.

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Small Business Impact

If the rule will have a substantial impact on small business, include a discussion of whether it would be feasible and practicable to do any of the following to reduce the impact of the rule on small business:

- Establish less stringent compliance or reporting requirements in the rule for small business.
- Establish less stringent schedules or deadlines in the rule for compliance or reporting requirements for small business.
- Consolidate or simplify the rule's compliance or reporting requirements for small business.
- Establish performance standards to replace design or operational standards in the rule for small business.
- Exempt small business from any or all requirements of the rule.

If legal and feasible, how does the rule use a method discussed above to reduce the substantial impact on small business?

There are no anticipated small business impacts.

Text of Proposed Rule:

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CHAPTER 20
SERVICE SUPPLIED BY RATE-REGULATED ELECTRIC UTILITIES

199—20.1(476) General information.

20.1(1) *Authorization of rules.* Iowa Code chapter 476 provides that the Iowa Utilities Commission shall establish all needful, just and reasonable rules, not inconsistent with law, to govern the exercise of its powers and duties, the practice and procedure before it, and to govern the form, content, and filing of reports, documents, and other papers necessary to carry out the provisions of this law.

a. Iowa Code chapter 478 provides that the Iowa Utilities Commission shall have power to make and enforce rules relating to the location, construction, operation, and maintenance of certain electrical transmission lines.

b. Electric utilities with fewer than 10,000 customers subject to commission regulation pursuant to Iowa Code section 476.1A are subject to the regulatory requirements set out in 199—Chapter 27(476) for municipal electric utilities and electric cooperatives.

20.1(2) *Application of rules.* The rules shall apply to any rate-regulated electric utility operating within the state of Iowa subject to Iowa Code chapter 476, and to the construction, operation, and maintenance of electric transmission lines to the extent provided in Iowa Code chapter 478, and shall supersede all tariffs on file with the commission that are in conflict with these rules.

a. These rules are intended to promote safe and adequate service to the public, to provide standards for uniform and reasonable practices by utilities, and to establish a basis for determining the reasonableness of such demands as may be made by the public upon the utilities.

b. The adoption of these rules shall in no way preclude the commission from altering or amending them pursuant to statute or from making such modifications with respect to their application as may be found necessary to meet exceptional conditions.

20.1(3) *Definitions.* The following words and terms, when used in these rules, shall have the meaning indicated below:

"Acid Rain Program" means the sulfur dioxide and nitrogen oxides air pollution control program established pursuant to Title IV of the Act under 40 CFR Parts 72-78.

"Act" means the Clean Air Act, 42 U.S.C. Section 7401, et seq, as amended on November 15, 1990.

"Affected unit" means a unit or source that is subject to any emission reduction requirement or limitation under the Acid Rain Program, the CAIR, the CSAPR, or the MATS, or a unit or source that opts in under 40 CFR Part 74, dated April 4, 1995.

"Allowance" means an authorization, allocated by the United States Environmental Protection Agency (EPA), to emit sulfur dioxide (SO_2) under the Acid Rain Program or SO_2 and nitrogen oxide (NO_X) under the CAIR, and the CSAPR during or after a specified calendar year.

"Allowance futures contract" is an agreement between a futures exchange clearinghouse and a buyer or seller to buy or sell an allowance on a specified future date at a specified price.

"Capacity" means the instantaneous rate at which energy can be delivered, received, or transferred, measured in kilowatts (kW).

"Clean Air Interstate Rule" or *"CAIR"* means the requirements EPA published in the Federal Register (70 Fed. Reg. 25161) on May 12, 2005.

"Code of Federal Regulations" or *"CFR"* means the Code of Federal Regulations, which contains the general administrative rules adopted by federal departments and agencies, in effect as of [effective date of chapter], unless a separate effective date is identified in a specific rule.

"Complaint," as used in this chapter, is a statement or question by anyone, whether a utility customer or not, alleging a wrong, grievance, injury, dissatisfaction, illegal action or procedure, dangerous condition or action, or utility obligation.

"Compliance plan" means the document submitted for an affected source to the EPA that specifies the methods by which each affected unit at the source will meet the applicable emissions limitation and emissions reduction requirements.

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"Cross-State Air Pollution Rule" or *"CSAPR"* means the requirements established by EPA in 40 CFR 97 Subparts AAAAA, BBBBB, CCCCC, and DDDDD as amended by 81 FR 13275 (March 14, 2016).

"Customer" means any person, firm, association, or corporation, any agency of the federal, state, or local government, or legal entity responsible by law for payment for the electric service or heat from the electric utility.

"Delinquent" or *"delinquency"* means an account for which a service bill or service payment agreement has not been paid in full on or before the last day for timely payment.

"Distribution line" means any single or multiphase electric power line operating at nominal voltage in either of the following ranges: 2,000 to 26,000 volts between ungrounded conductors or 1,155 to 15,000 volts between grounded and ungrounded conductors, regardless of the functional service provided by the line.

"Electric plant" includes all real estate, fixtures, and property owned, controlled, operated, or managed in connection with or to facilitate production, generation, transmission, or distribution, in providing electric service or heat by an electric utility.

"Electric service" is furnishing to the public for compensation any electricity, heat, light, power, or energy.

"Emission for emission trade" is an exchange of one type of emission for another type of emission. For example, the exchange of SO_2 emission allowances for NOx emission allowances.

"Energy" means electric energy measured in kilowatt hours (kWh).

"Mercury and Air Toxics Standards" or *"MATS"* means the requirements established by EPA in 40 CFR Parts 60 and 63 regarding limits of power plant emissions of toxic air pollutants (February 16, 2012).

"Meter" means, unless otherwise qualified, a device that measures and registers the integral of an electrical quantity with respect to time.

"Power" means electric power measured in kW.

"Price hedging" means using futures contracts or options to guard against unfavorable price changes.

"Rate-regulated utility" means any utility, as defined in subrule 20.1(3), which is subject to rate regulation under Iowa Code chapter 476.

"Secondary line" means any single or multiphase electric power line operating at nominal voltage less than either 2,000 volts between ungrounded conductors or 1,155 volts between grounded and ungrounded conductors, regardless of the functional service provided by the line.

"Service limitation" means the establishment of a limit on the amount of power that may be consumed by a residential customer through the installation of a service limiter on the customer's meter.

"Service limiter" or *"service limitation device"* means a device that limits a residential customer's power consumption to 3,600 watts (or some higher level of usage approved by the commission) and that resets itself automatically, or can be reset manually by the customer, and may also be reset remotely by the utility at all times.

"Speculation" means using futures contracts or options to profit from expectations of future price changes.

"Tariff" means the entire body of rates, tolls, rentals, charges, classifications, rules, procedures, policies, etc., adopted and filed with the commission by an electric utility in fulfilling its role of furnishing service.

"Timely payment" means a payment on a customer's account made on or before the date shown on a current bill for service, or on a form, which records an agreement between the customer and a utility for a series of partial payments to settle a delinquent account, as the date that determines application of a late payment charge to the current bill or future collection efforts.

"Transmission line" means any single or multiphase electric power line operating at nominal voltages at or in excess of either 69,000 volts between ungrounded conductors or 40,000 volts between grounded and ungrounded conductors, regardless of the functional service provided by the line.

"Uniform System of Accounts" means the Uniform System of Accounts as effective on October 11, 2016.

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"Utility" means any person, partnership, business association, or corporation, domestic or foreign, owning or operating any facilities for providing electric service or heat to the public for compensation.

"Vintage trade" means an exchange of one vintage of allowances for another vintage of allowances with the difference in value between vintages being cash or additional allowances.

"Weighted average unit cost of inventoried allowances" equals the dollars in inventory at the end of the month divided by the total allowances available for use at the end of the month.

20.1(4) *Abbreviations.* The following abbreviations, when used in these rules, have the following meanings:

ANSI—American National Standards Institute
DOE—Department of Energy
FERC—Federal Energy Regulatory Commission
NFPA—National Fire Protection Association

199—20.2(476) Records, reports, and tariffs.

20.2(1) *Location and retention of records.* Unless otherwise specified by this chapter, all records required by these rules shall be kept and preserved in accordance with the applicable provisions of 199—Chapter 18(476,546).

20.2(2) *Tariffs to be filed with the commission.* The schedules of rates and rules of rate-regulated electric utilities shall be filed with the commission and shall be classified, designated, arranged, and submitted so as to conform to the requirements of this chapter. Provisions of the schedules shall be definite and so stated as to minimize ambiguity or the possibility of misinterpretation. The form, identification, and content of tariffs shall be in accordance with these rules. A rate-regulated electric utility's current tariff will be made available through the commission's electronic filing system (EFS).

20.2(3) *Form and identification.* All tariffs shall conform to the following rules:

a. The tariff shall be filed electronically using the commission's EFS. The filed tariff shall be capable of being reproduced on 8½- × 11-inch paper so customers may readily view and reproduce copies of the tariff. A tariff filed with the commission may be the same format as is required by a federal agency provided that the rules of the commission as to title page; identity of superseding, replacing, or revision sheets; identity of amending sheets; identity of the filing utility, issuing official, date of issue, effective date; and the words "Electric Tariff filed with Iowa Utilities Commission" shall apply in the modification of the federal agency format for the purposes of filing with this commission.

b. The title page of every tariff and supplement show:

(1) The first page shall be the title page, which shall show:

(Name of Public Utility)
Electric Tariff
Filed with
Iowa Utilities Commission
(Date)

(2) When a tariff is to be superseded or replaced in its entirety, the replacing tariff shall show on the upper right corner of its title page that it supersedes a tariff on file and the number being superseded or replaced, for example:

tariff no.
supersedes tariff no.

(3) When a new part of a tariff eliminates an existing part of a tariff it shall so state and clearly indicate the part eliminated.

(4) Any tariff modifications as defined above shall be marked in the right-hand margin of the replacing tariff sheet with symbols described below to indicate the place, nature, and extent of the change in text.

—Symbols—
(C)—Changed regulation
(D)—Discontinued rate or regulation

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(I)—Increase in rate or new treatment resulting in increased rate
(L)—Changed text location
(N)—New rate, treatment, or regulation
(R)—Reduction in rate or new treatment resulting in reduced rate
(T)—Change in text only

c. All sheets except the title page shall have, in addition to the above-stated requirements, the following information:

(1) Name of utility, followed by the words "Electric Tariff filed with Iowa Utilities commission." If the utility is not a corporation, and a trade name is used, the name of the individual or partners must precede the trade name.

(2) Issuing official and issue date.

(3) Effective date (to be left blank by rate-regulated utilities).

d. All sheets except the title page shall have the following form:

(Company Name)	(Part identification)
Electric Tariff	(This sheet identification)
Filed with commission	(Canceled sheet identification, if any)
	(Content or tariff)
Issued: (Date)	Effective:
Issued by: (Name, title)	(Proposed Effective Date:)

The issued date is the date the tariff or the amended sheet content was adopted by the utility.

The effective date will be left blank by rate-regulated utilities and shall be determined by the commission. The utility may propose an effective date in the cover letter or interpretation submitted with the tariff. In lieu of a proposed effective date, the utility can provide the date of the month the utility would like the tariff to become effective in the cover letter or interpretation.

20.2(4) *Content of tariffs.*

a. A table of contents containing a list of rate schedules and other sections in the order in which they appear showing the sheet numbers of the first page of each rate schedule or other section. In the event the utility filing the tariff elects to segregate a section, such as general rules from the section containing the rate schedules or other sections, it may at its option prepare a separate table of contents for each such segregated section.

b. A preliminary statement containing a brief general explanation of the utility's operations.

c. All rates for service with indication for each rate of the type and voltage of service and the class of customers to which each rate applies. There shall also be shown any limitations on loads and type of equipment that may be connected, the net prices per unit of service and the number of units per billing period to which the net prices apply, the period of billing, the minimum bill, any effect of transformer capacity upon minimum bill or upon the number of kWh in any step of the rate, method of measuring demands, method of calculating or estimating loads in cases where transformer capacity has a bearing upon minimum bill or size of rate steps, level payment plan, and any special terms or conditions applicable. The period during which the net amount may be paid before the account becomes delinquent shall be specified. In any case where net and gross amounts are billed, the difference between net and gross is a late payment charge and shall be so specified.

d. The voltage and type of service, (direct current or single or polyphase alternating current) supplied in each municipality, but without reference required to any particular part thereof.

e. Forms of standard contracts required of customers for the various types of service available.

f. If service to other utilities or municipalities is furnished at a standard filed rate, either a copy of

each signed contract or a copy of the standard uniform contract form together with a summary of the provisions of each signed contract. The summary shall show the principal provisions of the contract and include the name and address of the customer, the points where energy is delivered, rate, term, minimum, load conditions, voltage of delivery, and any special provisions such as rentals.

g. Copies of special contracts for the purchase, sale, or interchange of electrical energy. All tariffs must provide that, notwithstanding any other provision of this tariff or contract with reference thereto, all rates and charges contained in this tariff or contract with reference thereto may be modified at any time by a subsequent filing made pursuant to the provisions of Iowa Code chapter 476.

h. A list of all communities in which service is furnished.

i. The list of service areas and the rates shall be filed in a form to facilitate ready determination of the rates available in each municipality and in unincorporated communities that have service. Any areas with the same rates shall be indicated.

j. Definitions of classes of customers.

k. Extension rules for extending service to new customers indicating what portion of the extension or cost thereof will be furnished by the utility; and if the rule is based on cost, the items of cost included.

l. Type of construction that the utility requires the customer to provide if in excess of the Iowa electric safety code or the requirements of the municipality having jurisdiction, whichever may be the most stringent.

m. Specification of such portions of service as the utility furnishes, owns, and maintains, such as service drop, service entrance cable or conductors, conduits, service entrance equipment, meter, and socket. Indication of the portions of interior wiring such as range or water heater connection, furnished in whole or in part by the utility, and statement indicating final ownership and responsibility for maintaining equipment furnished by utility.

n. Statement of the type of special construction commonly requested by customers that the utility allows to be connected, and terms upon which such construction will be permitted, with due provision for the avoidance of unjust discrimination as between customers who request special construction and those who do not. This applies, for example, to a case where a customer desires underground service in overhead territory.

o. Rules with which prospective customers must comply as a condition of receiving service, and the terms of contracts required.

p. Rules governing the establishment and maintenance of credit by customers for payment of service bills.

q. Rules governing the procedure followed in disconnecting and reconnecting service.

r. Notice required from a customer for having service discontinued.

s. Rules covering temporary, emergency, auxiliary, and stand-by service.

t. Rules covering the type of equipment that may or may not be connected, including rules such as those requiring demand-limiting devices or power-factor corrective equipment.

u. General statement of the method used in making adjustments for wastage of electricity when accidental grounds exist without the knowledge of the customer.

v. Statements of utility rules on meter reading, bill issuance, customer payment, notice of delinquency, and service discontinuance for nonpayment of bill.

w. Rules for extending service in accordance with subrule 20.3(13).

x. If a sliding scale or automatic adjustment is applicable to regulated rates and charges of billed customers, the manner and method of such adjustment calculation shall be covered through a detailed explanation.

y. Rules on how a customer or prospective customer should file a complaint with the utility, and how the complaint will be processed.

z. Rules on how a customer, disconnected customer, or potential customer for residential service may negotiate for a payment agreement on amount due, determination of even payment amounts, and time allowed for payments.

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20.2(5) *Annual, periodic, and other reports to be filed with the commission.*

a. System map verification. The utility shall file annually a verification that it has a currently correct set of utility system maps in accordance with the general requirements of subrule 20.3(11) and a statement as to the location of the utility's offices where such maps, except those deemed confidential by the commission, are accessible and available for examination by the commission or its agents. The verification and map location information shall also be reported to the commission upon other occasions when significant changes occur in either the maps or location of the maps.

b. Electric service record. Each utility shall compile a monthly record of electric service showing the production, acquisition, and disposition of electric energy, the number of customer terminal voltage investigations made, the number of customer meters tested, and such other information as may be required by the commission. The monthly "Electric Service" record shall be compiled not later than 30 days after the end of the month covered and such record shall, upon and after compilation, be kept available for inspection by the commission or its staff at the utility's principal office within the state of Iowa. A summary of the 12 monthly "Electric Service" records for each calendar year shall be attached to and submitted with the utility's annual report to the commission.

c. The utility shall keep the commission informed currently by written notice as to the location at which the utility keeps the various classes of records required by these rules.

d. The utility's current rules, if any, published or furnished by the utility for the use of engineers, architects, electrical contractors, etc., covering meter and service installations shall be maintained and made available to the commission upon request.

e. A copy of each type of customer bill form in current use shall be filed with the commission.

f. A copy of the adjustment calculation shall be provided to the commission prior to each billing cycle on the forms adopted by the commission.

g. Residential customer statistics. Each rate-regulated electric utility shall file with the commission on or before the fifteenth day of each month one copy of the following residential customer statistics for the preceding month:

(1) Number of accounts;
(2) Number of accounts certified as eligible for energy assistance since the preceding October 1;
(3) Number of accounts past due;
(4) Number of accounts eligible for energy assistance and past due;
(5) Total revenue owed on accounts past due;
(6) Total revenue owed on accounts eligible for energy assistance and past due;
(7) Number of disconnection notices issued;
(8) Number of disconnection notices issued on accounts eligible for energy assistance;
(9) Number of disconnections for nonpayment;
(10) Number of reconnections;
(11) Number of accounts determined uncollectible; and
(12) Number of accounts eligible for energy assistance and determined uncollectible.

h. List of persons authorized to receive commission inquiries. Each utility shall file with the commission in the annual report required in the "General Information" rule of 199— Chapter 23(476) a list of names, titles, addresses, and telephone numbers of persons authorized to receive, act upon, and respond to communications from the commission in connection with: (1) general management duties; (2) customer relations (complaints); (3) engineering operations; (4) meter tests and repairs; (5) franchises for electric lines; and (6) certificates for electric generating plants; (7) outages and interruptions 24 hours a day. The contact information required by this paragraph shall be kept current as changes or corrections are made.

This rule is intended to implement Iowa Code section 476.2.

199—20.3(476) General service requirements.

20.3(1) *Disposition of electricity.* The utility shall own the meter and associated instrument transformers, own or control the wiring between the instrument transformers and the meter, and place a

visible seal on all meters in customer use in a manner the seal must be broken to gain entry.

a. For purposes of this subrule, the following definitions shall apply:

"Master meter" means a single meter used in determining the amount of electricity provided to a multi-occupancy building or multiple buildings.

"Multi-occupancy building" means a building that contains two or more units for occupancy or premises.

b. All electricity sold by a utility shall be on the basis of meter measurement except:

(1) Where the consumption of electricity may be readily computed without metering; or

(2) For temporary service installations not otherwise metered.

c. The amount of all electricity delivered to multi-occupancy buildings, where units are separately rented or owned, shall be measured on the basis of individual meter measurement for each unit, except in the following instances:

(1) Where electricity is used in centralized heating, cooling, water-heating, or ventilation systems;

(2) Where a facility is designated for elderly or handicapped persons;

(3) Where submetering or resale of service was permitted prior to 1966;

(4) Where individual metering is impractical. "Impractical" means:

1. Conditions or structural barriers exist in the multi-occupancy building that would make individual meters unsafe or physically impossible to install; or

2. The cost of providing individual metering exceeds the long-term benefits of individual metering; or

(5) Where the benefits of individual metering (reduced and controlled energy consumption) are more effectively accomplished through a master meter arrangement.

1. A new multi-occupancy building qualifies for master metering under this subparagraph if the predicted annual energy use would result in at least a 30 percent energy savings compared to the predicted annual energy use of a new building meeting the requirements of the State of Iowa Energy Code and operating with equipment, fixtures, and appliances meeting federal energy standards for manufactured devices for a new building.

2. An existing multi-occupancy building qualifies for master metering under this subparagraph when the predicted annual energy use would result in at least a 20 percent energy savings compared to the building's current annual energy usage levels.

3. Credits for on-site renewable energy generation shall not be taken into account when determining the predicted energy savings.

4. A report from a qualified, independent third party stating that the proposed building or renovation will meet the energy savings requirements of this subparagraph shall establish a rebuttable presumption of eligibility for master metering. "Qualified, independent third party" means a licensed architect or engineer, a certified residential energy services network home energy rating system rater, or any other professional deemed qualified by the commission.

If a multi-occupancy building is master-metered, the end-user occupants may be charged for electricity as an unidentified portion of the rent, condominium fee, or similar payment, or, if some other method of allocating the cost of the electric service is used, the total charge for electric service shall not exceed the total electric bill charged by the utility for the same period.

d. Master metering to multiple buildings is prohibited, except for multiple buildings owned by the same person or entity. Multi-occupancy buildings within a multiple building complex may be master-metered pursuant to this paragraph only if the requirements of paragraph 20.3(1)*"c"* have been met.

e. This rule shall not be construed to prohibit any utility from requiring more extensive individual metering than otherwise required by this rule if pursuant to tariffs filed with and approved by the commission.

f. All electricity consumed by the utility shall be on the basis of meter measurement except where consumption may be readily computed without metering, or where metering is impractical.

20.3(2) *Meter reading records.* The meter reading records shall show:

a. Customer's name, address, and rate schedule or identification of rate schedule.

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b. Identification of the meter or meters either by permanently marked utility number or by manufacturer's name, type number, and serial number.

c. Meter readings.

d. If the reading has been estimated.

e. Any applicable multiplier or constant.

20.3(3) *Meter register.* If it is necessary to apply a multiplier to the meter readings, the multiplier must be marked on the face of the meter register or stenciled in weather-resistant paint upon the front cover of the meter. Customers shall have continuous visual access to meter registers as a means of verifying the accuracy of bills presented to them and for implementing such energy conservation initiatives as they desire, except in the individual locations where the utility has experienced vandalism to windows in the protective enclosures. Where remote meter reading is used, whether outdoor on premises or off premises automated, the customer shall also have readable meter registers at the meter. A utility may comply with the requirements of this subrule by making the required information available via the Internet or other equivalent means.

Where a delayed processing means is used, the utility may comply by having readable kWh registers only, visually accessible.

In instances in which the utility has determined that readable access, to locations existing July 1, 1981, will create a safety hazard, the utility is exempted from the access provisions above.

In instances when a building owner has determined that unrestricted access to tenant metering installation would create a vandalism or safety hazard, the utility is exempted from the access provision above.

Continuing efforts should be made to eliminate or minimize the number of restricted locations. The utility should assist affected customers in obtaining meter register information.

20.3(4) *Meter reading and billing interval.* Readings of all meters used for determining charges and billings to customers shall be scheduled at least monthly and for the beginning and termination of service. Bills to larger customers may, for good cause, be provided weekly or daily for a period not to exceed one month. Intervals other than monthly shall not be applied to smaller customers, or to larger customers after the initial month provided above, without a waiver from the commission. If the commission denies a waiver, or if a waiver is not sought with respect to a high-demand customer after the initial month, that customer's meter shall be read monthly for the next 12 months. The group of larger customers to which shorter billing intervals may be applied shall be specified in the utility's tariff sheets, but shall not include residential customers.

An effort shall be made to obtain readings of the meters on corresponding days of each meter reading period. When the meter reading date causes a given billing period to deviate by more than 10 percent (counting only business days) from the normal meter reading period, such bills shall be prorated on a daily basis.

In the event that the utility leaves a meter reading form with the customer when access to meters cannot be gained and the form is not returned in time for the billing operation, an estimated bill may be provided.

If an actual meter reading cannot be obtained, the utility may provide an estimated bill without reading the meter or supplying a meter reading form to the customer. Only in unusual cases or when approval is obtained from the customer shall more than three consecutive estimated bills be provided.

20.3(5) *Demand meter registration.* When a demand meter is used for billing, the meter installation should be designed so that the highest expected annual demand reading to be used for billing will appear in the upper half of the meter's range.

20.3(6) *Service areas.* Service areas are defined by the boundaries on service area maps. Electronic maps are available for viewing during regular business hours at the commission's offices and on the commission's website.

20.3(7) *Modification of service area and answers.*

a. An exclusive service area is subject to modification through a contested case proceeding that may be commenced by filing a petition for modification of service area with the commission. The

commission may commence a service area modification proceeding on its own motion. In determining whether the modification is in the public interest, the commission will consider the factors described in Iowa Code section 476.25(1) and any other relevant factors.

b. An electric utility may file a petition for modification of service area containing (1) a legal description of the service area desired, (2) a designation of the utilities involved in each boundary section, (3) a justification for the proposed service area modification, and (4) in addition to the PDF (Portable Document Format) required in the "Paper copies required" subrule of 199—Chapter 14(17A,476), an electronic file of the proposed service area boundaries, in a format designated by the commission, as described on the EFS homepage under EFS Filing Standards. The justification shall include a detailed statement of why the proposed modification is in the public interest. A map showing the affected areas that complies with paragraph 20.3(11)*"a"* shall be attached to the petition as an exhibit.

c. Electric utilities may agree to service area modifications by contract pursuant to Iowa Code section 476.25(2).

20.3(8) *Certificate of authority.* Any electric utility or municipal corporation requesting a service territory modification pursuant to subrule 20.3(9) that would result in service to a customer by a utility other than the utility currently serving the customer must also petition the commission for a certificate of authority under Iowa Code section 476.23. The electric utility or municipal corporation shall pay the party currently serving the customer a reasonable price for the facilities serving the customer.

20.3(9) *Maps.*

a. Each utility shall maintain a current map or set of maps, including KMZ or other similar format, showing the physical location of electric lines, stations, and electric transmission facilities for its service areas, which include the exact location of the following:

(1) Generating stations with capacity designation.

(2) Purchased power supply points with maximum contracted capacity designation.

(3) Purchased power metering points if located at other than power delivery points.

(4) Transmission lines with size and type of conductor designation and operating voltage designation.

(5) Transmission-to-transmission voltage transformation substations with transformer voltage and capacity designation.

(6) Transmission-to-distribution voltage transformation substations with transformer voltage and capacity designation.

(7) Distribution lines with size and type of conductor designation, phase designation, and voltage designation.

(8) All points at which transmission, distribution, or secondary lines of the utility cross Iowa state boundaries.

(9) All current information required in Iowa Code section 476.24(1).

(10) All county boundaries and county names.

(11) Natural and artificial lakes that cover more than 50 acres and all rivers.

(12) Any additional information required by the commission.

b. All maps, except those deemed confidential by the commission, shall be available for examination at the utility's designated offices during the utility's regular office hours or on the utility's website. The maps shall be drawn with clean, uniform lines to a scale of one inch per mile. A large scale shall be used where it is necessary to clarify areas where there is a heavy concentration of facilities. All cartographic details shall be clean cut, and the background shall contain little or no coloration or shading.

20.3(10) *Prepayment meters.* Prepayment meters shall not be geared or set so as to result in the charge of a rate or amount higher than would be paid if a standard type meter were used, except under tariffs approved by the commission.

20.3(11) *Plant additions, electrical line extensions, and service lines.*

a. Definitions. The following definitions shall apply to the terms used in this subrule:

"Advance for construction" means cash payments or equivalent surety made to the utility by an applicant for an extensive plant addition or an electrical line extension, portions of which may be refunded

depending on the attachment of any subsequent service line made to the extensive plant addition or electrical line extension. Cash payments or equivalent surety shall include a grossed-up amount for the income tax effect of such revenue. The amount of tax shall be reduced by the present value of the tax benefits to be obtained by depreciating the property in determining tax liability.

"Agreed-upon attachment period" means a period of not less than 30 days nor more than one year mutually agreed upon by the utility and the applicant within which the customer will attach. If no time period is mutually agreed upon, the agreed-upon attachment period shall be deemed to be 30 days.

"Contribution in aid of construction" means a nonrefundable cash payment grossed-up for the income tax effect of such revenue covering the costs of a service line that are in excess of costs paid by the utility. The amount of tax shall be reduced by the present value of the tax benefits to be obtained by depreciating the property in determining the tax liability.

"Electrical line extensions" means distribution line extensions and secondary line extensions as defined in subrule 20.1(3), except for service lines as defined in this subrule.

"Equivalent overhead transformer cost" is that transformer capitalized cost, or fraction thereof, that would be required for similarly situated customers served by a pole-mounted or platform-mounted transformer(s). For each overhead service, it is the capitalized cost of the transformer(s) divided by the number of customers served by that transformer(s). For each underground service, it is the capitalized cost of an overhead transformer(s) with the same voltage and volt-ampere rating divided by the number of customers served by that transformer(s).

"Estimated annual revenues" is calculated based upon the following factors, including, but not limited to: The size of the facility to be used by the customer, the size and type of equipment to be used by the customer, the average annual amount of service required by the equipment, and the average number of hours per day and days per year the equipment will be in use.

"Estimated base revenues" is calculated by subtracting the fuel expense costs as described in the uniform system of accounts as adopted by the commission and energy efficiency charges from the estimated annual revenues.

"Estimated construction costs" is calculated using average current costs in accordance with good engineering practices and upon the following factors: amount of service required or desired by the customer requesting the electrical line extension or service line; size, location, and characteristics of the electrical line extension or service line, including appurtenances, except equivalent overhead transformer cost; and whether the ground is frozen or whether other adverse conditions exist. In no event shall estimated construction costs include costs associated with facilities built for the convenience of the utility. The customer shall be charged actual permit fees in addition to estimated construction costs. Permit fees are to be paid regardless of whether the customer is required to pay an advance for construction or a nonrefundable contribution in aid of construction, and the cost of any permit fee is not refundable.

"Plant addition" means any additional plant required to be constructed to provide service to a customer other than an electrical line extension or service line.

"Point of attachment" is that point of first physical attachment of the utilities' service drop (overhead) or service lateral (underground) conductors to the customer's service entrance conductors. For overhead services it shall be the point of tap or splice to the service entrance conductors. For underground services it shall be the point of tap or splice to the service entrance conductors in a terminal box or meter or other enclosure with adequate space inside or outside the building wall. If there is no terminal box, meter, or other enclosure with adequate space, it shall be the point of entrance into the building.

"Service line" means any secondary line extension, as defined in subrule 20.1(3), on private property serving a single customer or point of attachment of electric service.

"Similarly situated customer" means a customer whose annual consumption or service requirements, as defined by estimated annual revenue, are approximately the same as the annual consumption or service requirements of other customers.

"Utility" means a rate-regulated utility.

b. Plant additions. The utility shall provide all electric plant at its cost and expense without requiring

an advance for construction from customers or developers except in those unusual circumstances where extensive plant additions are required before the customer can be served. A written contract between the utility and the customer that requires an advance for construction by the customer to make plant additions shall be available for commission inspection.

c. Electrical line extensions. Where the customer will attach to the electrical line extension within the agreed-upon attachment period after completion of the electrical line extension, the following shall apply:

(1) The utility shall finance and make the electrical line extension for a customer without requiring an advance for construction if the estimated construction costs to provide an electrical line extension are less than or equal to three times estimated base revenue calculated on the basis of similarly situated customers. The utility may use a feasibility model, rather than three times estimated base revenue, to determine what, if any, advance for construction is required by the customer. The utility shall file a summary explaining the inputs into the feasibility model and a description of the model as part of the utility's tariff. Whether or not the construction of the electrical line extension would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees, and the permit fees are not refundable.

(2) If the estimated construction cost to provide an electrical line extension is greater than three times estimated base revenue calculated on the basis of similarly situated customers, the applicant for the electrical line extension shall contract with the utility and make, no more than 30 days prior to commencement of construction, an advance for construction equal to the estimated construction cost less three times estimated base revenue to be produced by the customer. The utility may use a feasibility model to determine whether an advance for construction is required. The utility shall file a summary explaining the inputs into the feasibility model and a description of the model as part of the utility's tariff. A written contract between the utility and the customer shall be available for commission inspection upon request. Whether or not the construction of the electrical line extension would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees, and the permit fees are not refundable.

(3) Where the customer will not attach within the agreed-upon attachment period after completion of the electrical line extension, the applicant for the electrical line extension shall contract with the utility and make, no more than 30 days prior to the commencement of construction, an advance for construction equal to the estimated construction cost. The utility may use a feasibility model to determine the amount of the advance for construction. The utility shall file a summary explaining the inputs into the feasibility model and a description of the model as part of the utility's tariff. A written contract between the utility and the customer shall be available for commission inspection upon request. Whether or not the construction of the electrical line extension would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees, and the permit fees are not refundable.

(4) Advances for construction may be paid by cash or equivalent surety and shall be refundable for ten years. The customer has the option of providing an advance for construction by cash or equivalent surety unless the utility determines that the customer has failed to comply with the conditions of a surety in the past.

(5) Refunds. When the customer is required to make an advance for construction, the utility shall refund to the depositor for a period of ten years from the date of the original advance a pro-rata share for each service line attached to the electrical line extension. The pro-rata refund shall be computed in the following manner:

1. If the combined total of three times estimated base revenue, or the amount allowed by the feasibility model, for the electrical line extension and each service line attached to the electrical line extension exceeds the total estimated construction cost to provide the electrical line extension, the entire amount of the advance for construction provided will be refunded.

2. If the combined total of three times estimated base revenue, or the amount allowed by the feasibility model, for the electrical line extension and each service line attached to the electrical line extension is less than the total estimated construction cost to provide the electrical line extension, the amount to be refunded will equal three times estimated base revenue, or the amount allowed by the feasibility model, when a service line is attached to the electrical line extension.

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3. In no event will the total amount to be refunded exceed the amount of the advance for construction. Any amounts subject to refund will be paid by the utility without interest. At the expiration of the above-described ten-year period, the advance for construction record will be closed and the remaining balance will be credited to the respective plant account.

(6) The utility shall keep a record of each work order under which the electrical line extension was installed, to include the estimated revenues, the estimated construction costs, the amount of any payment received, and any refunds paid.

d. Service lines.

(1) The utility shall finance and construct either an overhead or underground service line without requiring a nonrefundable contribution in aid of construction or any payment by the applicant where the length of the overhead service line to the first point of attachment is up to 50 feet on private property or where the cost of the underground service line to the meter or service disconnect is less than or equal to the estimated cost of constructing an equivalent overhead service line of up to 50 feet.

(2) Where the length of the overhead service line exceeds 50 feet on private property, the applicant shall be required to provide a nonrefundable contribution in aid of construction for that portion of the service line on private property, exclusive of the point of attachment, within 30 days after completion. The nonrefundable contribution in aid of construction for that portion of the service line shall be computed as follows:

$$\text{(Estimated Construction Costs)} \times \frac{\text{(Total Length in Excess of 50 Feet)}}{\text{(Total Length of Service Line)}}$$

(3) Where the cost of the underground service line exceeds the estimated cost of constructing an equivalent overhead service line of up to 50 feet, the applicant shall be required to provide a nonrefundable contribution in aid of construction within 30 days after completion equal to the difference between the estimated cost of constructing the underground service line and the estimated cost of constructing an equivalent overhead service line of up to 50 feet.

(4) A utility may adopt a tariff or rule that allows the utility to finance and construct a service line of more than 50 feet without requiring a nonrefundable contribution in aid of construction from the customer if the tariff or rule applies equally to all customers or members.

(5) Whether or not the construction of the service line would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees.

e. Extensions not required. Utilities shall not be required to make electrical line extensions or install service lines as described in this subrule, unless the electrical line extension or service line shall be of a permanent nature. When the utility provides a temporary service to a customer, the utility may require that the customer bear all the cost of installing and removing the service in excess of any salvage realized.

f. Different payment arrangement. This subrule shall not be construed as prohibiting any utility from making a contract with a customer using a different payment arrangement, if the contract provides a more favorable payment arrangement to the customer, so long as no discrimination is practiced among customers.

This rule is intended to implement Iowa Code section 476.8.

199—20.4(476) Customer relations.

20.4(1) *Customer information.* Each utility shall:

a. Maintain up-to-date maps, plans, or records of its entire transmission and distribution systems, together with such other information as may be necessary to enable the utility to advise prospective customers, and others entitled to the information, as to the facilities available for serving prospective customers in its service area.

b. Assist the customer or prospective customer in selecting the most economical rate schedule available for the customer's proposed type of service.

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c. Notify customers affected by a change in rates or schedule classification in the manner provided in the rules of practice and procedure before the commission. ("Compliance Filings and Tariffs" rule of 199—Chapter 26(476))

d. Post a notice in a conspicuous place in each office of the utility where applications for service are received, informing the public that copies of the rate schedules and rules relating to the service of the utility, as filed with the commission, are available for public inspection. The utility shall provide access to its rate schedules and rules for service on its website and the notice shall include the website address.

e. Upon request, inform its customers as to the method of reading meters.

f. State, on the bill form, that tariff and rate schedule information is available upon request at the utility's local business office or on the utility's website. If the utility provides access to its tariff and rate schedules on its website, the bill form shall include the website address.

g. Upon request, transmit a statement of either the customer's actual consumption, or degree day adjusted consumption, at the company's option, of electricity for each billing during the prior 12 months.

h. Furnish such additional information as the customer may reasonably request.

20.4(2) *Customer contact employee qualifications.* Each utility shall promptly and courteously resolve inquiries for information or complaints. Employees who receive customer telephone calls and office visits shall be qualified and trained in screening and resolving complaints, to avoid a preliminary recitation of the entire complaint to employees without ability and authority to act. The employee shall provide identification to the customer that will enable the customer to reach that employee again if needed.

a. Each utility shall notify its customers, by bill insert or notice on the bill form, of the address and telephone number where a utility representative qualified to assist in resolving the complaint can be reached. The bill insert or notice shall also include the following statement: "If (utility name) does not resolve your complaint, you may request assistance from the Iowa Utilities Commission by calling 515.725.7300, or toll-free 877.565.4450, or by writing to 1375 E. Court Avenue, Des Moines, Iowa 50319, or by email to customer@iuc.iowa.gov."

b. The bill insert or notice on the bill shall be provided monthly.

20.4(3) *Customer deposits.*

a. Each utility may require from any customer or prospective customer a deposit intended to guarantee partial payment of bills for service. Each utility shall allow a person other than the customer to pay the customer's deposit. In lieu of a cash deposit, the utility may accept the written guarantee of a surety or other responsible party as surety for an account. Upon termination of a guarantee contract, or whenever the utility deems the contract insufficient as to amount or surety, a cash deposit or a new or additional guarantee may be required for good cause upon written notice.

b. A new or additional deposit may be required from a customer when a deposit has been refunded or is found to be inadequate. Written notice shall be mailed advising the customer of any new or additional deposit requirement. The customer shall have no less than 12 days from the date of mailing to comply. The new or additional deposit shall be payable at any of the utility's business offices or local authorized agents. An appropriate receipt shall be provided. No written notice is required to be given of a deposit required as a prerequisite for commencing initial service.

c. No deposit shall be required as a condition for service other than determined by application of either credit rating or deposit calculation criteria, or both, of the filed tariff.

d. The total deposit for any residential or commercial customer for a place that has previously received service shall not be greater than the highest billing of service for one month for the place in the previous 12-month period. The deposit for any residential or commercial customer for a place that has not previously received service, or for an industrial customer, shall be the customer's projected one-month usage for the place to be served as determined by the utility, or as may be reasonably required by the utility in cases involving service for short periods or special occasions.

20.4(4) *Interest on customer deposits.* Interest shall be paid by the rate-regulated utility to each customer required to make a deposit. Rate-regulated utilities shall compute interest on customer deposits at 7.5 percent per annum, compounded annually. Interest shall be paid for the period beginning with the date

of deposit to the date of refund or to the date that the deposit is applied to the customer's account, or to the date the customer's bill becomes permanently delinquent. The date of refund is that date on which the refund or the notice of deposit refund is forwarded to the customer's last-known address. The date a customer's bill becomes permanently delinquent, relative to an account treated as an uncollectible account, is the most recent date the account became delinquent.

20.4(5) *Customer deposit records.* Each utility shall keep records to show:

a. The name and address of each depositor.

b. The amount and date of the deposit.

c. Each transaction concerning the deposit.

20.4(6) *Customer's receipt for a deposit.* Each utility shall issue a receipt of deposit to each customer from whom a deposit is received, and shall provide means whereby a depositor may establish claim if the receipt is lost.

20.4(7) *Deposit refund.* A deposit shall be refunded after 12 consecutive months of prompt payment, ~~(~~which may be 11 timely payments and 1 automatic forgiveness of late payment~~)~~. For refund purposes the account shall be reviewed for prompt payment after 12 months of service following the making of the deposit and for each 12-month interval terminating on the anniversary of the deposit. However, deposits received from customers subject to the exemption provided by 20.4(3)*"b,"* including surety deposits, may be retained by the utility until final billing. Upon termination of service, the deposit plus accumulated interest, less any unpaid utility bill of the customer, shall be reimbursed to the person who made the deposit.

20.4(8) *Unclaimed deposits.* The utility shall make a reasonable effort to return each unclaimed deposit and accrued interest after the termination of the services for which the deposit was made. The utility shall maintain a record of deposit information for at least two years or until such time as the deposit, together with accrued interest, escheats to the state pursuant to Iowa Code section 556.4, at which time the record and deposit, together with accrued interest less any lawful deductions, shall be sent to the state treasurer pursuant to Iowa Code section 556.11.

20.4(9) *Customer bill forms.* Each customer shall be informed as promptly as possible following the reading of the customer's meter, on bill form or otherwise, of the following:

a. The reading of the meter at the beginning and at the end of the period for which the bill is provided.

b. The dates on which the meter was read, at the beginning and end of the billing period.

c. The number and kind of units metered.

d. The applicable rate schedule, with the identification of the applicable rate classification.

e. The account balance brought forward and amount of each net charge for rate-schedule-priced utility service, sales tax, other taxes, late payment charge, and total amount currently due. In the case of prepayment meters, the amount of money collected shall be shown.

f. The last date for timely payment shall be clearly shown and shall be not less than 20 days after the bill is provided.

g. A distinct marking to identify an estimated bill.

h. A distinct marking to identify a minimum bill.

i. Any conversions from meter reading units to billing units, or any calculations to determine billing units from recording or other devices, or any other factors, such as sliding scale or automatic adjustment and amount of sales tax adjustments used in determining the bill.

j. Customer billing information alternate. A utility serving less than 5000 electric customers may provide the information in this subrule on bill form or otherwise. If the utility elects not to provide this information, it shall advise the customer, on bill form or by bill insert, that such information can be obtained by contacting the utility's local office.

20.4(10) *Payment agreements.*

a. Availability of a first payment agreement. When a residential customer cannot pay in full a delinquent bill for utility service or has an outstanding debt to the utility for residential utility service and is not in default of a payment agreement with the utility, a utility shall offer the customer an opportunity to enter into a reasonable payment agreement.

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b. Reasonableness. Whether a payment agreement is reasonable will be determined by considering the current household income, ability to pay, payment history including prior defaults on similar agreements, the size of the bill, the amount of time, the reasons why the bill has been outstanding, and any special circumstances creating extreme hardships within the household. The utility may require the person to confirm financial difficulty with an acknowledgment from the department of human services or another agency.

c. Terms of payment agreements.

(1) First payment agreement. The utility shall offer the following conditions to customers who have received a disconnection notice or who have been previously disconnected and are not in default of a payment agreement:

1. For customers who received a disconnection notice or who have been disconnected less than 120 days and are not in default of a payment agreement, the utility shall offer an agreement with at least 12 even monthly payments. For customers who have been disconnected more than 120 days and are not in default of a payment agreement, the utility shall offer an agreement with at least 6 even monthly payments. The utility shall inform customers they may pay off the delinquency early without incurring any prepayment penalties.
2. The agreement shall also include a provision for payment of the current account.
3. The utility may also require the customer to enter into a budget billing plan to pay the current bill.
4. When the customer makes the agreement in person, a signed copy of the agreement shall be provided to the customer.
5. The utility may offer the customer the option of making the agreement over the telephone or through electronic transmission.
6. When the customer makes the agreement over the telephone or through electronic transmission, the utility shall provide to the customer a written document reflecting the terms and conditions of the agreement within three days of the date the parties entered into the oral agreement or electronic agreement.
7. The document will be considered provided to the customer when addressed to the customer's last-known address and deposited in the U.S. mail with postage paid. If delivery is by other than U.S. mail, the document shall be considered provided to the customer when delivered to the last-known address of the person responsible for payment for the service.
8. The document shall state that unless the customer notifies the utility otherwise within ten days from the date the document is provided, it will be deemed that the customer accepts the terms as stated in the written document. The document stating the terms and conditions of the agreement shall include the address and a toll-free or collect telephone number where a qualified representative can be reached.
9. Once the first payment required by the agreement is made by the customer or on behalf of the customer, the oral or electronic agreement is deemed accepted by the customer.
10. Each customer entering into a first payment agreement shall be granted at least one late payment that is four days or less beyond the due date for payment, and the first payment agreement shall remain in effect.
11. The initial payment is due on the due date for the next regular bill.
12. A customer shall not be charged interest, or a late payment charge, on a payment agreement where the customer is making payments consistent with the terms of the payment agreement.

(2) Second payment agreement. The utility shall offer a second payment agreement to a customer who is in default of a first payment agreement if the customer has made at least two consecutive full payments under the first payment agreement.

1. The second payment agreement shall be for a term at least as long as the term of the first payment agreement.
2. The customer shall be required to pay for current service in addition to the monthly payments under the second payment agreement and may be required to make the first payment up-front as a condition of entering into the second payment agreement.
3. The utility may also require the customer to enter into a budget billing plan to pay the current bill.

(3) Additional payment agreements. The utility may offer additional payment agreements to the

customer.

d. Refusal by utility. A customer may offer the utility a proposed payment agreement. If the utility and the customer do not reach an agreement, the utility may refuse the offer orally, but the utility must provide a written refusal to the customer, stating the reason for the refusal, within three days of the oral notification. The written refusal shall be considered provided to the customer when addressed to the customer's last-known address and deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the written refusal shall be considered provided to the customer when handed to the customer or when delivered to the last-known address of the customer.

A customer may ask the commission for assistance in working out a reasonable payment agreement. The request for assistance must be made to the commission within ten days after the written refusal is provided. During the review of this request, the utility shall not disconnect the service.

20.4(11) *Bill payment terms.* The bill shall be considered provided to the customer when deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the bill shall be considered provided when delivered to the last-known address of the customer. There shall not be less than 20 days between the providing of a bill and the date by which the account becomes delinquent. Bills for customers on more frequent billing intervals under subrule 20.3(6) may not be considered delinquent less than 5 days from the date the bill is provided. However, a late payment charge may not be assessed if payment is received within 20 days of the date the bill is provided.

a. The date of delinquency for all residential customers or other customers whose consumption is less than 3,000 kWh per month shall be changeable for cause; such as, but not limited to, 15 days from the approximate date each month upon which income is received by the person responsible for payment. In no case, however, shall the utility be required to delay the date of delinquency more than 30 days beyond the date of preparation of the previous bill.

b. In any case where net and gross amounts are billed to customers, the difference between net and gross is a late payment charge and is valid only when part of a delinquent bill payment. A utility's late payment charge shall not exceed 1.5 percent per month of the past due amount. No collection fee may be levied in addition to this late payment charge. This rule does not prohibit cost-justified charges for disconnection and reconnection of service.

c. If the customer makes partial payment in a timely manner, and does not designate the service or product for which payment is made, the payment shall be credited pro rata between the bill for utility services and related taxes.

d. Each account shall be granted not less than one complete forgiveness of a late payment charge each calendar year. The utility's rules shall be definitive that on one monthly bill in each period of eligibility, the utility will accept the net amount of such bill as full payment for such month after expiration of the net payment period. The rules shall state how the customer is notified that the eligibility has been used. Complete forgiveness prohibits any effect upon the credit rating of the customer or collection of late payment charge.

e. Budget billing plan. Utilities shall offer a budget billing plan to all residential customers or other customers whose consumption is less than 3,000 kWh per month. A budget billing plan should be designed to limit the volatility of a customer's bill and maintain reasonable account balances. The budget billing plan shall include at least the following:

(1) Be offered to each eligible customer when the customer initially requests service. The plan may be estimated if there is insufficient usage history to create a budget billing plan based on actual use.

(2) Allow for entry into the budget billing plan anytime during the calendar year.

(3) Provide that a customer may request termination of the plan at any time. If the customer's account is in arrears at the time of termination, the balance shall be due and payable at the time of termination. If there is a credit balance, the customer shall be allowed the option of obtaining a refund or applying the credit to future charges. A utility is not required to offer a new budget billing plan to a customer for six months after the customer has terminated from a budget billing plan.

(4) Use a computation method that produces a reasonable monthly budget billing amount, which may

take into account forward-looking factors such as fuel price and weather forecasts, and that complies with requirements of this subrule. The computation method used by the utility shall be described in the utility's tariff and shall be subject to commission approval. The utility shall give notice to customers when it changes the type of computation method in the budget billing plan.

The amount to be paid at each billing interval by a customer on a budget billing plan shall be computed at the time of entry into the plan and shall be recomputed at least annually. The budget billing amount may be recomputed monthly, quarterly, when requested by the customer, or whenever price, consumption, or a combination of factors results in a new estimate differing by 10 percent or more from that in use.

When the budget billing amount is recomputed, the budget billing plan account balance shall be divided by 12, and the resulting amount shall be added to the estimated monthly budget billing amount. Except when a utility has a budget billing plan that recomputes the budget billing amount monthly, the customer shall be given the option of applying any credit to payments of subsequent months' budget billing amounts due or of obtaining a refund of any credit in excess of $25.

Except when a utility has a budget billing plan that recomputes the budget billing amount monthly, the customer shall be notified of the recomputed payment amount not less than one full billing period prior to the date of delinquency for the recomputed payment. The notice may accompany the bill prior to the bill that is affected by the recomputed payment amount.

(5) Irrespective of the account balance, a delinquency in payment shall be subject to the same collection and disconnection procedures as other accounts, with the late payment charge applied to the budget billing amount. If the account balance is a credit, the budget billing plan may be terminated by the utility after 30 days of delinquency.

20.4(12) *Customer records.* The utility shall retain records as may be necessary to effectuate compliance with subrules 20.4(14) and 20.6(6), but not less than five years. Records for customer shall show where applicable:

a. kWh meter reading.
b. kWh consumption.
c. kW meter reading.
d. kW measured demand.
e. kW billing demand.
f. Total amount of bill.

20.4(13) *Adjustment of bills.*

a. Meter error. Whenever a meter creeps or whenever a metering installation is found upon any test to have an average error of more than 2.0 percent for watthour metering; or a demand metering error of more than 1.5 percent in addition to the errors allowed under accuracy of demand metering; an adjustment of bills for service for the period of inaccuracy shall be made in the case of overregistration and may be made in the case of underregistration. The amount of the adjustment shall be calculated on the basis that the metering equipment should be 100 percent accurate with respect to the testing equipment used to make the test. For watthour metering installations the average accuracy shall be the arithmetic average of the percent registration at 10 percent of rated test current and at 100 percent of rated test current giving the 100 percent of rated test current registration a weight of four and the 10 percent of rated test current registration a weight of one.

b. Determination of adjustment. Recalculation of bills shall be on the basis of actual monthly consumption except that if service has been measured by self-contained single-phase meters or three-wire network meters and involves no billing other than for kWh, the recalculation of bills may be based on the average monthly consumption determined from the most recent 36 months, consumption data.

When the average error cannot be determined by test because of failure of part or all of the metering equipment, it shall be permissible to use the registration of check metering installations, if any, or to estimate the quantity of energy consumed based on available data. The customer must be advised of the failure and of the basis for the estimate of quantity billed. The periods of error shall be used as defined in immediately following subparagraphs (1) and (2).

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(1) Overregistration. If the date when overregistration began can be determined, such date shall be the starting point for determination of the amount of the adjustment. If the date when overregistration began cannot be determined, it shall be assumed that the error has existed for the shortest time period calculated as one-half the time since the meter was installed, or one-half the time elapsed since the last meter test, unless otherwise ordered by the commission.

The overregistration due to creep shall be calculated by timing the rate of creeping and assuming that the creeping affected the registration of the meter for 25 percent of the time since the more recent of either metering installation or last previous test.

(2) Underregistration. If the date when underregistration began can be determined, it shall be the starting point for determination of the amount of the adjustment except that billing adjustment shall be limited to the preceding six months. If the date when underregistration began cannot be determined, it shall be assumed that the error has existed for one-half of the time elapsed since the more recent of either meter installation or the last meter test, except that billing adjustment shall be limited to the preceding six months, unless otherwise ordered by the commission.

The underregistration due to creep shall be calculated by timing the rate of creeping and assuming that this creeping affected the registration for 25 percent of the time since the more recent of either metering installation or last previous test, except that billing adjustment shall be limited to the preceding six months.

c. Refunds. If the recalculated bills indicate that $5 or more is due an existing customer or $10 or more is due a person no longer a customer of the utility, the tariff shall provide refunding of the full amount of the calculated difference between the amount paid and the recalculated amount. Refunds shall be made to the two most recent customers who received service through the metering installation found to be in error. In the case of a previous customer who is no longer a customer of the utility, a notice of the amount subject to refund shall be mailed to such previous customer at the last-known address, and the utility shall, upon demand made within three months thereafter, refund the same.

Refunds shall be completed within six months following the date of the metering installation test.

d. Back billing. A utility may not back bill due to underregistration unless a minimum back bill amount is specified in its tariff. The minimum amount specified for back billing shall not be less than, but may be greater than, $5 for an existing customer or $10 for a former customer. All recalculations resulting in an amount due equal to or greater than the tariff specified minimum shall result in issuance of a back bill.

Back billings shall be provided no later than six months following the date of the metering installation test.

e. Overcharges. When a customer has been overcharged as a result of incorrect reading of the meter, incorrect application of the rate schedule, incorrect connection of the metering installation, or other similar reasons, the amount of the overcharge shall be adjusted, refunded, or credited to the customer. The time period for which the utility is required to adjust, refund, or credit the customer's bill shall not exceed five years unless otherwise ordered by the commission.

f. Undercharges. When a customer has been undercharged as a result of incorrect reading of the meter, incorrect application of the rate schedule, incorrect connection of the meter, or other similar reasons, the amount of the undercharge may be billed to the customer. The period for which the utility may adjust for the undercharge shall not exceed five years unless otherwise ordered by the commission. The maximum back bill shall not exceed the dollar amount equivalent to the tariffed rate for like charges (e.g., usage-based, fixed, or service charges) in the 12 months preceding discovery of the error, unless otherwise ordered by the commission.

g. Credits and explanations. Credits due a customer because of meter inaccuracies, errors in billing, or misapplication of rates shall be separately identified.

20.4(14) *Refusal or disconnection of service.* A utility shall refuse service or disconnect service to a customer, as defined in subrule 20.1(3), in accordance with tariffs that are consistent with these rules.

a. The utility shall give written notice of pending disconnection except as specified in paragraph 20.4(15)*"b."* The notice shall set forth the reason for the notice and the final date by which the account is to be settled or specific action taken. The notice shall be considered provided to the customer when addressed

to the customer's last-known address and deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the notice shall be considered provided when delivered to the last-known address of the customer. The date for disconnection of service shall be not less than 12 days after the notice is provided. The date for disconnection of service for customers on shorter billing intervals under subrule 20.3(6) shall not be less than 24 hours after the notice is posted at the service premises.

One written notice, including all reasons for the notice, shall be given where more than one cause exists for disconnection of service. In determining the final date by which the account is to be settled or other specific action taken, the days of notice for the causes shall be concurrent.

b. Service may be disconnected without notice:

(1) In the event of a condition on the customer's premises determined by the utility to be hazardous.

(2) In the event of customer use of equipment in a manner that adversely affects the utility's equipment or the utility's service to others.

(3) In the event of tampering with the equipment furnished and owned by the utility. For the purposes of this subrule, a broken or absent meter seal alone shall not constitute tampering.

(4) In the event of unauthorized use.

c. Service may be disconnected or refused after proper notice:

(1) For violation of or noncompliance with the utility's rules on file with the commission.

(2) For failure of the customer to furnish the service equipment, permits, certificates, or rights-of-way that are specified to be furnished, in the utility's rules filed with the commission, as conditions of obtaining service, for the withdrawal of that same equipment, for the termination of those same permissions or rights, or for the failure of the customer to fulfill the contractual obligations imposed as conditions of obtaining service by any contract filed with and subject to the regulatory authority of the commission.

(3) For failure of the customer to permit the utility reasonable access to the utility's equipment.

d. Service may be refused or disconnected after proper notice for nonpayment of a bill or deposit, except as restricted by subrules 20.4(16) and 20.4(17), provided that the utility has complied with the following provisions when applicable:

(1) Given the customer a reasonable opportunity to dispute the reason for the disconnection or refusal.

(2) Given the customer, and any other person or agency designated by the customer, written notice that the customer has at least 12 days in which to make settlement of the account to avoid disconnection and a written summary of the rights and responsibilities available. Customers billed more frequently than monthly pursuant to subrule 20.3(6) shall be given posted written notice that they have 24 hours to make settlement of the account to avoid disconnection and a written summary of the rights and responsibilities. All written notices shall include a toll-free or collect telephone number where a utility representative qualified to provide additional information about the disconnection can be reached. Each utility representative must provide the representative's name and have immediate access to current, detailed information concerning the customer's account and previous contacts with the utility.

(3) The summary of the rights and responsibilities must be approved by the commission. Any utility providing electric service and defined as a public utility in Iowa Code section 476.1 that does not use the standard form set forth below for customers billed monthly shall submit to the commission electronically its proposed form for approval. A utility billing a combination customer for both gas and electric service may modify the standard form to replace each use of the word "electric" with the words "gas and electric" in all instances.

CUSTOMER RIGHTS AND RESPONSIBILITIES TO AVOID SHUTOFF OF ELECTRIC SERVICE FOR NONPAYMENT

1. What can I do if I receive a notice from the utility that says my service will be shut off because I have a past due bill?

a. Pay the bill in full;

b. Enter into a reasonable payment plan with the utility (see #2 below);

c. Apply for and become eligible for low-income energy assistance (see #3 below);

d. Give the utility a written statement from a doctor or public health official stating that shutting off

your electric service would pose an especial health danger for a person living at the residence (see #4 below); or

e. Tell the utility if you think part of the amount shown on the bill is wrong.

However, you must still pay the part of the bill you agree you owe the utility (see #5 below).

2. How do I go about making a reasonable payment plan? (Residential customers only)

a. Contact the utility as soon as you know you cannot pay the amount you owe. If you cannot pay all the money you owe at one time, you are to be offered a payment plan that spreads payments evenly over at least 12 months. The plan may be longer depending on your financial situation.

b. If you have not made the payments you promised in a previous payment plan with the utility and still owe money, you may qualify for a second payment agreement under certain conditions.

c. If you do not make the payments you promise, the utility may shut off your utility service on one day's notice, unless all the money you owe the utility is paid or you enter into another payment agreement.

3. How do I apply for low-income energy assistance? (Residential customers only)

a. Applications are taken at your local community action agency. If you are unsure where to apply, call 211 or 800.244.7431, or visit https://hhs.iowa.gov/programs/programs-and-services/liheap. To prevent disconnection, contact the utility prior to disconnection of your service.

b. To avoid disconnection, you must apply for energy assistance or weatherization before your service is shut off. Notify your utility that you may be eligible and have applied for energy assistance. Once your service has been disconnected, it will not be reconnected based on approval for energy assistance.

c. Being certified eligible for energy assistance will prevent your service from being disconnected from November 1 through April 1.

4. What if someone living at the residence has a serious health condition? (Residential customers only)

Contact the utility if you believe this is the case. Contact your doctor or a public health official and ask the doctor or health official to contact the utility and state that shutting off your utility service would pose an especial health danger for a person living at your residence. The doctor or public health official must provide a written statement to the utility office within five days of when your doctor or public health official notifies the utility of the health condition; otherwise, your utility service may be shut off. If the utility receives this written statement, your service will not be shut off for 30 days. This 30-day delay is to allow you time to arrange payment of your utility bill or find other living arrangements. After 30 days, your service may be shut off if full payment or payment arrangements have not been made.

5. What should I do if I believe my bill is not correct?

You may dispute your utility bill. You must tell the utility that you dispute the bill. You must pay the part of the bill you think is correct. If you do this, the utility will not shut off your service for up to 45 days from the date the bill was mailed while you and the utility work out the dispute over the part of the bill you think is incorrect. You may ask the Iowa Utilities Commission for assistance in resolving the dispute. (See #9 below.)

6. When can the utility shut off my utility service because I have not paid my bill?

a. Your utility can shut off service between the hours of 6 a.m. and 2 p.m., Monday through Friday.

b. The utility will not shut off your service on nights, weekends, or holidays for nonpayment of a bill.

c. The utility will not shut off your service if you enter into a reasonable payment plan to pay the overdue amount (see #2 above).

d. The utility will not shut off your service if the temperature is forecasted to be 20 degrees Fahrenheit or colder during the following 24-hour period, including the day your service is scheduled to be shut off.

e. If you have qualified for low-income energy assistance, the utility cannot shut off your service from November 1 through April 1. However, you will still owe the utility for the service used during this time.

f. The utility will not shut off your service if you have notified the utility that you dispute a portion of your bill and you pay the part of the bill that you agree is correct.

g. If one of the heads of household is a service member deployed for military service, utility service cannot be shut off during the deployment or within 90 days after the end of deployment. In order for this

exception to disconnection to apply, the utility must be informed of the deployment prior to disconnection. However, you will still owe the utility for service used during this time.

7. How will I be told the utility is going to shut off my service?

a. You must be given a written notice at least 12 days before the utility service can be shut off for nonpayment. This notice will include the reason for shutting off your service.

b. If you have not made payments required by an agreed-upon payment plan, your service may be disconnected with only one day's notice.

c. The utility must also try to reach you by telephone or in person before it shuts off your service. From November 1 through April 1, if the utility cannot reach you by telephone or in person, the utility will put a written notice on the door of or another conspicuous place at your residence to tell you that your utility service will be shut off.

8. If service is shut off, when will it be turned back on?

a. The utility will turn your service back on if you pay the whole amount you owe.

b. If you make your payment during regular business hours, or by 7 p.m. for utilities permitting such payment or other arrangements after regular business hours, the utility must make a reasonable effort to turn your service back on that day. If service cannot reasonably be turned on that same day, the utility must do it by 11 a.m. the next day.

c. The utility may charge you a fee to turn your service back on which may be higher in the evening or on weekends, so you may ask that your service be turned on during normal utility business hours.

9. Is there any other help available besides my utility?

If the utility has not been able to help you with your problem, you may contact the Iowa Utilities Commission toll-free at 877.565.4450. You may also write the Iowa Utilities Commission at 1375 E. Court Ave., Des Moines, IA 50319, or email at customer@iuc.iowa.gov. Low-income customers may also be eligible for free legal assistance from Iowa Legal Aid, and may contact Legal Aid at 800.532.1275.

(4) If the utility has adopted a service limitation policy pursuant to subrule 20.4(23), the following paragraph shall be appended to the end of the standard form for the summary of rights and responsibilities, as set forth in subparagraph 20.4(15)*"d"*(3):

Service limitation: We have adopted a limitation of service policy for customers who otherwise could be disconnected. Contact our business office for more information or to learn if you qualify.

(5) When disconnecting service to a residence, the utility made a diligent attempt to contact, by telephone or in person, the customer to inform the customer of the pending disconnection and the customer's rights and responsibilities. During the period from November 1 through April 1, if the attempt at customer contact fails, the premises shall be posted at least one day prior to disconnection with a notice informing the customer of the pending disconnection and rights and responsibilities available to avoid disconnection.

If an attempt at personal or telephone contact of a customer occupying a rental unit has been unsuccessful, the utility shall make a diligent attempt to contact the landlord of the rental unit, if known, to determine if the customer is still in occupancy and, if so, the customer's present location. The landlord shall also be informed of the date when service may be disconnected. The utility shall make a diligent attempt to inform the landlord at least 48 hours prior to disconnection of service to a tenant.

If the disconnection will affect occupants of residential units leased from the customer, the premises of any building known by the utility to contain residential units affected by disconnection must be posted, at least two days prior to disconnection, with a notice informing any occupants of the date when service will be disconnected and the reasons for the disconnection.

(6) Disputed bill. If the customer has received notice of disconnection and has a dispute concerning a bill for electric utility service, the utility may require the customer to pay a sum of money equal to the amount of the undisputed portion of the bill pending settlement and thereby avoid disconnection of service. A utility shall delay disconnection for nonpayment of the disputed bill for up to 45 days after the providing of the bill if the customer pays the undisputed amount. The 45 days shall be extended if requested of the utility by the commission in the event the customer files a written complaint with the commission in

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compliance with 199—Chapter 6(476,546).

(7) Reconnection. Disconnection of a residential customer may take place only between the hours of 6 a.m. and 2 p.m. on a weekday and not on weekends or holidays. If a disconnected customer makes payment or other arrangements during normal business hours, or by 7 p.m. for utilities permitting such payment or other arrangements after normal business hours, all reasonable efforts shall be made to reconnect the customer that day. If a disconnected customer makes payment or other arrangements after 7 p.m., all reasonable efforts shall be made to reconnect the customer not later than 11 a.m. the next day.

(8) Severe cold weather. A disconnection may not take place where electricity is used as the only source of space heating or to control or operate the only space heating equipment at a residence when the actual temperature or the 24-hour forecast of the National Weather Service for the residence's area is predicted to be 20 degrees Fahrenheit or colder. If the utility has properly posted a disconnect notice but is precluded from disconnecting service because of severe cold weather, the utility may immediately proceed with appropriate disconnection procedures, without further notice, when the temperature in the residence's area rises above 20 degrees Fahrenheit and is forecasted to remain above 20 degrees Fahrenheit for at least 24 hours, unless the customer has paid in full the past due amount or is otherwise entitled to postponement of disconnection.

(9) Health of a resident. Disconnection of a residential customer shall be postponed if the disconnection of service would present an especial danger to the health of any permanent resident of the premises. An especial danger to health is indicated if a person appears to be seriously impaired and may, because of mental or physical problems, be unable to manage the person's own resources, to carry out activities of daily living or to be protected from neglect or hazardous situations without assistance from others. Indicators of an especial danger to health include but are not limited to: age, infirmity, or mental incapacitation; serious illness; physical disability, including blindness and limited mobility; and any other factual circumstances that indicate a severe or hazardous health situation.

The utility may require written verification of the especial danger to health by a physician or a public health official, including the name of the person endangered; a statement that the person is a resident of the premises in question; the name, business address, and telephone number of the certifying party; the nature of the health danger; and approximately how long the danger will continue. Initial verification by the verifying party may be by telephone if written verification is forwarded to the utility within five days.

Verification shall postpone disconnection for 30 days. In the event service is terminated within 14 days prior to verification of illness by or for a qualifying resident, service shall be restored to that residence if a proper verification is thereafter made in accordance with the foregoing provisions. If the customer does not enter into a reasonable payment agreement for the retirement of the unpaid balance of the account within the first 30 days and does not keep the current account paid during the period that the unpaid balance is to be retired, the customer is subject to disconnection pursuant to paragraph 20.4(15)*"f."*

(10) Winter energy assistance (November 1 through April 1). If the utility is informed that the customer's household may qualify for winter energy assistance or weatherization funds, there shall be no disconnection of service for 30 days from the date the utility is notified to allow the customer time to obtain assistance. Disconnection shall not take place from November 1 through April 1 for a resident who is a head of household and who has been certified to the public utility by the community action agency as eligible for either the low-income home energy assistance program or weatherization assistance program, as well as members of the household named in the application. A utility may develop an incentive program to delay disconnection on April 1 for customers who make payments throughout the November 1 through April 1 period. All such incentive programs shall be set forth in tariffs approved by the commission.

(11) Deployment. If the utility is informed that one of the heads of household as defined in Iowa Code section 476.20 is a service member deployed for military service, as defined in Iowa Code section 29A.90, disconnection cannot take place at the residence during the deployment or prior to 90 days after the end of the deployment.

e. Abnormal electric consumption. A customer who is subject to disconnection for nonpayment of bill, and who has electric consumption that appears to the customer to be abnormally high, may request the

utility to assist in identifying the factors contributing to this usage pattern and to suggest remedial measures. The utility shall assist by discussing patterns of electric usage that may be readily identifiable, suggesting that an energy audit be conducted, and identifying sources of energy conservation information and financial assistance that may be available to the customer.

f. A utility may disconnect electric service after 24-hour notice (and without the written 12-day notice) for failure of the customer to comply with the terms of a payment agreement.

g. The utility shall, prior to November 1, mail customers a notice describing the availability of winter energy assistance funds and the application process. The notice must be of a type size that is easily legible and conspicuous and must contain the information set out by the state agency administering the assistance program. A utility serving fewer than 25,000 customers may publish the notice in a customer newsletter in lieu of mailing. A utility serving fewer than 6,000 customers may publish the notice in an advertisement in a local newspaper of general circulation or shopper's guide.

20.4(15) *Insufficient reasons for denying service.* The following shall not constitute sufficient cause for refusal of service to a customer:

a. Delinquency in payment for service by a previous occupant of the premises to be served.

b. Failure to pay for merchandise purchased from the utility.

c. Failure to pay for a different type or class of public utility service.

d. Failure to pay the bill of another customer as guarantor thereof.

e. Failure to pay the back bill provided in accordance with paragraph 20.4(14)*"d"* (slow meters).

f. Failure to pay a bill provided in accordance with paragraph 20.4(14)*"f."*

g. Failure of a residential customer to pay a deposit during the period November 1 through April 1 for the location at which the customer has been receiving service in the customer's name.

h. Delinquency in payment for service by an occupant if the customer applying for service is creditworthy and able to satisfy any deposit requirements.

i. Delinquency in payment for service arising more than ten years prior, as measured from the most recent of:

(1) The last date of service for the account giving rise to the delinquency,

(2) Physical disconnection of service for the account giving rise to the delinquency, or

(3) The last voluntary payment or voluntary written promise of payment made by the customer, if made before the ten-year period described in this paragraph has otherwise lapsed.

j. Delinquency in payment for service that arose on or before September 4, 2010, pursuant to an oral contract, except in cases of fraud or deception that prevented the utility from timely addressing such delinquencies with the customer.

20.4(16) *When disconnection prohibited.*

a. No disconnection may take place from November 1 through April 1 for a resident who has been certified to the public utility by the local community action agency as being eligible for either the low-income home energy assistance program or weatherization assistance program.

b. If the utility is informed that one of the heads of household as defined in Iowa Code section 476.20 is a service member deployed for military service, as defined in Iowa Code section 29A.90, disconnection cannot take place at the residence during the deployment or prior to 90 days after the end of the deployment.

20.4(17) *Estimated demand.* Upon request of the customer and provided the customer's demand is estimated for billing purposes, the utility shall measure the demand during the customer's normal operation and use the measured demand for billing.

20.4(18) *Servicing utilization control equipment.* Each utility shall service and maintain any equipment it uses on customer's premises and shall correctly set and keep in proper adjustment any thermostats, clocks, relays, time switches, or other devices that control the customer's service in accordance with the provisions in the utility's rate schedules.

20.4(19) *Customer complaints.* Complaints concerning the charges, practices, facilities, or service of the utility shall be investigated promptly and thoroughly. The utility shall keep such records of customer complaints as will enable it to review and analyze its procedures and actions.

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a. Each utility shall provide in its filed tariff a concise, fully informative procedure for the resolution of customer complaints.

b. The utility shall take reasonable steps to ensure that customers unable to travel shall not be denied the right to be heard.

c. The final step in a complaint hearing and review procedure shall be a filing for commission resolution of the issues.

20.4(20) *Change in type of service.* If a change in the type of service or a change in voltage to a customer's substation is effected at the insistence of the utility and not solely by reason of increase in the customer's load or change in the character thereof, the utility shall share equitably in the cost of changing the equipment of the customer affected as determined by the commission in the absence of agreement between utility and customer. In general, the customer should be protected against or reimbursed for the following losses and expenses to an appropriate degree:

a. Loss of value in electrical power utilization equipment,

b. Cost of changes in wiring, and

c. Cost of removing old and installing new utilization equipment.

20.4(21) *Limitation of service.* The utility shall have the option of adopting a policy for service limitation at a customer's residence as a measure to be taken in lieu of disconnection of service to the customer. The service limiter policy shall be set out in the utility's tariff and contain the following conditions:

a. A service limitation device shall not be activated without the customer's agreement.

b. A service limitation device shall not be activated unless the customer has defaulted on all payment agreements for which the customer qualifies under the commission's rules and the customer has agreed to a subsequent payment agreement.

c. The service limiter shall provide for usage of a minimum of 3,600 watts. If the service limiter policy provides for different usage levels for different customers, the tariff shall set out specific nondiscriminatory criteria for determining the usage levels. Electric-heating residential customers may have their service limited if otherwise eligible, but such customers shall have consumption limits set at a level that allows them to continue to heat their residences. For purposes of this subrule, "electric heating" means heating by means of a fixed-installation electric appliance that serves as the primary source of heat and not, for example, one or more space heaters.

d. A provision that, if the minimum usage limit is exceeded such that the limiter function interrupts service, the service limiter function must be capable of being reset manually by the customer, or the service limiter function must reset itself automatically within 15 minutes after the interruption. In addition, the service limiter function may also be capable of being reset remotely by the utility. If the utility chooses to use the option of resetting the meter remotely, the utility shall provide a 24-hour toll-free number for the customer to notify the utility that the limiter needs to be reset and the meter shall be reset immediately following notification by the customer. If the remote reset option is used, the meter must still be capable of being reset manually by the customer or the service limiter function must reset itself automatically within 15 minutes after the interruption.

e. There shall be no disconnect, reconnect, or other charges associated with service limiter interruptions or restorations.

f. A provision that, upon installation of a service limiter or activation of a service limiter function on the meter, the utility shall provide the customer with information on the operation of the limiter, including how it can be reset, and information on what appliances or combination of appliances can generally be operated to stay within the limits imposed by the limiter.

g. A provision that the service limiter function of the meter shall be disabled no later than the next working day after the residential customer has paid the delinquent balance in full.

h. A service limiter customer that defaults on the payment agreement is subject to disconnection after a 24-hour notice pursuant to paragraph 20.4(15)*"f."*

These rules are intended to implement Iowa Code sections 476.6, 476.8, 476.20, and 476.54.

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199—20.5(476) Engineering practice.

20.5(1) *Requirement for good engineering practice.* The electric plant of the utility shall be constructed, installed, maintained, and operated in accordance with accepted good engineering practice in the electric industry to assure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.

20.5(2) *Standards incorporated by reference.* The utility shall use the applicable provisions in the publications listed below as standards of accepted good practice, unless otherwise ordered by the commission.

a. Iowa Electrical Safety Code, as defined in 199—Chapter 25(478).

b. National Electrical Code, ANSI/NFPA 70-2020, as amended on April 1, 2021.

c. American National Standard Requirements for Instrument Transformers, ANSI/IEEE C57.13.1-2016, as approved August 21, 2017; and C57.13.3-2016, as approved August 21, 2017.

d. American National Standard for Electric Power Systems and Equipment Voltage Ratings (60 Hertz), ANSI C84.1-2020, as published September 3, 2020.

e. Recommended Practice for Grounding of Industrial and Commercial Power Systems, IEEE 3003.1-2019, as approved June 13, 2019.

f. IEEE Standard 1159-2019, IEEE Recommended Practice for Monitoring Electric Power Quality or any successor standard, as approved June 13, 2019.

g. IEEE Standard 519-2014, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems as approved March 27, 2014.

h. At railroad crossings, 199—42 (476), "Engineering standards for electric and communications lines" subrule.

20.5(3) *Adequacy of supply and reliability of service.* The generating capacity of the utility's plant, supplemented by the electric power regularly available from other sources, must be sufficiently large to meet all normal demands for service and provide a reasonable reserve for emergencies.

In appraising adequacy of supply the commission will segregate electric utilities into two classes viz., those having high capacity transmission interconnections with other electrical utilities and those that lack such interconnection and are therefore completely dependent upon the firm generating capacity of the utility's own generating facilities.

a. In the case of utilities having interconnecting ties with other utilities, the commission will, upon appraising adequacy of supply, take appropriate notice of the utility's recent past record, as of the date of appraisal, of any widespread service interruptions and any capacity shortages along with the consideration of the supply regularly available from other sources, the normal demands, and the required reserve for emergencies.

b. In the case of noninterconnected utilities, the commission will give attention to the maximum total coincident customer demand that could be satisfied without the use of the single element of plant equipment, the disability of which would produce the greatest reduction in total net plant productive capacity and also give attention to the normal demands for service and to the reasonable reserve for emergencies.

This rule is intended to implement Iowa Code sections 476.8 and 478.18.

199—20.6(476) Metering.

20.6(1) *Inspection and testing program.* Each utility shall adopt a written program for the inspection and testing of its meters to determine the necessity for adjustment, replacement, or repair. The frequency of inspection and methods of testing shall be based on the utility's experience, manufacturer's recommendations, and accepted good practice. The publications listed in subrule 20.6(3) are representative of accepted good practice. Each utility shall maintain inspecting and testing records for each meter and associated device until three years after its retirement.

20.6(2) *Program content.* The written program shall, at minimum, address the following subject areas:

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a. Classification of meters by capacity, type, and any other factor considered pertinent.

b. Checking of new meters for acceptable accuracy before being placed in service.

c. Testing of in-service meters, including any associated instruments or corrective devices, for accuracy, adjustments, or repairs. This may be accomplished by periodic tests at specified intervals or on the basis of a statistical sampling plan, but shall include meters removed from service for any reason.

d. Periodic calibration or testing of devices or instruments used by the utility to test meters.

e. The limits of meter accuracy considered acceptable by the utility.

f. The nature of meter and meter test records that will be maintained by the utility.

20.6(3) *Accepted good practice.* The American National Standard Code for Electricity Metering, ANSI C12.1-2022, as approved June 9, 2022, is considered to be representative of accepted good practice in matters of metering and meter testing.

20.6(4) *Meter adjustment.* All meters and associated metering devices shall, when tested, be adjusted as closely as practicable to the condition of zero error.

20.6(5) *Request tests.* Upon request by a customer, a utility shall test the meter servicing for that customer but it need not be more frequently than once in 18 months.

A written report of the test results shall be mailed to the customer within ten days of the completed test and a record of each test shall be kept and made available upon request. The utility shall give the customer or a representative of the customer the opportunity to be present while the test is conducted.

If the test finds the meter is accurate within the limits accepted by the utility in its meter inspection and testing program, the utility may charge the customer $25 or the cost of conducting the test, whichever is less. The customer shall be advised of any potential charge before the meter is removed for testing.

20.6(6) *Referee tests.* Upon written request by a customer or utility, the commission will conduct a referee test of a meter but it need not be more frequently than once in 18 months. The customer request shall be accompanied by a $30 deposit made payable to the utility.

Within five days of receipt of the written request and payment, the commission shall forward the deposit to the utility and notify the utility of the requirement for a test. The utility shall, within 30 days after notification of the request, schedule the date, time, and place of the test with the commission and customer. The meter shall not be removed or adjusted before the test. The utility shall furnish all testing equipment and facilities for the test. If the tested meter is found to be more than 2 percent fast or 2 percent slow, the deposit will be returned to the party requesting the test and billing adjustments shall be made as required in subrule 20.4(13). The commission shall issue its report within 15 days after the test is conducted, with a copy to the customer and the utility.

20.6(7) *Condition of meter.* No meter that is known to be mechanically or electrically defective, or to have incorrect constants, or that has not been tested and adjusted if necessary in accordance with these rules shall be installed or continued in service. The capacity of the meter and the index mechanism shall be consistent with the electricity requirements of the customer.

20.6(8) *Comprehensive meter upgrade programs.*

a. A utility may forgo the meter testing procedures required under the utility's own inspection and testing program and subrule 20.6(2) if:

(1) The meters are removed or scheduled to be removed as part of a comprehensive meter upgrade program over a specified period not to exceed three years;

(2) The meters being removed have not previously been shown to be inaccurate or otherwise faulty;

(3) The utility either retains the removed meters for a period of one year from the removal date to allow customers the opportunity to challenge a meter's accuracy or tests a representative statistical sample based upon an industry standard such as ANSI C12.1-2022 of each type of meter being removed as part of the program and maintains the removed meters for a period of at least six months; and

(4) The utility tests any meter upon request of a customer based upon the customer's experience comparing the replaced and replacement meters.

b. Prior to forgoing its testing procedures under this subrule, a utility shall notify the commission that the utility is engaging in a comprehensive meter upgrade program. The notice shall state the option the

utility is electing to pursue under subparagraph 20.6(8)*"a"*(3), the specified period of the program, and the expected number of meters to be upgraded. A utility electing to test a statistical sample of removed meters under subparagraph 20.6(8)*"a"*(3) shall also state the industry standard it will use to determine the sample size and provide the full text of the standard to the commission upon request.

c. A utility shall continue to follow the meter testing procedures for meters removed for any reason unrelated to the comprehensive meter upgrade program.

d. A utility shall resume the meter testing procedures required under the utility's own inspection and testing program and subrule 20.6(2) upon completion of the comprehensive meter upgrade program or the end of the specified period, whichever occurs first.

199—20.7(476) Standards of quality of service.

20.7(1) Standard frequency. The standard frequency for alternating current distribution systems shall be 60 cycles per second. The frequency shall be maintained within limits that will permit the satisfactory operation of customer's clocks connected to the system.

20.7(2) Voltage limits retail. Each utility supplying electric service to ultimate customers shall provide service voltages in conformance with the standard at paragraph 20.5(2)*"d."*

20.7(3) Voltage balance. Where three-phase service is provided the utility shall exercise reasonable care to assure that the phase voltages are in balance. In no case shall the ratio of maximum voltage deviation from average to average voltage exceed .02.

20.7(4) Voltage limits, service for resale. The nominal voltage shall be as mutually agreed upon by the parties concerned. The allowable variation shall not exceed 7.5 percent above or below the agreed-upon nominal voltage without the express approval of the commission.

20.7(5) Exceptions to voltage requirements. Voltage outside the limits specified will not be considered a violation when the variations:

a. Arise from the action of the elements.

b. Are infrequent fluctuations not exceeding five minutes in duration.

c. Arise from service interruptions.

d. Arise from temporary separation of parts of the system from the main system.

e. Are from causes beyond the control of the utility.

f. Do not exceed 10 percent above or below the standard nominal voltage, and service is at a distribution line or transmission line voltage with the retail customer providing voltage regulators.

20.7(6) Voltage surveys and records. Voltage measurements shall be made at the customer's entrance terminals. For single-phase service the measurement shall be made between the grounded conductor and the ungrounded conductors. For three-phase service the measurement shall be made between the phase wires.

20.7(7) Each utility shall make a sufficient number of voltage measurements in order to determine if voltages are in compliance with the requirements as stated in subrules 20.7(2), 20.7(3), and 20.7(4). All records obtained under this subrule shall be retained by the utility for at least two years and shall be available for inspection by the commission's representatives. Notations on each chart shall indicate the following:

a. The location where the voltage was taken.

b. The time and date of the test.

c. The results of the comparison with a working standard indicating voltmeter.

20.7(8) Equipment for voltage measurements.

a. Secondary standard indicating voltmeter. Each utility shall have available at least one indicating voltmeter maintained with error no greater than 0.25 percent of full scale.

b. Working standard indicating voltmeters. Each utility shall have at least two indicating voltmeters maintained so as to have as-left errors of no greater than 1 percent of full scale.

c. Recording voltmeters. Each utility must have readily available at least two portable recording voltmeters with a rated accuracy of 1 percent of full scale.

20.7(9) Extreme care must be exercised in the handling of standards and instruments to assure that their

accuracy is not disturbed. Each standard shall be accompanied at all times by a certificate or calibration card, duly signed and dated, on which are recorded the corrections required to compensate for errors found at the customary test points at the time of the last previous test.

20.7(10) Planned interruptions shall be made at a time that will not cause unreasonable inconvenience to customers, and interruptions planned for longer than one hour shall be preceded by adequate notice to those who will be affected.

20.7(11) Power quality monitoring. Each utility shall investigate power quality complaints from its customers and determine if the cause of the problem is on the utility's systems. In addressing these problems, each utility shall implement to the extent reasonably practical the practices outlined in the standard given at paragraph 20.5(2)*"f."*

20.7(12) Harmonics. A harmonic is a sinusoidal component of the 60 cycles per second fundamental wave having a frequency that is an integral multiple of the fundamental frequency. When excessive harmonics problems arise, each electric utility shall investigate and take actions to rectify the problem. In addressing harmonics problems, the utility and the customer shall implement to the extent practicable and in conformance with prudent operation the practices outlined in the standard at paragraph 20.5(2)*"g."*

This rule is intended to implement Iowa Code sections 476.2 and 476.8.

199—20.8(476) Safety.

20.8(1) *Protective measures.* Each utility shall exercise reasonable care to reduce those hazards inherent in connection with its utility service and to which its employees, its customers, and the general public may be subjected and shall adopt and execute a safety program designed to protect the public and fitted to the size and type of its operations. A utility shall include in its safety program procedures for notifying the commission and the public of an incident involving a component of a wind turbine, solar facility, storage facility, or any other generating facility where the incident has resulted in damage to adjacent property or members of the public.

20.8(2) *Accident investigation and prevention.* The utility shall give reasonable assistance to the commission in the investigation of the cause of accidents and in the determination of suitable means of preventing accidents.

20.8(3) *Reportable accidents.* Each utility shall maintain a summary of all reportable accidents, as defined in the "Accident reports" rule of 199—Chapter 25(476,478), arising from its operations.

20.8(4) *Grounding of secondary distribution system.* Unless otherwise specified by the commission, each utility shall comply with, and encourage its customers to comply with, the applicable provisions of the acceptable standards listed in subrule 20.5(2) for the grounding of secondary circuits and equipment.

Ground connections should be tested for resistance at the time of installation. The utility shall keep a record of all ground resistance measurements.

The utility shall establish a program of inspection so that all artificial grounds installed by it shall be inspected within reasonable periods of time.

199—20.9(476) Electric energy automatic adjustment. The electric energy cost adjustment of the unit charge shall be an energy adjustment clause.

20.9(1) *Applicability.* A utility's electric energy adjustment shall recover from consumers only those costs which:

a. Are incurred in supplying energy;
b. Are beyond direct control of management;
c. Are subject to sudden important change in level;
d. Are an important factor in determining the total cost to serve; and
e. Are readily, precisely, and continuously segregated in the accounts of the utility.

20.9(2) *Energy adjustment clause.* Prior to any period in which a utility proposes to change the adjustment amount for each energy unit delivered to the customer, the utility shall determine and file for commission approval the adjustment amount to be charged for each energy unit delivered under rates set by

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the commission. The energy adjustment clause factors shall be printed on the customer's bill. The filing shall include all invoices (except invoices for fuel, freight, and transportation), worksheets, and detailed supporting data used to determine the amount of the adjustment. Spreadsheets, workbooks, and databases included in filings shall include all cell formulae and cell references. Utilities that participate in a wholesale energy market and use a forecasted energy adjustment clause shall provide information about key inputs and assumptions and explain the differences between the forecast and actual fuel costs. The estimated amount of fossil fuel should be detailed to reflect the amount of fuel, transportation, emission allowances, and other costs.

a. The utility shall keep and maintain journal entries to reflect a breakdown for each type of fuel: actual cost of fuel, transportation costs, and other costs. Items identified as other costs should be described and their inclusion as fuel costs shall be approved by the commission. The commission may direct that journal entries be filed. The utility shall also file detailed supporting data:

(1) To show the actual amount of sales of energy by month for which an adjustment was utilized, and

(2) To support the energy cost adjustment balance utilized in the monthly energy adjustment clause filings.

b. The energy adjustment shall provide for change of the price per kWh delivered under rates set by the commission based upon the formulas provided in the utility's tariff. The energy adjustment factor shall be rounded on a consistent basis to either the nearest 0.01¢/kWh or 0.001¢/kWh. The tariff shall define the components of the formula(s) and shall include reference to the specific accounts of the Uniform System of Accounts for each component.

(1) For each period as specified in the tariff, the calculation shall include but not be limited to:

1. The estimated energy cost and revenues;

2. The estimated electric energy to be delivered and entered in accounts 440, 442, and 444-7, excluding energy from distinct interchange deliveries entered into account 447, and including intrautility energy service as included in accounts 448 and 929 of the Uniform System of Accounts during the month in which the energy adjustment charge will be used; and

3. The energy cost adjustment account balance.

(2) The base formula for the energy adjustment factor shall be:

Energy adjustment factor = (energy cost adjustment account balance + estimated energy costs and revenues) / estimated energy delivered

c. The estimated energy cost and revenues shall be the estimated cost and revenues associated with:

(1) Fossil and nuclear fuel consumed in the utility's own plants and the utility's share of fossil and nuclear fuel consumed in jointly owned or leased plants. Fossil fuel shall include natural gas used for electric generation and the cost of fossil fuel transferred from account 151 to account 501 or 547 of the Uniform System of Accounts. Nuclear fuel shall be that shown in account 518 of the Uniform System of Accounts except that if account 518 contains any expense for fossil fuel that has already been included in the cost of fossil fuel, it shall be deducted from the account. (Paragraph C of account 518 includes the cost of other fuels used for ancillary steam facilities.)

(2) The cost of steam purchased, or transferred from another department of the utility or from others under a joint facility operating agreement, for use in prime movers producing electric energy (accounts 503 and 521).

(3) A deduction shall be made of the expenses of producing steam chargeable to others, to other utility departments under a joint operating agreement, or to other electric accounts outside the steam generation group of accounts (accounts 504 and 522).

(4) The cost of water used for hydraulic power generation. Water cost shall be limited to items of account 536 of the Uniform System of Accounts. For pumped storage projects, the energy cost of pumping is included. Pumping energy cost shall be determined from the applicable costs of paragraph 20.9(2)*"c."*

(5) The energy costs paid for energy purchased under arrangements or contracts, as entered into account 555 of the Uniform System of Accounts, less the energy revenues to be recovered from corresponding sales, as entered in account 447 of the Uniform System of Accounts.

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(6) Purchases from alternative energy production facilities under the commission's "Additional rate-regulated utility obligations regarding AEP facilities" rule at 199—Chapter 15(476).

(7) The weighted average costs of inventoried allowances used in generating electricity.

(8) The gains and losses, as described in subrule 20.17(9), from allowance transactions occurring during the month. Allowance transactions shall include vintage trades and emission for emission trades.

(9) Eligible costs or credits associated with the utility's annual reconciliation of its alternate energy purchase program under the "Alternate energy purchase programs" rule of 199—Chapter 15(476).

(10) Federal production tax credits unless the commission approves different ratemaking treatment.

(11) Other costs and revenues as specified in the utility's tariff and approved by the commission. For all other costs and revenues, the utility shall provide the type of cost, the dollar amount, and reference to the commission order approving the cost to be included in the energy adjustment clause.

d. The energy cost adjustment account balance shall be the cumulative balance of any excess or deficiency that arises out of the difference between commission recognized energy cost recovery and the amount recovered through application of energy charges to consumption under rates set by the commission. The calculation for the energy cost adjustment account balances shall include but is not limited to:

(1) The actual energy expense for the prior period and recorded in accounts 440, 442, and 444-6 of the Uniform System of Accounts;

(2) The actual electric energy delivered for the prior period and recorded in accounts 440, 442, and 444-7, excluding energy from distinct interchange deliveries entered into account 447, and including intrautility energy service as included in accounts 448 and 929 of the Uniform System of Accounts; and

(3) The beginning energy cost adjustment account balance (overrecovered or underrecovered amount) for the current period.

e. Reserve account for nuclear generation. A rate-regulated utility owning nuclear generation or purchasing energy under a participation power agreement on nuclear generation may establish a reserve account. The reserve account will spread the higher cost of energy used to replace the energy normally received from nuclear sources. A surcharge would be added to each kWh from the nuclear source. The surcharges collected are credited to the reserve account. During an outage or reduced level of operation, replacement energy cost would be offset through debit to the reserve account. The debit would be based upon the cost differential between replacement energy cost and the average cost (including the surcharge) of energy from the nuclear capacity. A reserve account shall have credit and debit limitations equal in dollar amounts to the total cost differential for replacement energy during a normal refueling outage.

f. A rate-regulated utility desiring to collect expensed allowance costs and the gains and losses from allowance transactions through the energy adjustment must file with the commission monthly reports including:

(1) The number and weighted average unit cost of allowances used during the month to offset emissions from the utility's affected units;

(2) The number and unit price of allowances purchased during the month;

(3) The number and unit price of allowances sold during the month;

(4) The weighted average unit cost of allowances remaining in inventory;

(5) The dollar amount of any gain from an allowance sale occurring during the month;

(6) The dollar amount of any loss from an allowance sale occurring during the month; and

(7) Documentation of any gain or loss from an allowance sale occurring during the month.

g. The energy adjustment clause factor may include other automatic adjustment mechanisms as approved by the commission.

20.9(3) *Utilities not making monthly changes to the adjustment amount.* Utilities that do not file monthly adjustments shall:

a. File the information pursuant to subrule 20.9(2) on a quarterly basis.

b. File an annual reconciliation of the EAC factor and an update to the EAC factor. The date of the annual reconciliation and update shall be specified in the utility's tariff. The reconciliation shall follow the requirements of subrule 20.9(2).

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c. Include a semiannual adjustment if the absolute value of the cumulative over recovery or under recovery amount is greater than 20 percent of the forecasted net recoverable energy costs for the EAC year. The semiannual adjustment filing shall be filed six months after the annual reconciliation and update filing and shall follow the requirements of subrule 20.9(2), but will be limited to the remaining months of the year. The semiannual factor updates may utilize updated forecasts for the costs and sales for the remainder of the year.

20.9(4) *Review of energy adjustment clause.* At least biennially, but no more than annually, the commission shall require each utility that owns generation and utilizes an energy adjustment clause to provide fuel, freight, and transportation invoices from two months of the previous calendar year. The utility shall include an explanation of and demonstrate how these invoices correspond to the energy adjustment clause calculations. The explanation shall include inventory accounting information and average cost of fuel and transportation included in the energy adjustment clause calculations. The commission will notify each utility by May 1 as to which two months' invoices will be required. These invoices shall be filed with the commission no later than the subsequent November 1.

20.9(5) *Annual reports.* With the first filing of the utility's EAC year, each utility participating in a wholesale market shall file a report explaining how participation results in reduced customer rates or reduces increases in customer rates, identifying current and evolving market issues that are expected to impact rates, and describing the utility's efforts to influence market issues for the benefit of customers.

199—20.10(476) Ratemaking standards.

20.10(1) *Coverage.* Standards for ratemaking shall apply to all rate-regulated utilities in the state of Iowa. The commission may, by rule or by order in specific cases, exempt a utility or class of utilities from any or all ratemaking standards. The standards are recommended to all service-regulated utilities in this jurisdiction.

20.10(2) *Cost of service.* Rates charged by an electric utility for providing electric service to each class of electric consumers shall be designed, to the maximum extent practicable, to reasonably reflect the costs of providing electric service to the class. The methods used to determine class costs of service shall to the maximum extent practical permit identification of differences in cost-incurrence, for each class of electric consumers, attributable to daily and seasonal time of use of service, and permit identification of differences in cost-incurrence attributable to differences in demand, energy, and customer components of cost.

The design of rates should reasonably approximate a pricing methodology for any individual utility that would reflect the price system that would exist in a competitive market environment. For purposes of determining revenue requirements among customer classes, embedded costs shall be preferred. For purposes of determining rate designs within customer classes, long-run marginal cost approaches are preferred although embedded cost approaches may be considered reasonable.

Nothing in this rule shall authorize or require the recovery by an electric utility of revenues in excess of, or less than, the amount of revenues otherwise determined to be lawful by the commission.

Guidelines for use in evaluating the acceptability of methods of class cost of service estimation include, but are not limited to, the following:

a. All usage of customer, demand, and energy components of service shall be considered new usage.

b. Customer classes shall be established on the primary basis of reasonably similar usage patterns within classes, even if this requires disaggregation or recombination of traditional customer classes.

c. Generating capacity estimates or allocations among and within classes shall recognize that utility systems are designed to serve both peak and off-peak demand, and shall attribute costs based upon both peak period demand and the contribution of off-peak period demand in determining generation mix. Generating capacity estimates and allocations among and within classes shall be based on load data for each class as described in paragraph "Class load data" of 199—Chapter 35(476).

d. Transmission and distribution capacity estimates or allocations among and within classes shall be demand-related based upon system usage patterns, and the load imposed by a class on the transmission or distribution capacity in question.

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e. Customer cost component estimates or allocations shall include only costs of the distribution system from and including transformers, meters, and associated customer service expenses.

f. Methods of cost estimates or allocations among customer classes shall recognize the differences in voltage levels and other service characteristics, and line losses among customer classes.

g. Methods of class cost of service determination that are consistent with zero customer, demand, or energy component costs or major categories of these, such as generation, transmission, or distribution, shall be considered unacceptable methods.

h. Long-run marginal cost methods of class cost of service determination shall clearly reflect changes in total costs to the utility with respect to changes in the outputs of customer, demand, or energy components of electric services.

i. The use of an inverse elasticity approach to adjust long-run marginal cost-based rates to the revenue requirement shall be unacceptable. Other approaches will be considered on a case-by-case basis.

20.10(3) *Declining block rates.* The energy-related cost component of a rate, or the amount attributable to the energy-related cost component of a rate, charged by an electric utility for providing electric service during any period to any class of electric consumers, shall not decrease as kWh consumption by such class increases during the period except to the extent that the utility demonstrates that the energy costs of providing electric service to such class decrease as consumption increases during the period.

20.10(4) *Time-of-day rates.* The rates charged by any electric utility for providing electric service to each class of electric consumers shall be on a time-of-day basis that reflects the cost of providing electric service to that class of electric consumers at different times of the day unless such rates are not cost-effective with respect to the class. These rates are cost-effective with respect to a class if the long-run benefits of the rate to the electric utility and its electric consumers in the class concerned are likely to exceed the metering costs and other costs associated with the use of the rates. Cost-based time-of-day rates shall be offered on an optional basis to electric consumers who do not otherwise qualify for the rates if consumers agree to pay the additional metering costs and other costs associated with the use of the rates.

20.10(5) *Seasonal rates.* The rates charged by an electric utility for providing electric service to each class of electric consumers may be on a seasonal basis that reflects the costs of providing service to the class of consumers at different seasons of the year to the extent that costs vary seasonally for the utility, if the commission determines that seasonal rates are appropriate in an individual case.

20.10(6) *Interruptible rates.* Each electric utility shall offer an interruptible rate that reflects the cost of providing interruptible service to the class of which the consumer is a member and the eligibility requirements for that interruptible service.

199—20.11(476) Customer notification of peaks in electric energy demand.

20.11(1) Pursuant to Iowa Code section 476.17, each investor-owned utility shall have a plan to notify its customers of an approaching peak demand on the day when peak demand is likely to occur. The plan shall be made available to the commission upon request.

20.11(2) The plan shall include, at a minimum, the following:

a. A description and explanation of the condition(s) that will prompt a peak alert.

b. A provision for a general notice to be given to customers prior to the time when peak demand is likely to occur and an explanation of when and how notice of an approaching peak in electric demand will be given to customers.

c. The text of the message or messages to be given in the general notice to customers. The message shall include the name of the utility providing the notice, an explanation that conditions exist that indicate a peak in electric demand is approaching, and an explanation of the significance of reductions in electricity use during a period of peak demand and the potential benefits of energy efficiency.

199—20.13(476) Periodic electric energy supply and cost review [476.6(12)].

Pursuant to Iowa Code section 476.6(12), the commission shall periodically conduct a contested case proceeding for the purpose of evaluating the reasonableness and prudence of a rate-regulated public utility's

practices related to procurement of and contracting for fuel used in generating electricity. When it determines to conduct a contested case proceeding, the commission shall notify a rate-regulated utility that it will be required to file an electric fuel procurement plan. The notification to the utility shall include a detailed list of what the commission will be examining as part of the review. The utility shall file its plan no later than 105 days after notification unless otherwise directed by the commission. A utility's procurement plan shall be organized to include information as follows:

20.13(1) *Index.* The plan shall include an index of all documents and information required to be filed in the plan, and the identification of the commission files in which the documents incorporated by reference are located.

20.13(2) *Purchase contracts and arrangements.* A utility's procurement plan shall include detailed summaries of the following types of contracts and agreements executed since the last procurement review:

a. All contracts and fuel supply arrangements for obtaining fuel for use by any unit in generation;

b. All contracts and arrangements for transporting fuel from point of production to the site where placed in inventory, including any unit generating electricity for the utility;

c. All contracts and arrangements for purchasing or selling allowances;

d. Purchased power contracts or arrangements, including sale-of-capacity contracts, involving over 25 MW of capacity;

e. Pool interchange agreements;

f. Multiutility transmission line interchange agreements; and

g. Interchange agreements between investor-owned utilities, generation and transmission cooperatives, or both, not required to be filed above, which were entered into or in effect since the last filing, and all such contracts or arrangements that will be entered into or exercised by the utility during the prospective 12-month period.

All procurement plans filed by a utility shall include all of the types of contracts and arrangements listed in subparagraphs (1) and (2) of this paragraph that will be entered into or exercised by the utility during the prospective 12-month period. In addition, the utility shall file an updated list of contracts that are or will become subject to renegotiation, extension, or termination within five years. The utility shall also update any price adjustment affecting any of the filed contracts or arrangements.

20.13(3) *Other contract offers.* The procurement plan shall include a list and description of those types of contracts and arrangements listed in paragraph 20.13(1)*"b"* offered to the utility since the last filing into which the utility did not enter. In addition, the procurement plan shall include a list of those types of contracts and arrangements listed in paragraph 20.13(1)*"b"* that were offered to the utility for the prospective 12-month period and into which the utility did not enter.

20.13(4) *Studies or investigation reports.* The procurement plans shall include all studies or investigation reports that have been considered by the utility in deciding whether to enter into any of those types of contracts or arrangements listed in paragraphs 20.13(1)*"b"* and *"c"* that will be exercised or entered into during the prospective 12-month period.

20.13(5) *Price hedge justification.* The procurement plan shall justify purchasing allowance futures contracts as a hedge against future price changes in the market rather than for speculation.

20.13(6) *Actual and projected costs.* The procurement plan shall include an accounting of the actual costs incurred in the purchase and transportation of fuel and the purchase of allowances for use in generating electricity associated with each contract or arrangement filed in accordance with paragraph 20.13(1)*"b"* for the previous 12-month period.

The procurement plan also shall include an accounting of all costs projected to be incurred by the utility in the purchase and transportation of fuel and the purchase of allowances for use in generating electricity associated with each contract or arrangement filed in accordance with paragraph 20.13(1)*"b"* in the prospective 12-month period.

If applicable, the reporting of transportation costs in the procurement plan shall include all known liabilities, including all unit train costs.

20.13(7) *Costs directly related to the purchase of fuel.* The utility shall provide a list and description of

all other costs directly related to the purchase of fuels for use in generating electricity not required to be reported by paragraph *"f."*

20.13(8) *Compliance plans.* Each utility shall file its emissions compliance plan as submitted to the EPA. Revisions to the compliance plan shall be filed with each subsequent procurement plan.

20.13(9) *Evidence submitted.* Each utility shall submit all factual evidence and written argument in support of its evaluation of the reasonableness and prudence of the utility's procurement practice decisions in the manner described in its procurement plan. The utility shall file data sufficient to forecast fuel consumption at each generating unit or power plant for the prospective 12-month period. The commission may require the submission of machine-readable data for selected computer codes or models.

20.13(10) *Additional information.* Each utility shall file additional information as ordered by the commission.

199—20.14(476) Flexible rates.

20.14(1) *Purpose.* This rule is intended to allow electric utility companies to offer, at their option, incentive or discount rates to their customers.

20.14(2) *General criteria.*

a. Electric utility companies may offer discounts to individual customers, to selected groups of customers, or to an entire class of customers. However, discounted rates must be offered to all directly competing customers in the same service territory. Customers are direct competitors if they make the same end product (or offer the same service) for the same general group of customers. Customers that only produce component parts of the same end product are not directly competing customers.

b. In deciding whether to offer a specific discount, the utility shall evaluate the individual customer's, group's, or class's situation and perform a cost-benefit analysis before offering the discount.

c. Any discount offered should be such as to significantly affect the customer's or customers' decision to stay on the system or to increase consumption.

d. The consequences of offering the discount should be beneficial to all customers and to the utility. Other customers should not be at risk of loss as a result of these discounts; in addition, the offering of discounts shall in no way lead to subsidization of the discounted rates by other customers in the same or different classes.

20.14(3) *Tariff requirements.* If a company elects to offer flexible rates, the utility shall file for review and approval tariff sheets specifying the general conditions for offering discounted rates. The tariff sheets shall include, at a minimum, the following criteria:

a. The cost-benefit analysis must demonstrate that offering the discount will be more beneficial than not offering the discount.

b. The ceiling for all discounted rates shall be the approved rate on file for the customer's rate class.

c. The floor for the discount rate shall be equal to the energy costs and customer costs of serving the specific customer.

d. No discount shall be offered for a period longer than five years, unless the commission determines upon good cause shown that a longer period is warranted.

e. Discounts should not be offered if they will encourage deterioration in the load characteristics of the customer receiving the discount.

20.14(4) *Reporting requirements.* Each rate-regulated electric utility electing to offer flexible rates shall file annual reports with the commission within 30 days of the end of each 12 months. Reports shall include the following information:

a. For all discounts initiated in the last 12 months, Section 1 of the report shall include:

(1) The identity of the new customers (by account number, if necessary);

(2) The value of the discount offered;

(3) The cost-benefit analysis results;

(4) The end-use cost of alternate fuels or energy supplies available to the customer, if relevant;

(5) The energy and demand components by month of the amount of electricity sold to the customer in

the preceding 12 months.

b. Section 2 of the report relates to overall program evaluation. Amount of electricity refers to both energy and demand components when the customer is billed for both elements. For all discounts currently being offered, Section 2 of the report shall include:

(1) The identity of each customer (by account number, if necessary);

(2) The amount of electricity sold in the last 12 months to each customer at discounted rates, by month;

(3) The amount of electricity sold to each customer in the same 12 months of the preceding year, by month;

(4) The dollar value of the discount in the last 12 months to each customer, by month; and

(5) The dollar value of sales to each customer for each of the previous 12 months.

c. For all customers specifically evaluated and denied or having a discount terminated in the last 12 months, Section 3 of the report shall include:

(1) Customer identification (by account number, if necessary);

(2) The amount of electricity sold in the last 12 months to each customer, by month;

(3) The amount of electricity sold to each customer in the same 12 months of the preceding year, by month; and

(4) The dollar value of sales to each customer for each of the past 12 months.

d. No monthly report is required if the utility had no customers receiving a discount during the relevant period and had no customers that were evaluated for the discount and rejected during the relevant period.

20.14(5) *Rate case treatment.* In a rate case, 50 percent of any identifiable increase in net revenues will be used to reduce rates for all customers; the remaining 50 percent of the identifiable increase in net revenues may be kept by the utility. If there is a decrease in revenues due to the discount, the utility's test year revenues will be adjusted to remove the effects of the discount by assuming that all sales were made at full tariffed rates for the customer class. Determining the actual amount will be a factual determination to be made in the rate case.

199—20.15(476) Customer contribution fund.

20.15(1) *Applicability and purpose.* This rule applies to each electric public utility, as defined in Iowa Code sections 476.1, 476.1A, and 476.1B. Pursuant to Iowa Code section 476.66, each utility shall maintain a program plan to assist the utility's low-income customers with weatherization and to supplement assistance received under the federal low-income home energy assistance program for the payment of winter heating bills.

20.15(2) *Notification.* Each utility shall notify all customers of the customer contribution fund at least twice a year. The method of notice that will ensure the most comprehensive notification to the utility's customers shall be employed. Upon commencement of service and at least once a year, the notice shall be mailed or personally delivered to all customers, or provided by electronic means to those customers who have consented to receiving electronic notices. The other required notice may be published in a local newspaper(s) of general circulation within the utility's service territory. A utility serving fewer than 6,000 customers may publish its semiannual notices locally in a free newspaper, utility newsletter, or shopper's guide instead of a newspaper. At a minimum, the notice shall include:

a. A description of the availability of the fund;

b. A description of the purpose of the fund; and

c. A customer authorization form. This form shall include a monthly billing option and any other methods of contribution.

20.15(3) *Methods of contribution.* The utility shall provide for contributions as monthly pledges, as well as one-time or periodic contributions. A pledge by a customer or other party shall not be construed to be a binding contract between the utility and the pledger. The pledge amount shall not be subject to delayed payment charges by the utility. Each utility may allow persons or organizations to contribute matching funds.

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20.15(4) *Annual report.* On or before September 30 of each year, each utility shall file with the commission a report of all the customer contribution fund activity for the previous fiscal year beginning July 1 and ending June 30. The report shall be in a form provided by the commission, contain an accounting of the total revenues collected and all distributions of the fund, and report all utility expenses directly related to the customer contribution fund.

199—20.16(476) Exterior flood lighting.

20.16(1) *Newly installed lighting.* All newly installed public utility-owned exterior flood lighting shall be solid-state lighting or lighting with equivalent or better energy efficiency.

20.16(2) *In-service lighting replacement schedule.* In-service lighting shall be replaced with solid-state lighting or lighting with equivalent or better energy efficiency when worn out due to ballast, lamp, or fixture failure for any other reason, such as vandalism or storm damage. A utility shall file with the commission as part of the utility's annual report required in 199—Chapter 23(476,546) a report stating the progress in converting to higher pressure sodium lighting or lighting with equivalent or higher energy efficiency.

20.16(3) *Efficacy standards.* Lighting other than solid-state has equivalent or better efficacy if one or more of the following can be established:

a. For fixtures, the mean lumens-per-watt lamp rating is greater than 100;

b. The new lighting uses no more energy per installation than comparable, suitably sized solid-state; or

c. The new lighting luminaries have a mean efficacy rating equal to or greater than 100 lumens per watt according to a DOE Lighting Facts label, testing under the DOE Commercially Available LED Product Evaluation and Reporting Program (CALiPER), Design Lights Consortium (DLC) or any other testing agency that follows Illuminating Engineering Society of North America LM-79-19, as approved May 14, 2019, test procedures.

199—20.17(476) Ratemaking treatment of emission allowances.

20.17(1) *Applicability and purpose.* This rule applies to all rate-regulated utilities providing electric service in Iowa. Under the Act, each electric utility is required to hold sufficient emission allowances to offset emissions at all affected and new units. The acquisition and disposition of emission allowances will be treated for ratemaking purposes as defined in this rule.

20.17(2) *Definitions.* The following words and terms, when used in this rule, shall have the meaning indicated below:

"*Auction allowances*" are allowances acquired or sold through EPA's annual allowance auction.

"*Boot*" means something acquired or forfeited to equalize a trade.

"*Direct sale allowances*" are allowances purchased from the EPA in its annual direct sale.

"*Fair market value*" is the amount at which an allowance could reasonably be sold in a transaction between a willing buyer and a willing seller other than in a forced or liquidation sale.

"*Historical cost*" is the amount of cash or its equivalent paid to acquire an asset, including any direct acquisition expenses. Any commissions paid to brokers shall be considered a direct acquisition expense.

"*Original cost*" is the historical cost of an asset to the person first devoting the asset to public service.

"*Statutory allowances*" are allowances allocated by the EPA at no cost to affected units under the Act either through annual allocations as a matter of statutory right and those for which a utility may qualify by using certain compliance options or effective use of conservation and renewables.

20.17(3) *Valuing allowances for ratemaking purposes.*

a. Statutory allowances. Valued at zero cost to electric utility.

b. Direct sale allowances. Valued at historical cost.

c. Auction allowances. Valued at historical cost.

d. Purchased allowances. Valued at historical cost.

20.17(4) *Valuing allowance inventory accounts.* Allowance inventory accounts shall be valued at the weighted average cost of all allowances eligible for use during that year.

20.17(5) *Valuing allowances acquired as part of a package.* Allowances acquired as part of a package

with equipment, fuel, or electricity shall be valued at their fair market value at the time the allowances were acquired.

20.17(6) *Valuing allowances acquired through exchanges.*

a. Exchanges without boot. Electric utilities shall value allowances received in exchanges based on the recorded inventory value of the allowances relinquished.

b. Exchanges with boot. Electric utilities shall value allowances as the sum of the inventory cost of the allowances given up and the monetary consideration paid in boot for the newly acquired allowances. In determining the historical cost of allowances received, a gain (or loss) shall be recorded to the extent that the amount of boot received exceeds a proportionate share of the recorded weighted average inventory cost of the allowance surrendered. The proportionate share shall be based upon the ratio of the monetary consideration received (i.e., boot) to the total consideration received (monetary consideration plus the fair market value of the allowances received). The historical cost of the allowances received shall be equal to the amount derived by subtracting the difference between the boot received and the gain from the old inventory cost.

20.17(7) *Valuing allowances transferred among affiliates.*

a. Allowances transferred from a utility to a parent or unregulated subsidiary shall be transferred at the higher of historical cost or fair market value.

b. Allowances transferred from an unregulated subsidiary or parent to a utility shall be transferred at the lesser of original cost or fair market value.

c. Allowances transferred from a utility to an affiliated utility shall be transferred at fair market value.

20.17(8) *Expense recognition and recovery of allowance costs.*

a. Expense recognition. Electric utilities shall charge allowances (including fractional amounts) to expense in the month in which related emissions occur.

b. Expense recovery. The expense associated with allowances used for compliance shall be passed through the energy adjustment as specified in rule 199—20.9(476). The expense associated with allowances used for compliance shall include expenses associated with vintage trades and emission for emission trades.

c. Allowance inventory shortage. If a utility emits more emissions in a month than it has allowances in inventory, the utility shall pass the estimated cost of acquiring the needed allowances through the energy adjustment. When the needed allowances are acquired, any difference between the estimated and actual cost of the allowances shall be passed through the energy adjustment as specified in rule 199—20.9(476).

20.17(9) *Gains/losses from allowance transactions.* The gains and losses, including net gains and losses, from allowance transactions shall be passed through the energy adjustment as specified in rule 199—20.9(476). Allowance transactions shall include vintage trades and emission for emission trades.

20.17(10) *Allowance futures or option contracts.*

a. Price hedging. Electric utilities shall defer the costs or benefits from hedging transactions and include such amounts in inventory values when the related allowances are acquired, sold, or otherwise disposed of. Where the costs or benefits of hedging transactions are not identifiable with specific allowances, the amounts shall be included in inventory values when the futures contract is closed.

b. Speculation. Allowance transactions entered into for the purpose of speculation shall not affect allowance inventory pricing.

20.17(11) *Working capital reserve of allowances.* A working capital reserve of allowances shall be established in each utility's rate case proceeding based on the probability of forced outages, fuel quality variability, variability in load growth, nuclear exposure, the price and availability of allowances on the national market, and any other factors that the commission deems appropriate. The working capital reserve will earn at the utility's authorized rate of return.

20.17(12) *Allowances banked for future use.* Allowances banked for future use shall be considered plant held for future use in utility rate proceedings if a definitive plan and schedule for use of the allowances is deemed adequate by the commission.

20.17(13) *Prudence of allowance transactions.* The prudence of allowance transactions shall be determined by the commission in the periodic electric energy supply and cost review. The prudency review

of allowance transactions and accompanying compliance plans shall be based on information available at the time the options or plans were developed. Costs recovered from ratepayers through the energy adjustment that are deemed imprudent by the commission shall be refunded with interest to ratepayers through the energy adjustment as specified in rule 199—20.9(476).

199—20.18(476,478) Service reliability requirements for electric utilities.

20.18(1) *Applicability.* This rule is applicable to investor-owned electric utilities and electric cooperative corporations and associations operating within the state of Iowa subject to Iowa Code chapter 476 and to the construction, operation, and maintenance of electric transmission lines by electric utilities as defined in subrule 20.18(4) to the extent provided in Iowa Code chapter 478.

20.18(2) *Purpose and scope.* Reliable electric service is of high importance to the health, safety, and welfare of the citizens of Iowa. The purpose of this rule is to establish requirements for assessing the reliability of the transmission and distribution systems and facilities that are under the commission's jurisdiction. This rule establishes reporting requirements to provide consumers, the commission, and electric utilities with methodology for monitoring reliability and ensuring quality of electric service within an electric utility's operating area. This rule provides definitions and requirements for maintenance of interruption data, retention of records, and report filing.

20.18(3) *General obligations.*

a. Each electric utility shall make reasonable efforts to avoid and prevent interruptions of service. However, when interruptions occur, service shall be reestablished within the shortest time practicable, consistent with safety.

b. The electric utility's electrical transmission and distribution facilities shall be designed, constructed, maintained, and electrically reinforced and supplemented as required to reliably perform the power delivery burden placed upon them in the storm and traffic hazard environment in which they are located.

c. Each electric utility shall carry on an effective preventive maintenance program and be capable of emergency repair work on a scale that its storm and traffic damage record indicates as appropriate to its scope of operations and to the physical condition of its transmission and distribution facilities.

d. In appraising the reliability of the electric utility's transmission and distribution system, the commission will consider the condition of the physical property and the size, training, supervision, availability, equipment, and mobility of the maintenance forces, all as demonstrated in actual cases of storm and traffic damage to the facilities.

e. Each electric utility shall keep records of interruptions of service on its primary distribution system and make an analysis of the records for the purpose of determining steps to be taken to prevent recurrence of such interruptions.

f. Each electric utility shall make reasonable efforts to reduce the risk of future interruptions by taking into account the age, condition, design, and performance of transmission and distribution facilities and providing adequate investment in the maintenance, repair, replacement, and upgrade of facilities and equipment.

20.18(4) *Definitions.* Terms and formulas when used in this rule are defined as follows:

"Customer" means (1) any person, firm, association, or corporation, (2) any agency of the federal, state, or local government, or (3) any legal entity responsible by law for payment of the electric service from the electric utility which has a separately metered electrical service point for which a bill is provided. Each meter equals one customer. Retail customers are end-use customers who purchase and ultimately consume electricity.

"Customer average interruption duration index (CAIDI)" means the average interruption duration for those customers who experience interruptions during the year. It is calculated by dividing the annual sum of all customer interruption durations by the total number of customer interruptions.

		Sum of All Customer Interruption Durations

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CAIDI	=	Total Number of Customer Interruptions

"Distribution system" means that part of the electric system owned or operated by an electric utility and designed to operate at a nominal voltage of 25,000 volts or less.

"Electric utility" means investor-owned electric utilities and electric cooperative corporations and associations owning, controlling, operating, or using transmission and distribution facilities and equipment subject to the commission's jurisdiction.

"Electrical service point" means the point of connection between the electric utility's equipment and the customer's equipment.

"GIS" means a geospatial information system. This is an information management framework that allows the integration of various data and geospatial information.

"Interrupting device" means a device capable of being reclosed whose purpose is to interrupt faults and restore service or disconnect loads. These devices can be manual, automatic, or motor-operated. Examples may include transmission breakers, feeder breakers, line reclosers, motor-operated switches, fuses, or other devices.

"Interruption" means a loss of service to one or more customers or other facilities and is the result of one or more component outages. The types of interruption include momentary event, sustained, and scheduled. The following interruption causes shall not be included in the calculation of the reliability indices:

1. Interruptions intentionally initiated pursuant to the provisions of an interruptible service tariff or contract and affecting only those customers taking electric service under such tariff or contract;
2. Interruptions due to nonpayment of a bill;
3. Interruptions due to tampering with service equipment;
4. Interruptions due to denied access to service equipment located on the affected customer's private property;
5. Interruptions due to hazardous conditions located on the affected customer's private property;
6. Interruptions due to a request by the affected customer;
7. Interruptions due to a request by a law enforcement agency, fire department, other governmental agency responsible for public welfare, or any agency or authority responsible for bulk power system security; or
8. Interruptions caused by the failure of a customer's equipment; the operation of a customer's equipment in a manner inconsistent with law, an approved tariff, rule, regulation, or an agreement between the customer and the electric utility; or the failure of a customer to take a required action that would have avoided the interruption, such as failing to notify the company of an increase in load when required to do so by a tariff or contract.

"Interruption duration" as used herein in regard to sustained outages means a period of time measured in one-minute increments that starts when an electric utility is notified or becomes aware of an interruption and ends when an electric utility restores electric service, as long as the duration is not less than five minutes long.

"Interruption, momentary" means single operation of an interrupting device that results in a voltage of zero. For example, two breaker or recloser operations equals two momentary interruptions. A momentary interruption is one in which power is restored automatically.

"Interruption, momentary event" means an interruption of electric service to one or more customers of duration limited to the period required to restore service by an interrupting device. Note: Such switching operations must be completed in a specified time not to exceed five minutes. This definition includes all reclosing operations that occur within five minutes of the first interruption. For example, if a recloser or breaker operates two, three, or four times and then holds, the event shall be considered one momentary event interruption.

"Interruption, scheduled" means an interruption of electric power that results when a transmission or distribution component is deliberately taken out of service at a selected time, usually for the purposes of

construction, preventive maintenance, or repair. If it is possible to defer the interruption, the interruption is considered a scheduled interruption.

"Interruption, sustained" means any interruption not classified as a momentary event interruption. It is an interruption of electric service that is not automatically or instantaneously restored, with duration of greater than five minutes.

"Loss of service" means the loss of electrical power, or a complete loss of voltage, to one or more customers. This does not include any of the power quality issues such as sags, swells, impulses, or harmonics. Also see definition of "interruption."

"Major event" will be declared whenever extensive physical damage to transmission and distribution facilities has occurred within an electric utility's operating area due to unusually severe and abnormal weather or event and:

1. Wind speed exceeds 90 mph for the affected area,
2. One-half inch of ice is present and wind speed exceeds 40 mph for the affected area,
3. Ten percent of the affected area total customer count is incurring a loss of service for a length of time to exceed five hours, or
4. 20,000 customers in a metropolitan area are incurring a loss of service for a length of time to exceed five hours.

"Metropolitan area" means any community, or group of contiguous communities, with a population of 20,000 individuals or more.

"Momentary average interruption frequency index (MAIFI)" means the average number of momentary electric service interruptions for each customer during the year. It is calculated by dividing the total number of customer momentary interruptions by the total number of customers served.

$$\text{MAIFI} = \frac{\text{Total Number of Customer Momentary Interruptions}}{\text{Total Number of Customer Interruptions}}$$

"OMS" is a computerized outage management system.

"Operating area" means a geographical area defined by the electric utility that is a distinct area for administration, operation, or data collection with respect to the facilities serving, or the service provided within, the geographical area.

"Outage" means the state of a component when it is not available to perform its intended function due to some event directly associated with that component. An outage may or may not cause an interruption of service to customers, depending on system configuration.

"Power quality" means the characteristics of electric power received by the customer, with the exception of sustained interruptions and momentary event interruptions. Characteristics of electric power that detract from its quality include waveform irregularities and voltage variations, either prolonged or transient. Power quality problems shall include, but are not limited to, disturbances such as high or low voltage, voltage spikes and transients, flickers and voltage sags, surges, and short-time overvoltages, as well as harmonics and noise.

"Rural circuit" means a circuit not defined as an urban circuit.

"System average interruption duration index (SAIDI)" means the average interruption duration per customer served during the year. It is calculated by dividing the sum of the customer interruption durations by the total number of customers served during the year.

$$\text{SAIDI} = \frac{\text{Sum of All Customer Interruption Durations}}{\text{Total Number of Customers Served}}$$

"System average interruption frequency index (SAIFI)" means the average number of interruptions per

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customer during the year. It is calculated by dividing the total annual number of customer interruptions by the total number of customers served during the year.

$$\text{SAIFI} = \frac{\text{Total Number of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

"Total number of customers served" means the total number of customers served on the last day of the reporting period.

"Urban circuit" means a circuit where both 75 percent or more of its customers and 75 percent or more of its primary circuit miles are located within a metropolitan area.

20.18(5) *Record-keeping requirements.*

a. Required records for electric utilities.

(1) Each electric utility shall maintain a geospatial information system (GIS) and an OMS sufficient to determine a history of sustained electric service interruptions experienced by each customer. The OMS shall have the ability to access data for each customer in order to determine a history of electric service interruptions. Data shall be sortable by each of, and in any combination with, the following factors:

1. State jurisdiction;
2. Operating area (if any);
3. Substation;
4. Circuit;
5. Number of interruptions in reporting period; and
6. Number of hours of interruptions in reporting period.

(2) Records on interruptions shall be sufficient to determine the following:

1. Starting date and time the utility became aware of the interruption;
2. Duration of the interruption;
3. Date and time service was restored;
4. Number of customers affected;
5. Description of the cause of the interruption;
6. Operating areas affected;
7. Circuit number(s) of the distribution circuit(s) affected;
8. Service account number or other unique identifier of each customer affected;
9. Address of each affected customer location;
10. Weather conditions at time of interruption;
11. System component(s) involved (e.g., transmission line, substation, overhead primary main, underground primary main, transformer); and
12. Whether the interruption was planned or unplanned.

(3) Each electric utility shall maintain as much information as feasible on momentary interruptions.

(4) Each electric utility shall keep information on cause codes, weather codes, isolating device codes, and equipment failed codes.

1. The minimum interruption cause code set should include: animals, lightning, major event, scheduled, trees, overload, error, supply, equipment, other, unknown, and earthquake.
2. The minimum interruption weather code set should include: wind, lightning, heat, ice/snow, rain, clear day, and tornado/hurricane.
3. The minimum interruption isolating device set should include: breaker, recloser, fuse, sectionalizer, switch, and elbow.
4. The minimum interruption equipment failed code set should include: cable, transformer, conductor, splice, lightning arrester, switches, cross arm, pole, insulator, connector, other, and unknown.
5. Utilities may augment the code sets listed above to enhance tracking.

(5) An electric utility shall retain for seven years the records required by 20.18(5)*"a"*(1) through (4).

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(6) Each electric utility shall record the date of installation of major facilities (poles, conductors, cable, and transformers) installed on or after April 1, 2003, and integrate that data into its GIS database.

20.18(6) *Notification of major events.* Notification of major events as defined in subrule 20.18(4) shall comply with the requirements of rule 199—20.19(476,478).

20.18(7) *Annual reliability and service quality report for.* Each electric utility shall submit to the commission on or before May 1 of each year an annual reliability report for the previous calendar year for the Iowa jurisdiction. The report shall include the following information:

a. Description of service area. Urban and rural Iowa service territory customer count, Iowa operating area customer count, if applicable, and major communities served within each operating area.

b. System reliability performance.

(1) An overall assessment of the reliability performance, including the urban and rural SAIFI, SAIDI, and CAIDI reliability indices for the previous calendar year for the Iowa service territory and each defined Iowa operating area, if applicable. This assessment shall include outages at the substation, transmission, and generation levels of the system that directly result in sustained interruptions to customers on the distribution system. These indices shall be calculated twice, once with the data associated with major events and once without. This assessment should contain tabular and graphical presentations of the trend for each index as well as the trends of the major causes of interruptions.

(2) The urban and rural SAIFI, SAIDI, and CAIDI reliability average indices for the previous five calendar years for the Iowa service territory and each defined Iowa operating area, if applicable. The reliability average indices shall include outages at the substation, transmission, and generation levels of the system that directly result in sustained interruptions to customers on the distribution system. Calculation of the five-year average shall start with data from the year covered by the first Annual Reliability Report submittal so that by the fifth Annual Reliability Report submittal a complete five-year average shall be available. These indices shall be calculated twice, once with the data associated with major events and once without.

(3) The MAIFI reliability indices for the previous five calendar years for the Iowa service territory and each defined Iowa operating area for which momentary interruptions are tracked. The first annual report should specify which portions of the system are monitored for momentary interruptions, identify and describe the quality of data used, and update as needed in subsequent reports.

c. Reporting on customer outages.

(1) The reporting electric utility shall provide tables and graphical representations showing, in ascending order, the total number of customers that experienced set numbers of sustained interruptions during the year (i.e., the number of customers who experienced zero interruptions, the number of customers who experienced one interruption, two interruptions, three interruptions, and so on). The utility shall provide this for each of the following:

1. All Iowa customers, excluding major events.
2. All Iowa customers, including major events.

(2) The reporting electric utility shall provide tables and graphical representations showing, in ascending order, the total number of customers that experienced a set range of total annual sustained interruption duration during the year (i.e., the number of customers who experienced zero hours total duration, the number of customers who experienced greater than 0.0833 but less than 0.5 hour total duration, the number of customers who experienced greater than 0.5 but less than 1.0 hour total duration, and so on, reflecting half-hour increments of duration). The utility shall provide this for each of the following:

1. All Iowa customers, excluding major events.
2. All Iowa customers, including major events.

d. Major event summary. For each major event that occurred in the reporting period, the following information shall be provided:

(1) A description of the area(s) impacted by each major event;

(2) The total number of customers interrupted by each major event;

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(3) The total number of customer-minutes interrupted by each major event; and

(4) Updated damage cost estimates to the electric utility's facilities.

e. Information on transmission and distribution facilities.

(1) Total circuit miles of electric distribution line in service at year's end, segregated by voltage level. Reasonable groupings of lines with similar voltage levels, such as but not limited to 12,000- and 13,000-volt three-phase facilities, are acceptable.

(2) Total circuit miles of electric transmission line in service at year's end, segregated by voltage level.

f. Plans and status report. A plan for service quality improvements, including costs, for the electric utility's transmission and distribution facilities that will ensure quality, safe, and reliable delivery of energy to customers.

g. Capital expenditure information. Reporting of capital expenditure information shall start with data from the year covered by the first Annual Reliability Report submittal so that by the fifth Annual Reliability Report submittal five years of data shall be available in each subsequent annual report.

(1) Each electric utility shall report on an annual basis the total of:

1. Capital investment in the electric utility's Iowa-based transmission and distribution infrastructure approved by its commission of directors or other appropriate authority. If any amounts approved by the commission of directors are designated for use in a recovery from a major event, those amounts shall be identified in addition to the total.

2. Capital investment expenditures in the electric utility's Iowa-based transmission and distribution infrastructure. If any expenditures were utilized in a recovery from a major event, those amounts shall be identified in addition to the total.

(2) Each electric utility shall report the same capital expenditure data from the past five years in the same fashion as in subparagraph 20.18(7)*"g"*(1).

h. Maintenance. Reporting of maintenance information shall start with data from the year covered by the first Annual Reliability Report submittal so that by the fifth Annual Reliability Report submittal five years of data shall be available in each subsequent annual report.

(1) Total maintenance budgets and expenditures for distribution, and for transmission, for each operating area, if applicable, and for the electric utility's entire Iowa system for the past five years. If any maintenance budgets and expenditures are designated for use in a recovery from a major event, or were used in a recovery from a major event, respectively, those amounts shall be identified in addition to the totals.

(2) Tree trimming.

1. The budget and expenditures described in subparagraph 20.18(7)*"h"*(1) shall be stated in such a way that the total annual tree trimming budget expenditures shall be identifiable for each operating area and for the electric utility's entire Iowa system for the past five years.

2. Total annual projected and actual miles of transmission line and of distribution line for which trees were trimmed for the reporting year for each operating area and for the electric utility's entire Iowa system for the reporting year, compared to the past five years. If the utility has utilized, or would prefer to utilize, an alternative method or methods of tracking physical tree trimming progress, it may propose the use of that method or methods to the commission in a request for waiver.

3. In the event the utility's actual tree trimming performance, based on how the utility tracks its tree trimming as described in numbered paragraph 20.18(7)*"h"*(2)"1," lags behind its planned trimming schedule by more than six months, the utility shall be required to file for the commission's approval additional tree trimming status reports on a quarterly basis. Such reports shall describe the steps the utility will take to remediate its tree trimming performance and backlog. The additional quarterly reports shall continue until the utility's backlog has been reduced to zero.

i. The annual reliability report shall include the number of poles inspected, the number rejected, and the number replaced.

20.18(8) *Inquiries about electric service reliability.*

A customer may request a report from an electric utility about the service reliability of the circuit supplying the customer's own meter. Within 20 working days of receipt of the request, the electric utility

shall supply the report to the customer at a reasonable cost. The report should identify which interruptions (number and durations) are due to major events.

199—20.19(476,478) Notification of outages.

20.19(1) *Notification.* The notification requirements in rule 20.19 are for the timely collection of electric outage information that may be useful to emergency management agencies in providing for the welfare of individual Iowa citizens. Each electric utility shall notify the commission when it is projected that an outage may result in a loss of service for more than six hours and the outage meets one of the following criteria:

a. Loss of service for more than six hours to substantially all of a municipality, including the surrounding area served by the same utility. A utility may use loss of service to 75 percent or more of customers within a municipality, including the surrounding area served by the utility, to meet this criterion;

b. Loss of service for more than six hours to 20 percent of the customers in a utility's established zone or loss of service to more than 5,000 customers in a metropolitan area, whichever is less;

c. A major event as defined in subrule 20.18(4); or

d. Any other outage considered significant by the electric utility. This includes loss of service for more than six hours to significant public health and safety facilities known to the utility at the time of the notification, even when the outage does not meet the criteria in paragraphs 20.19(1)*"a"* and *"b."*

20.19(2) *Information required.*

a. Notification shall be provided regarding outages that meet the requirements of subrule 20.19(1) by notifying the commission duty officer by email at dutyofficer@iuc.iowa.gov or, in appropriate circumstances, by telephone at 515.745.2332. Notification shall be made at the earliest possible time after it is determined the event may be reportable and should include the following information, as available:

(1) The general nature or cause of the outage;

(2) The area affected;

(3) The approximate number of customers that have experienced a loss of electric service as a result of the outage;

(4) The time when service is estimated to be restored; and

(5) The name of the utility, the name and telephone number of the person making the report, and the name and telephone number of a contact person knowledgeable about the outage.

The notice should be supplemented as more complete or accurate information is available.

b. The utility shall provide to the commission updates of the estimated time when service will be restored to all customers able to receive service or of significant changed circumstances, unless service is restored within one hour of the time initially estimated.

c. The utility shall notify the commission once service is fully restored to all customers after an outage meeting the requirements of subrule 20.19(1).

199—20.20(476) Electric vehicle charging service.

20.20(1) A commercial or public electric vehicle charging station is not a public utility under Iowa Code section 476.1 if the charging station receives all electric power from the electric utility in whose service area the charging station is located. If an electric vehicle charging station obtains electric power from a source other than the electric utility, the determination of whether the commercial or public electric vehicle charging station is a public utility shall be resolved by the commission.

20.20(2) A person, partnership, business association, or corporation, foreign or domestic, furnishing electricity to a commercial or public electric vehicle charging station shall comply with Iowa Code section 476.25 and, if applicable, with the terms and conditions of the public utility's tariffs or service rules.

20.20(3) A rate-regulated public utility shall not, through its filed tariff, prohibit electric vehicle charging or restrict the method of sale of electric vehicle charging at a commercial or public electric vehicle charging station.

20.20(4) Electric utilities and entities providing commercial or public electric vehicle charging service shall comply with all applicable statutes and regulations governing the provision of electric vehicle charging

service, including but not limited to all taxing requirements, and shall, if necessary, file all appropriate tariffs.

199—20.21(476) Transmission cost adjustment (TCA).

20.21(1) *Transmission cost adjustment.* Pursuant to Iowa Code section 476.6(8)*"b,"* public utilities may automatically adjust rates and charges to recover transmission-related costs incurred by or charged to the public utility consistent with a tariff or agreement that is subject to the jurisdiction of FERC, provided that a schedule showing the automatic adjustment of rates and charges is first filed with and approved by the commission. The public utilities shall also file accounting information and invoices for any expenses incurred for construction and maintenance, along with any other documents filed with the respective regional transmission organization or the FERC, regarding these qualifying transmission-related costs. Transmission cost adjustments shall be computed and tracked separately for each customer classification or grouping previously approved by the commission and shall use the same unit of measure as the utility's tariffed rates. Changes in the customer classification and grouping on file are not automatic and require prior approval by the commission. If any eligible cost is recovered outside of the TCA, the cost may not be recovered through the TCA until the cost is removed from its current recovery mechanism. If any eligible cost is recovered outside of the TCA, the cost may not be recovered through the TCA until the cost is removed from base rates during a utility's rate case. The TCA factor shall be included as a separate line item on the customer's bill.

20.21(2) *TCA annual factor.* An annual TCA factor update shall be filed as a TF docket at least 30 days prior to the beginning of the utility's TCA year. The TCA update shall include information describing which eligible TCA costs are being recovered through the TCA and, if not recovered through the TCA, where eligible costs are being recovered. The annual TCA factors for each customer classification or grouping shall be based upon forecasted transmission costs allocated to Iowa retail customers, forecasted Iowa sales or demand, and allocation factors approved by the commission. The forecasted allocation factors shall be based on a three-year average of the actual allocation factors for each of the three previous calendar years. For customers billed by kWh, the factors shall be developed on a kWh basis. For customers billed by kW, the factors shall be developed on a kilowatt basis. In addition, the following is required to be included with this filing:

a. A listing of all transmission costs that are incurred by or charged to the public utility and are consistent with a tariff or agreement that is subject to the jurisdiction of the FERC, detailing where each transmission cost is currently being recovered (e.g., base rates, TCA).

b. A time series chart of each transmission cost eligible for inclusion in the TCA for the previous three calendar years.

20.21(3) *Annual reconciliation.* Within four months after the effective date of annual TCA factors, a utility shall file an annual reconciliation based upon actual costs and revenues attributed to Iowa customers for the prior calendar year. The annual reconciliation shall be filed in the same TF docket identified for the annual filing required in subrule 20.21(2). The reconciliation shall include updated allocators for each customer classification or grouping based on actual load data from the prior calendar year. The actual costs for the prior calendar year shall be allocated to each customer class based upon the updated allocation factors. The utility shall compare the actual transmission costs allocated to each customer class with the actual revenue billed through the TCA by customer class net of the prior year's reconciliation dollar amount for each customer class. Any resulting overcollection or undercollection for each class shall be divided by the forecasted sales or demand for each customer class for the remainder of the TCA period. The resulting adjustments shall be added to the effective TCA factors that were approved in the TCA annual factor filing under subrule 20.21(2). The adjusted TCA factor for customers billed by kWh shall be developed on a kWh basis, and for customers billed on a kilowatt basis, the adjusted TCA factor shall be developed on a kilowatt basis.

20.21(4) *Other adjustments to the TCA factor.* A utility may propose other adjustments to the TCA factor throughout the 12-month TCA period to assist with accurate recovery of forecasted costs and

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revenues, subject to commission approval. Any midyear adjustments shall be filed in the same TF docket as the annual filing. If a utility proposes an adjustment to the TCA factor, other than the reconciliation required in subrule 20.21(3), the utility shall provide an explanation for the proposed adjustment and provide information to support the proposed adjustment. For any customer billed by kWh, the proposed adjustment shall be developed on a kWh basis. For any customer billed on a kilowatt basis, the proposed adjustment shall be developed on a kilowatt basis.

20.21(5) *Quarterly informational filings.* By the end of the month following the end of each calendar quarter, the utility shall file a report containing, at minimum, the current cumulative overcollection or undercollection balance, support for the overcollection or undercollection calculation, the total transmission cost for the current calendar year by category, and the supporting invoices and documentation for the most recent calendar quarter. The reports shall be filed in the same TF docket as the annual TCA filing.

20.21(6) *Semiannual transmission reports.* Each year at the beginning, and midpoint of a utility's TCA year, each utility shall file a report detailing the utility's transmission-related activities. These reports shall detail the utility's recent efforts to mitigate transmission costs and influence policy to the benefit of the utility and its ratepayers.

20.21(7) *Midcontinent Independent System Operator, Inc. (MISO) refunds.* Any utility utilizing a TCA mechanism that receives transmission-related refunds from MISO shall file a refund plan for commission approval, detailing how the utility will distribute the refund to customers. The refund plan must be filed once the amount and timing of the refund is known to the utility. The refund plan shall include an applicable interest rate for refund amounts held more than 30 days, the method of distributing the refund to customers, and the timing of distributing the refund to customers.

These rules are intended to implement Iowa Code sections 17A.3, 364.23, 474.5, 476.1, 476.2, 476.6, 476.8, 476.20, 476.54, 476.66, 478.18, and 546.7.

ATTACHMENT C

CHAPTER 20
SERVICE SUPPLIED BY RATE-REGULATED ELECTRIC UTILITIES

199—20.1(476) General information.

20.1(1) *Authorization of rules.* Iowa Code chapter 476 provides that the Iowa Utilities Commission shall establish all needful, just and reasonable rules, not inconsistent with law, to govern the exercise of its powers and duties, the practice and procedure before it, and to govern the form, content, and filing of reports, documents, and other papers necessary to carry out the provisions of this law.

a. Iowa Code chapter 478 provides that the Iowa Utilities Commission shall have power to make and enforce rules relating to the location, construction, operation, and maintenance of certain electrical transmission lines.

b. Electric utilities with fewer than 10,000 customers subject to commission regulation pursuant to Iowa Code section 476.1A are subject to the regulatory requirements set out in 199—Chapter 27(476) for municipal electric utilities and electric cooperatives.

20.1(2) *Application of rules.* The rules shall apply to any rate-regulated electric utility operating within the state of Iowa subject to Iowa Code chapter 476, and to the construction, operation, and maintenance of electric transmission lines to the extent provided in Iowa Code chapter 478, and shall supersede all tariffs on file with the commission that are in conflict with these rules.

a. These rules are intended to promote safe and adequate service to the public, to provide standards for uniform and reasonable practices by utilities, and to establish a basis for determining the reasonableness of such demands as may be made by the public upon the utilities.

b. The adoption of these rules shall in no way preclude the commission from altering or amending them pursuant to statute or from making such modifications with respect to their application as may be found necessary to meet exceptional conditions.

20.1(3) *Definitions.* The following words and terms, when used in these rules, shall have the meaning indicated below:

"Acid Rain Program" means the sulfur dioxide and nitrogen oxides air pollution control program established pursuant to Title IV of the Act under 40 CFR Parts 72-78.

"Act" means the Clean Air Act, 42 U.S.C. Section 7401, et seq, as amended on November 15, 1990.

"Affected unit" means a unit or source that is subject to any emission reduction requirement or limitation under the Acid Rain Program, the CAIR, the CSAPR, or the MATS, or a unit or source that opts in under 40 CFR Part 74, dated April 4, 1995.

"Allowance" means an authorization, allocated by the United States Environmental Protection Agency (EPA), to emit sulfur dioxide (SO_2) under the Acid Rain Program or SO_2 and nitrogen oxide (NO_X) under the CAIR, and the CSAPR during or after a specified calendar year.

"Allowance futures contract" is an agreement between a futures exchange clearinghouse and a buyer or seller to buy or sell an allowance on a specified future date at a specified price.

"Capacity" means the instantaneous rate at which energy can be delivered, received, or transferred, measured in kilowatts (kW).

"Clean Air Interstate Rule" or *"CAIR"* means the requirements EPA published in the Federal Register (70 Fed. Reg. 25161) on May 12, 2005.

"Code of Federal Regulations" or *"CFR"* means the Code of Federal Regulations, which contains the general administrative rules adopted by federal departments and agencies, in effect as of [effective date of chapter], unless a separate effective date is identified in a specific rule.

"Complaint," as used in this chapter, is a statement or question by anyone, whether a utility customer or not, alleging a wrong, grievance, injury, dissatisfaction, illegal action or procedure,

dangerous condition or action, or utility obligation.

"Compliance plan" means the document submitted for an affected source to the EPA that specifies the methods by which each affected unit at the source will meet the applicable emissions limitation and emissions reduction requirements.

"Cross-State Air Pollution Rule" or *"CSAPR"* means the requirements established by EPA in 40 CFR 97 Subparts AAAAA, BBBBB, CCCCC, and DDDDD as amended by 81 FR 13275 (March 14, 2016).

"Customer" means any person, firm, association, or corporation, any agency of the federal, state, or local government, or legal entity responsible by law for payment for the electric service or heat from the electric utility.

"Delinquent" or *"delinquency"* means an account for which a service bill or service payment agreement has not been paid in full on or before the last day for timely payment.

"Distribution line" means any single or multiphase electric power line operating at nominal voltage in either of the following ranges: 2,000 to 26,000 volts between ungrounded conductors or 1,155 to 15,000 volts between grounded and ungrounded conductors, regardless of the functional service provided by the line.

"Electric plant" includes all real estate, fixtures, and property owned, controlled, operated, or managed in connection with or to facilitate production, generation, transmission, or distribution, in providing electric service or heat by an electric utility.

"Electric service" is furnishing to the public for compensation any electricity, heat, light, power, or energy.

"Emission for emission trade" is an exchange of one type of emission for another type of emission. For example, the exchange of SO_2 emission allowances for NOx emission allowances.

"Energy" means electric energy measured in kilowatt hours (kWh).

"Mercury and Air Toxics Standards" or *"MATS"* means the requirements established by EPA in 40 CFR Parts 60 and 63 regarding limits of power plant emissions of toxic air pollutants (February 16, 2012).

"Meter" means, unless otherwise qualified, a device that measures and registers the integral of an electrical quantity with respect to time.

"Power" means electric power measured in kW.

"Price hedging" means using futures contracts or options to guard against unfavorable price changes.

"Rate-regulated utility" means any utility, as defined in subrule 20.1(3), which is subject to rate regulation under Iowa Code chapter 476.

"Secondary line" means any single or multiphase electric power line operating at nominal voltage less than either 2,000 volts between ungrounded conductors or 1,155 volts between grounded and ungrounded conductors, regardless of the functional service provided by the line.

"Service limitation" means the establishment of a limit on the amount of power that may be consumed by a residential customer through the installation of a service limiter on the customer's meter.

"Service limiter" or *"service limitation device"* means a device that limits a residential customer's power consumption to 3,600 watts (or some higher level of usage approved by the commission) and that resets itself automatically, or can be reset manually by the customer, and may also be reset remotely by the utility at all times.

"Speculation" means using futures contracts or options to profit from expectations of future price changes.

"Tariff" means the entire body of rates, tolls, rentals, charges, classifications, rules, procedures, policies, etc., adopted and filed with the commission by an electric utility in fulfilling its role of

furnishing service.

"Timely payment" means a payment on a customer's account made on or before the date shown on a current bill for service, or on a form, which records an agreement between the customer and a utility for a series of partial payments to settle a delinquent account, as the date that determines application of a late payment charge to the current bill or future collection efforts.

"Transmission line" means any single or multiphase electric power line operating at nominal voltages at or in excess of either 69,000 volts between ungrounded conductors or 40,000 volts between grounded and ungrounded conductors, regardless of the functional service provided by the line.

"Uniform System of Accounts" means the Uniform System of Accounts as effective on October 11, 2016.

"Utility" means any person, partnership, business association, or corporation, domestic or foreign, owning or operating any facilities for providing electric service or heat to the public for compensation.

"Vintage trade" means an exchange of one vintage of allowances for another vintage of allowances with the difference in value between vintages being cash or additional allowances.

"Weighted average unit cost of inventoried allowances" equals the dollars in inventory at the end of the month divided by the total allowances available for use at the end of the month.

20.1(4) *Abbreviations.* The following abbreviations, when used in these rules, have the following meanings:

ANSI—American National Standards Institute
DOE—Department of Energy
FERC—Federal Energy Regulatory Commission
NFPA—National Fire Protection Association

199—20.2(476) Records, reports, and tariffs.

20.2(1) *Location and retention of records.* Unless otherwise specified by this chapter, all records required by these rules shall be kept and preserved in accordance with the applicable provisions of 199—Chapter 18(476,546).

20.2(2) *Tariffs to be filed with the commission.* The schedules of rates and rules of rate-regulated electric utilities shall be filed with the commission and shall be classified, designated, arranged, and submitted so as to conform to the requirements of this chapter. Provisions of the schedules shall be definite and so stated as to minimize ambiguity or the possibility of misinterpretation. The form, identification, and content of tariffs shall be in accordance with these rules. A rate-regulated electric utility's current tariff will be made available through the commission's electronic filing system (EFS).

20.2(3) *Form and identification.* All tariffs shall conform to the following rules:

a. The tariff shall be filed electronically using the commission's EFS. The filed tariff shall be capable of being reproduced on 8½- × 11-inch paper so customers may readily view and reproduce copies of the tariff. A tariff filed with the commission may be the same format as is required by a federal agency provided that the rules of the commission as to title page; identity of superseding, replacing, or revision sheets; identity of amending sheets; identity of the filing utility, issuing official, date of issue, effective date; and the words "Electric Tariff filed with Iowa Utilities Commission" shall apply in the modification of the federal agency format for the purposes of filing with this commission.

b. The title page of every tariff and supplement show:

(1) The first page shall be the title page, which shall show:

(Name of Public Utility)
Electric Tariff
Filed with
Iowa Utilities Commission

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(Date)

(2) When a tariff is to be superseded or replaced in its entirety, the replacing tariff shall show on the upper right corner of its title page that it supersedes a tariff on file and the number being superseded or replaced, for example:

tariff no.
supersedes tariff no.

(3) When a new part of a tariff eliminates an existing part of a tariff it shall so state and clearly indicate the part eliminated.

(4) Any tariff modifications as defined above shall be marked in the right-hand margin of the replacing tariff sheet with symbols described below to indicate the place, nature, and extent of the change in text.

—Symbols—

(C)—Changed regulation

(D)—Discontinued rate or regulation

(I)—Increase in rate or new treatment resulting in increased rate

(L)—Changed text location

(N)—New rate, treatment, or regulation

(R)—Reduction in rate or new treatment resulting in reduced rate

(T)—Change in text only

c. All sheets except the title page shall have, in addition to the above-stated requirements, the following information:

(1) Name of utility, followed by the words "Electric Tariff filed with Iowa Utilities commission." If the utility is not a corporation, and a trade name is used, the name of the individual or partners must precede the trade name.

(2) Issuing official and issue date.

(3) Effective date (to be left blank by rate-regulated utilities).

d. All sheets except the title page shall have the following form:

(Company Name)	(Part identification)
Electric Tariff	(This sheet identification)
Filed with commission	(Canceled sheet identification, if any)
	(Content or tariff)
Issued: (Date)	Effective:
Issued by: (Name, title)	(Proposed Effective Date:)

The issued date is the date the tariff or the amended sheet content was adopted by the utility.

The effective date will be left blank by rate-regulated utilities and shall be determined by the commission. The utility may propose an effective date in the cover letter or interpretation submitted with the tariff. In lieu of a proposed effective date, the utility can provide the date of the month the utility would like the tariff to become effective in the cover letter or interpretation.

20.2(4) *Content of tariffs.*

a. A table of contents containing a list of rate schedules and other sections in the order in which they appear showing the sheet numbers of the first page of each rate schedule or other section. In the event the utility filing the tariff elects to segregate a section, such as general rules from the section containing the rate schedules or other sections, it may at its option prepare a separate table of contents

for each such segregated section.

b. A preliminary statement containing a brief general explanation of the utility's operations.

c. All rates for service with indication for each rate of the type and voltage of service and the class of customers to which each rate applies. There shall also be shown any limitations on loads and type of equipment that may be connected, the net prices per unit of service and the number of units per billing period to which the net prices apply, the period of billing, the minimum bill, any effect of transformer capacity upon minimum bill or upon the number of kWh in any step of the rate, method of measuring demands, method of calculating or estimating loads in cases where transformer capacity has a bearing upon minimum bill or size of rate steps, level payment plan, and any special terms or conditions applicable. The period during which the net amount may be paid before the account becomes delinquent shall be specified. In any case where net and gross amounts are billed, the difference between net and gross is a late payment charge and shall be so specified.

d. The voltage and type of service, (direct current or single or polyphase alternating current) supplied in each municipality, but without reference required to any particular part thereof.

e. Forms of standard contracts required of customers for the various types of service available.

f. If service to other utilities or municipalities is furnished at a standard filed rate, either a copy of each signed contract or a copy of the standard uniform contract form together with a summary of the provisions of each signed contract. The summary shall show the principal provisions of the contract and include the name and address of the customer, the points where energy is delivered, rate, term, minimum, load conditions, voltage of delivery, and any special provisions such as rentals.

g. Copies of special contracts for the purchase, sale, or interchange of electrical energy. All tariffs must provide that, notwithstanding any other provision of this tariff or contract with reference thereto, all rates and charges contained in this tariff or contract with reference thereto may be modified at any time by a subsequent filing made pursuant to the provisions of Iowa Code chapter 476.

h. A list of all communities in which service is furnished.

i. The list of service areas and the rates shall be filed in a form to facilitate ready determination of the rates available in each municipality and in unincorporated communities that have service. Any areas with the same rates shall be indicated.

j. Definitions of classes of customers.

k. Extension rules for extending service to new customers indicating what portion of the extension or cost thereof will be furnished by the utility; and if the rule is based on cost, the items of cost included.

l. Type of construction that the utility requires the customer to provide if in excess of the Iowa electric safety code or the requirements of the municipality having jurisdiction, whichever may be the most stringent.

m. Specification of such portions of service as the utility furnishes, owns, and maintains, such as service drop, service entrance cable or conductors, conduits, service entrance equipment, meter, and socket. Indication of the portions of interior wiring such as range or water heater connection, furnished in whole or in part by the utility, and statement indicating final ownership and responsibility for maintaining equipment furnished by utility.

n. Statement of the type of special construction commonly requested by customers that the utility allows to be connected, and terms upon which such construction will be permitted, with due provision for the avoidance of unjust discrimination as between customers who request special construction and those who do not. This applies, for example, to a case where a customer desires underground service in overhead territory.

o. Rules with which prospective customers must comply as a condition of receiving service, and the terms of contracts required.

p. Rules governing the establishment and maintenance of credit by customers for payment of

service bills.

q. Rules governing the procedure followed in disconnecting and reconnecting service.

r. Notice required from a customer for having service discontinued.

s. Rules covering temporary, emergency, auxiliary, and stand-by service.

t. Rules covering the type of equipment that may or may not be connected, including rules such as those requiring demand-limiting devices or power-factor corrective equipment.

u. General statement of the method used in making adjustments for wastage of electricity when accidental grounds exist without the knowledge of the customer.

v. Statements of utility rules on meter reading, bill issuance, customer payment, notice of delinquency, and service discontinuance for nonpayment of bill.

w. Rules for extending service in accordance with subrule 20.3(13).

x. If a sliding scale or automatic adjustment is applicable to regulated rates and charges of billed customers, the manner and method of such adjustment calculation shall be covered through a detailed explanation.

y. Rules on how a customer or prospective customer should file a complaint with the utility, and how the complaint will be processed.

z. Rules on how a customer, disconnected customer, or potential customer for residential service may negotiate for a payment agreement on amount due, determination of even payment amounts, and time allowed for payments.

20.2(5) *Annual, periodic, and other reports to be filed with the commission.*

a. System map verification. The utility shall file annually a verification that it has a currently correct set of utility system maps in accordance with the general requirements of subrule 20.3(11) and a statement as to the location of the utility's offices where such maps, except those deemed confidential by the commission, are accessible and available for examination by the commission or its agents. The verification and map location information shall also be reported to the commission upon other occasions when significant changes occur in either the maps or location of the maps.

b. Electric service record. Each utility shall compile a monthly record of electric service showing the production, acquisition, and disposition of electric energy, the number of customer terminal voltage investigations made, the number of customer meters tested, and such other information as may be required by the commission. The monthly "Electric Service" record shall be compiled not later than 30 days after the end of the month covered and such record shall, upon and after compilation, be kept available for inspection by the commission or its staff at the utility's principal office within the state of Iowa. A summary of the 12 monthly "Electric Service" records for each calendar year shall be attached to and submitted with the utility's annual report to the commission.

c. The utility shall keep the commission informed currently by written notice as to the location at which the utility keeps the various classes of records required by these rules.

d. The utility's current rules, if any, published or furnished by the utility for the use of engineers, architects, electrical contractors, etc., covering meter and service installations shall be maintained and made available to the commission upon request.

e. A copy of each type of customer bill form in current use shall be filed with the commission.

f. A copy of the adjustment calculation shall be provided to the commission prior to each billing cycle on the forms adopted by the commission.

g. Residential customer statistics. Each rate-regulated electric utility shall file with the commission on or before the fifteenth day of each month one copy of the following residential customer statistics for the preceding month:

(1) Number of accounts;

(2) Number of accounts certified as eligible for energy assistance since the preceding October 1;

(3) Number of accounts past due;

(4) Number of accounts eligible for energy assistance and past due;
(5) Total revenue owed on accounts past due;
(6) Total revenue owed on accounts eligible for energy assistance and past due;
(7) Number of disconnection notices issued;
(8) Number of disconnection notices issued on accounts eligible for energy assistance;
(9) Number of disconnections for nonpayment;
(10) Number of reconnections;
(11) Number of accounts determined uncollectible; and
(12) Number of accounts eligible for energy assistance and determined uncollectible.

h. List of persons authorized to receive commission inquiries. Each utility shall file with the commission in the annual report required in the "General Information" rule of 199— Chapter 23(476) a list of names, titles, addresses, and telephone numbers of persons authorized to receive, act upon, and respond to communications from the commission in connection with: (1) general management duties; (2) customer relations (complaints); (3) engineering operations; (4) meter tests and repairs; (5) franchises for electric lines; and (6) certificates for electric generating plants; (7) outages and interruptions 24 hours a day. The contact information required by this paragraph shall be kept current as changes or corrections are made.

This rule is intended to implement Iowa Code section 476.2.

199—20.3(476) General service requirements.

20.3(1) *Disposition of electricity.* The utility shall own the meter and associated instrument transformers, own or control the wiring between the instrument transformers and the meter, and place a visible seal on all meters in customer use in a manner the seal must be broken to gain entry.

a. For purposes of this subrule, the following definitions shall apply:

"Master meter" means a single meter used in determining the amount of electricity provided to a multi-occupancy building or multiple buildings.

"Multi-occupancy building" means a building that contains two or more units for occupancy or premises.

b. All electricity sold by a utility shall be on the basis of meter measurement except:
(1) Where the consumption of electricity may be readily computed without metering; or
(2) For temporary service installations not otherwise metered.

c. The amount of all electricity delivered to multi-occupancy buildings, where units are separately rented or owned, shall be measured on the basis of individual meter measurement for each unit, except in the following instances:
(1) Where electricity is used in centralized heating, cooling, water-heating, or ventilation systems;
(2) Where a facility is designated for elderly or handicapped persons;
(3) Where submetering or resale of service was permitted prior to 1966;
(4) Where individual metering is impractical. "Impractical" means:

1. Conditions or structural barriers exist in the multi-occupancy building that would make individual meters unsafe or physically impossible to install; or

2. The cost of providing individual metering exceeds the long-term benefits of individual metering; or

(5) Where the benefits of individual metering (reduced and controlled energy consumption) are more effectively accomplished through a master meter arrangement.

1. A new multi-occupancy building qualifies for master metering under this subparagraph if the predicted annual energy use would result in at least a 30 percent energy savings compared to the predicted annual energy use of a new building meeting the requirements of the State of Iowa Energy Code and operating with equipment, fixtures, and appliances meeting federal energy standards for manufactured devices for a new building.

2. An existing multi-occupancy building qualifies for master metering under this subparagraph when the predicted annual energy use would result in at least a 20 percent energy savings compared to the building's current annual energy usage levels.

3. Credits for on-site renewable energy generation shall not be taken into account when determining the predicted energy savings.

4. A report from a qualified, independent third party stating that the proposed building or renovation will meet the energy savings requirements of this subparagraph shall establish a rebuttable presumption of eligibility for master metering. "Qualified, independent third party" means a licensed architect or engineer, a certified residential energy services network home energy rating system rater, or any other professional deemed qualified by the commission.

If a multi-occupancy building is master-metered, the end-user occupants may be charged for electricity as an unidentified portion of the rent, condominium fee, or similar payment, or, if some other method of allocating the cost of the electric service is used, the total charge for electric service shall not exceed the total electric bill charged by the utility for the same period.

d. Master metering to multiple buildings is prohibited, except for multiple buildings owned by the same person or entity. Multi-occupancy buildings within a multiple building complex may be master-metered pursuant to this paragraph only if the requirements of paragraph 20.3(1)*"c"* have been met.

e. This rule shall not be construed to prohibit any utility from requiring more extensive individual metering than otherwise required by this rule if pursuant to tariffs filed with and approved by the commission.

f. All electricity consumed by the utility shall be on the basis of meter measurement except where consumption may be readily computed without metering, or where metering is impractical.

20.3(2) *Meter reading records.* The meter reading records shall show:

a. Customer's name, address, and rate schedule or identification of rate schedule.

b. Identification of the meter or meters either by permanently marked utility number or by manufacturer's name, type number, and serial number.

c. Meter readings.

d. If the reading has been estimated.

e. Any applicable multiplier or constant.

20.3(3) *Meter register.* If it is necessary to apply a multiplier to the meter readings, the multiplier must be marked on the face of the meter register or stenciled in weather-resistant paint upon the front cover of the meter. Customers shall have continuous visual access to meter registers as a means of verifying the accuracy of bills presented to them and for implementing such energy conservation initiatives as they desire, except in the individual locations where the utility has experienced vandalism to windows in the protective enclosures. Where remote meter reading is used, whether outdoor on premises or off premises automated, the customer shall also have readable meter registers at the meter. A utility may comply with the requirements of this subrule by making the required information available via the Internet or other equivalent means.

Where a delayed processing means is used, the utility may comply by having readable kWh registers only, visually accessible.

In instances in which the utility has determined that readable access, to locations existing July 1, 1981, will create a safety hazard, the utility is exempted from the access provisions above.

In instances when a building owner has determined that unrestricted access to tenant metering installation would create a vandalism or safety hazard, the utility is exempted from the access provision above.

Continuing efforts should be made to eliminate or minimize the number of restricted locations. The utility should assist affected customers in obtaining meter register information.

20.3(4) *Meter reading and billing interval.* Readings of all meters used for determining charges

and billings to customers shall be scheduled at least monthly and for the beginning and termination of service. Bills to larger customers may, for good cause, be provided weekly or daily for a period not to exceed one month. Intervals other than monthly shall not be applied to smaller customers, or to larger customers after the initial month provided above, without a waiver from the commission. If the commission denies a waiver, or if a waiver is not sought with respect to a high-demand customer after the initial month, that customer's meter shall be read monthly for the next 12 months. The group of larger customers to which shorter billing intervals may be applied shall be specified in the utility's tariff sheets, but shall not include residential customers.

An effort shall be made to obtain readings of the meters on corresponding days of each meter reading period. When the meter reading date causes a given billing period to deviate by more than 10 percent (counting only business days) from the normal meter reading period, such bills shall be prorated on a daily basis.

In the event that the utility leaves a meter reading form with the customer when access to meters cannot be gained and the form is not returned in time for the billing operation, an estimated bill may be provided.

If an actual meter reading cannot be obtained, the utility may provide an estimated bill without reading the meter or supplying a meter reading form to the customer. Only in unusual cases or when approval is obtained from the customer shall more than three consecutive estimated bills be provided.

20.3(5) *Demand meter registration.* When a demand meter is used for billing, the meter installation should be designed so that the highest expected annual demand reading to be used for billing will appear in the upper half of the meter's range.

20.3(6) *Service areas.* Service areas are defined by the boundaries on service area maps. Electronic maps are available for viewing during regular business hours at the commission's offices and on the commission's website.

20.3(7) *Modification of service area and answers.*

a. An exclusive service area is subject to modification through a contested case proceeding that may be commenced by filing a petition for modification of service area with the commission. The commission may commence a service area modification proceeding on its own motion. In determining whether the modification is in the public interest, the commission will consider the factors described in Iowa Code section 476.25(1) and any other relevant factors.

b. An electric utility may file a petition for modification of service area containing (1) a legal description of the service area desired, (2) a designation of the utilities involved in each boundary section, (3) a justification for the proposed service area modification, and (4) in addition to the PDF (Portable Document Format) required in the "Paper copies required" subrule of 199—Chapter 14(17A,476), an electronic file of the proposed service area boundaries, in a format designated by the commission, as described on the EFS homepage under EFS Filing Standards. The justification shall include a detailed statement of why the proposed modification is in the public interest. A map showing the affected areas that complies with paragraph 20.3(11)*"a"* shall be attached to the petition as an exhibit.

c. Electric utilities may agree to service area modifications by contract pursuant to Iowa Code section 476.25(2).

20.3(8) *Certificate of authority.* Any electric utility or municipal corporation requesting a service territory modification pursuant to subrule 20.3(9) that would result in service to a customer by a utility other than the utility currently serving the customer must also petition the commission for a certificate of authority under Iowa Code section 476.23. The electric utility or municipal corporation shall pay the party currently serving the customer a reasonable price for the facilities serving the customer.

20.3(9) *Maps.*

a. Each utility shall maintain a current map or set of maps, including KMZ or other similar

format, showing the physical location of electric lines, stations, and electric transmission facilities for its service areas, which include the exact location of the following:

(1) Generating stations with capacity designation.

(2) Purchased power supply points with maximum contracted capacity designation.

(3) Purchased power metering points if located at other than power delivery points.

(4) Transmission lines with size and type of conductor designation and operating voltage designation.

(5) Transmission-to-transmission voltage transformation substations with transformer voltage and capacity designation.

(6) Transmission-to-distribution voltage transformation substations with transformer voltage and capacity designation.

(7) Distribution lines with size and type of conductor designation, phase designation, and voltage designation.

(8) All points at which transmission, distribution, or secondary lines of the utility cross Iowa state boundaries.

(9) All current information required in Iowa Code section 476.24(1).

(10) All county boundaries and county names.

(11) Natural and artificial lakes that cover more than 50 acres and all rivers.

(12) Any additional information required by the commission.

b. All maps, except those deemed confidential by the commission, shall be available for examination at the utility's designated offices during the utility's regular office hours or on the utility's website. The maps shall be drawn with clean, uniform lines to a scale of one inch per mile. A large scale shall be used where it is necessary to clarify areas where there is a heavy concentration of facilities. All cartographic details shall be clean cut, and the background shall contain little or no coloration or shading.

20.3(10) *Prepayment meters.* Prepayment meters shall not be geared or set so as to result in the charge of a rate or amount higher than would be paid if a standard type meter were used, except under tariffs approved by the commission.

20.3(11) *Plant additions, electrical line extensions, and service lines.*

a. Definitions. The following definitions shall apply to the terms used in this subrule:

"Advance for construction" means cash payments or equivalent surety made to the utility by an applicant for an extensive plant addition or an electrical line extension, portions of which may be refunded depending on the attachment of any subsequent service line made to the extensive plant addition or electrical line extension. Cash payments or equivalent surety shall include a grossed-up amount for the income tax effect of such revenue. The amount of tax shall be reduced by the present value of the tax benefits to be obtained by depreciating the property in determining tax liability.

"Agreed-upon attachment period" means a period of not less than 30 days nor more than one year mutually agreed upon by the utility and the applicant within which the customer will attach. If no time period is mutually agreed upon, the agreed-upon attachment period shall be deemed to be 30 days.

"Contribution in aid of construction" means a nonrefundable cash payment grossed-up for the income tax effect of such revenue covering the costs of a service line that are in excess of costs paid by the utility. The amount of tax shall be reduced by the present value of the tax benefits to be obtained by depreciating the property in determining the tax liability.

"Electrical line extensions" means distribution line extensions and secondary line extensions as defined in subrule 20.1(3), except for service lines as defined in this subrule.

"Equivalent overhead transformer cost" is that transformer capitalized cost, or fraction thereof, that would be required for similarly situated customers served by a pole-mounted or platform-mounted transformer(s). For each overhead service, it is the capitalized cost of the transformer(s) divided by the

number of customers served by that transformer(s). For each underground service, it is the capitalized cost of an overhead transformer(s) with the same voltage and volt-ampere rating divided by the number of customers served by that transformer(s).

"Estimated annual revenues" is calculated based upon the following factors, including, but not limited to: The size of the facility to be used by the customer, the size and type of equipment to be used by the customer, the average annual amount of service required by the equipment, and the average number of hours per day and days per year the equipment will be in use.

"Estimated base revenues" is calculated by subtracting the fuel expense costs as described in the uniform system of accounts as adopted by the commission and energy efficiency charges from the estimated annual revenues.

"Estimated construction costs" is calculated using average current costs in accordance with good engineering practices and upon the following factors: amount of service required or desired by the customer requesting the electrical line extension or service line; size, location, and characteristics of the electrical line extension or service line, including appurtenances, except equivalent overhead transformer cost; and whether the ground is frozen or whether other adverse conditions exist. In no event shall estimated construction costs include costs associated with facilities built for the convenience of the utility. The customer shall be charged actual permit fees in addition to estimated construction costs. Permit fees are to be paid regardless of whether the customer is required to pay an advance for construction or a nonrefundable contribution in aid of construction, and the cost of any permit fee is not refundable.

"Plant addition" means any additional plant required to be constructed to provide service to a customer other than an electrical line extension or service line.

"Point of attachment" is that point of first physical attachment of the utilities' service drop (overhead) or service lateral (underground) conductors to the customer's service entrance conductors. For overhead services it shall be the point of tap or splice to the service entrance conductors. For underground services it shall be the point of tap or splice to the service entrance conductors in a terminal box or meter or other enclosure with adequate space inside or outside the building wall. If there is no terminal box, meter, or other enclosure with adequate space, it shall be the point of entrance into the building.

"Service line" means any secondary line extension, as defined in subrule 20.1(3), on private property serving a single customer or point of attachment of electric service.

"Similarly situated customer" means a customer whose annual consumption or service requirements, as defined by estimated annual revenue, are approximately the same as the annual consumption or service requirements of other customers.

"Utility" means a rate-regulated utility.

b. Plant additions. The utility shall provide all electric plant at its cost and expense without requiring an advance for construction from customers or developers except in those unusual circumstances where extensive plant additions are required before the customer can be served. A written contract between the utility and the customer that requires an advance for construction by the customer to make plant additions shall be available for commission inspection.

c. Electrical line extensions. Where the customer will attach to the electrical line extension within the agreed-upon attachment period after completion of the electrical line extension, the following shall apply:

(1) The utility shall finance and make the electrical line extension for a customer without requiring an advance for construction if the estimated construction costs to provide an electrical line extension are less than or equal to three times estimated base revenue calculated on the basis of similarly situated customers. The utility may use a feasibility model, rather than three times estimated base revenue, to determine what, if any, advance for construction is required by the customer. The

utility shall file a summary explaining the inputs into the feasibility model and a description of the model as part of the utility's tariff. Whether or not the construction of the electrical line extension would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees, and the permit fees are not refundable.

(2) If the estimated construction cost to provide an electrical line extension is greater than three times estimated base revenue calculated on the basis of similarly situated customers, the applicant for the electrical line extension shall contract with the utility and make, no more than 30 days prior to commencement of construction, an advance for construction equal to the estimated construction cost less three times estimated base revenue to be produced by the customer. The utility may use a feasibility model to determine whether an advance for construction is required. The utility shall file a summary explaining the inputs into the feasibility model and a description of the model as part of the utility's tariff. A written contract between the utility and the customer shall be available for commission inspection upon request. Whether or not the construction of the electrical line extension would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees, and the permit fees are not refundable.

(3) Where the customer will not attach within the agreed-upon attachment period after completion of the electrical line extension, the applicant for the electrical line extension shall contract with the utility and make, no more than 30 days prior to the commencement of construction, an advance for construction equal to the estimated construction cost. The utility may use a feasibility model to determine the amount of the advance for construction. The utility shall file a summary explaining the inputs into the feasibility model and a description of the model as part of the utility's tariff. A written contract between the utility and the customer shall be available for commission inspection upon request. Whether or not the construction of the electrical line extension would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees, and the permit fees are not refundable.

(4) Advances for construction may be paid by cash or equivalent surety and shall be refundable for ten years. The customer has the option of providing an advance for construction by cash or equivalent surety unless the utility determines that the customer has failed to comply with the conditions of a surety in the past.

(5) Refunds. When the customer is required to make an advance for construction, the utility shall refund to the depositor for a period of ten years from the date of the original advance a pro-rata share for each service line attached to the electrical line extension. The pro-rata refund shall be computed in the following manner:

1. If the combined total of three times estimated base revenue, or the amount allowed by the feasibility model, for the electrical line extension and each service line attached to the electrical line extension exceeds the total estimated construction cost to provide the electrical line extension, the entire amount of the advance for construction provided will be refunded.

2. If the combined total of three times estimated base revenue, or the amount allowed by the feasibility model, for the electrical line extension and each service line attached to the electrical line extension is less than the total estimated construction cost to provide the electrical line extension, the amount to be refunded will equal three times estimated base revenue, or the amount allowed by the feasibility model, when a service line is attached to the electrical line extension.

3. In no event will the total amount to be refunded exceed the amount of the advance for construction. Any amounts subject to refund will be paid by the utility without interest. At the expiration of the above-described ten-year period, the advance for construction record will be closed and the remaining balance will be credited to the respective plant account.

(6) The utility shall keep a record of each work order under which the electrical line extension was installed, to include the estimated revenues, the estimated construction costs, the amount of any

payment received, and any refunds paid.

d. Service lines.

(1) The utility shall finance and construct either an overhead or underground service line without requiring a nonrefundable contribution in aid of construction or any payment by the applicant where the length of the overhead service line to the first point of attachment is up to 50 feet on private property or where the cost of the underground service line to the meter or service disconnect is less than or equal to the estimated cost of constructing an equivalent overhead service line of up to 50 feet.

(2) Where the length of the overhead service line exceeds 50 feet on private property, the applicant shall be required to provide a nonrefundable contribution in aid of construction for that portion of the service line on private property, exclusive of the point of attachment, within 30 days after completion. The nonrefundable contribution in aid of construction for that portion of the service line shall be computed as follows:

$$\text{(Estimated Construction Costs)} \times \frac{\text{(Total Length in Excess of 50 Feet)}}{\text{(Total Length of Service Line)}}$$

(3) Where the cost of the underground service line exceeds the estimated cost of constructing an equivalent overhead service line of up to 50 feet, the applicant shall be required to provide a nonrefundable contribution in aid of construction within 30 days after completion equal to the difference between the estimated cost of constructing the underground service line and the estimated cost of constructing an equivalent overhead service line of up to 50 feet.

(4) A utility may adopt a tariff or rule that allows the utility to finance and construct a service line of more than 50 feet without requiring a nonrefundable contribution in aid of construction from the customer if the tariff or rule applies equally to all customers or members.

(5) Whether or not the construction of the service line would otherwise require a payment from the customer, the utility shall charge the customer for actual permit fees.

e. Extensions not required. Utilities shall not be required to make electrical line extensions or install service lines as described in this subrule, unless the electrical line extension or service line shall be of a permanent nature. When the utility provides a temporary service to a customer, the utility may require that the customer bear all the cost of installing and removing the service in excess of any salvage realized.

f. Different payment arrangement. This subrule shall not be construed as prohibiting any utility from making a contract with a customer using a different payment arrangement, if the contract provides a more favorable payment arrangement to the customer, so long as no discrimination is practiced among customers.

This rule is intended to implement Iowa Code section 476.8.

199—20.4(476) Customer relations.

20.4(1) *Customer information.* Each utility shall:

a. Maintain up-to-date maps, plans, or records of its entire transmission and distribution systems, together with such other information as may be necessary to enable the utility to advise prospective customers, and others entitled to the information, as to the facilities available for serving prospective customers in its service area.

b. Assist the customer or prospective customer in selecting the most economical rate schedule available for the customer's proposed type of service.

c. Notify customers affected by a change in rates or schedule classification in the manner provided in the rules of practice and procedure before the commission. ("Compliance Filings and Tariffs" rule of 199—Chapter 26(476))

d. Post a notice in a conspicuous place in each office of the utility where applications for service

are received, informing the public that copies of the rate schedules and rules relating to the service of the utility, as filed with the commission, are available for public inspection. The utility shall provide access to its rate schedules and rules for service on its website and the notice shall include the website address.

e. Upon request, inform its customers as to the method of reading meters.

f. State, on the bill form, that tariff and rate schedule information is available upon request at the utility's local business office or on the utility's website. If the utility provides access to its tariff and rate schedules on its website, the bill form shall include the website address.

g. Upon request, transmit a statement of either the customer's actual consumption, or degree day adjusted consumption, at the company's option, of electricity for each billing during the prior 12 months.

h. Furnish such additional information as the customer may reasonably request.

20.4(2) *Customer contact employee qualifications.* Each utility shall promptly and courteously resolve inquiries for information or complaints. Employees who receive customer telephone calls and office visits shall be qualified and trained in screening and resolving complaints, to avoid a preliminary recitation of the entire complaint to employees without ability and authority to act. The employee shall provide identification to the customer that will enable the customer to reach that employee again if needed.

a. Each utility shall notify its customers, by bill insert or notice on the bill form, of the address and telephone number where a utility representative qualified to assist in resolving the complaint can be reached. The bill insert or notice shall also include the following statement: "If (utility name) does not resolve your complaint, you may request assistance from the Iowa Utilities Commission by calling 515.725.7300, or toll-free 877.565.4450, or by writing to 1375 E. Court Avenue, Des Moines, Iowa 50319, or by email to customer@iuc.iowa.gov."

b. The bill insert or notice on the bill shall be provided monthly.

20.4(3) *Customer deposits.*

a. Each utility may require from any customer or prospective customer a deposit intended to guarantee partial payment of bills for service. Each utility shall allow a person other than the customer to pay the customer's deposit. In lieu of a cash deposit, the utility may accept the written guarantee of a surety or other responsible party as surety for an account. Upon termination of a guarantee contract, or whenever the utility deems the contract insufficient as to amount or surety, a cash deposit or a new or additional guarantee may be required for good cause upon written notice.

b. A new or additional deposit may be required from a customer when a deposit has been refunded or is found to be inadequate. Written notice shall be mailed advising the customer of any new or additional deposit requirement. The customer shall have no less than 12 days from the date of mailing to comply. The new or additional deposit shall be payable at any of the utility's business offices or local authorized agents. An appropriate receipt shall be provided. No written notice is required to be given of a deposit required as a prerequisite for commencing initial service.

c. No deposit shall be required as a condition for service other than determined by application of either credit rating or deposit calculation criteria, or both, of the filed tariff.

d. The total deposit for any residential or commercial customer for a place that has previously received service shall not be greater than the highest billing of service for one month for the place in the previous 12-month period. The deposit for any residential or commercial customer for a place that has not previously received service, or for an industrial customer, shall be the customer's projected one-month usage for the place to be served as determined by the utility, or as may be reasonably required by the utility in cases involving service for short periods or special occasions.

20.4(4) *Interest on customer deposits.* Interest shall be paid by the rate-regulated utility to each customer required to make a deposit. Rate-regulated utilities shall compute interest on customer

deposits at 7.5 percent per annum, compounded annually. Interest shall be paid for the period beginning with the date of deposit to the date of refund or to the date that the deposit is applied to the customer's account, or to the date the customer's bill becomes permanently delinquent. The date of refund is that date on which the refund or the notice of deposit refund is forwarded to the customer's last-known address. The date a customer's bill becomes permanently delinquent, relative to an account treated as an uncollectible account, is the most recent date the account became delinquent.

20.4(5) *Customer deposit records.* Each utility shall keep records to show:

a. The name and address of each depositor.

b. The amount and date of the deposit.

c. Each transaction concerning the deposit.

20.4(6) *Customer's receipt for a deposit.* Each utility shall issue a receipt of deposit to each customer from whom a deposit is received, and shall provide means whereby a depositor may establish claim if the receipt is lost.

20.4(7) *Deposit refund.* A deposit shall be refunded after 12 consecutive months of prompt payment, ~~(~~which may be 11 timely payments and 1 automatic forgiveness of late payment~~)~~. For refund purposes the account shall be reviewed for prompt payment after 12 months of service following the making of the deposit and for each 12-month interval terminating on the anniversary of the deposit. However, deposits received from customers subject to the exemption provided by 20.4(3)*"b,"* including surety deposits, may be retained by the utility until final billing. Upon termination of service, the deposit plus accumulated interest, less any unpaid utility bill of the customer, shall be reimbursed to the person who made the deposit.

20.4(8) *Unclaimed deposits.* The utility shall make a reasonable effort to return each unclaimed deposit and accrued interest after the termination of the services for which the deposit was made. The utility shall maintain a record of deposit information for at least two years or until such time as the deposit, together with accrued interest, escheats to the state pursuant to Iowa Code section 556.4, at which time the record and deposit, together with accrued interest less any lawful deductions, shall be sent to the state treasurer pursuant to Iowa Code section 556.11.

20.4(9) *Customer bill forms.* Each customer shall be informed as promptly as possible following the reading of the customer's meter, on bill form or otherwise, of the following:

a. The reading of the meter at the beginning and at the end of the period for which the bill is provided.

b. The dates on which the meter was read, at the beginning and end of the billing period.

c. The number and kind of units metered.

d. The applicable rate schedule, with the identification of the applicable rate classification.

e. The account balance brought forward and amount of each net charge for rate-schedule-priced utility service, sales tax, other taxes, late payment charge, and total amount currently due. In the case of prepayment meters, the amount of money collected shall be shown.

f. The last date for timely payment shall be clearly shown and shall be not less than 20 days after the bill is provided.

g. A distinct marking to identify an estimated bill.

h. A distinct marking to identify a minimum bill.

i. Any conversions from meter reading units to billing units, or any calculations to determine billing units from recording or other devices, or any other factors, such as sliding scale or automatic adjustment and amount of sales tax adjustments used in determining the bill.

j. Customer billing information alternate. A utility serving less than 5000 electric customers may provide the information in this subrule on bill form or otherwise. If the utility elects not to provide this information, it shall advise the customer, on bill form or by bill insert, that such information can be obtained by contacting the utility's local office.

ATTACHMENT C

20.4(10) *Payment agreements.*

a. Availability of a first payment agreement. When a residential customer cannot pay in full a delinquent bill for utility service or has an outstanding debt to the utility for residential utility service and is not in default of a payment agreement with the utility, a utility shall offer the customer an opportunity to enter into a reasonable payment agreement.

b. Reasonableness. Whether a payment agreement is reasonable will be determined by considering the current household income, ability to pay, payment history including prior defaults on similar agreements, the size of the bill, the amount of time, the reasons why the bill has been outstanding, and any special circumstances creating extreme hardships within the household. The utility may require the person to confirm financial difficulty with an acknowledgment from the department of human services or another agency.

c. Terms of payment agreements.

(1) First payment agreement. The utility shall offer the following conditions to customers who have received a disconnection notice or who have been previously disconnected and are not in default of a payment agreement:

1. For customers who received a disconnection notice or who have been disconnected less than 120 days and are not in default of a payment agreement, the utility shall offer an agreement with at least 12 even monthly payments. For customers who have been disconnected more than 120 days and are not in default of a payment agreement, the utility shall offer an agreement with at least 6 even monthly payments. The utility shall inform customers they may pay off the delinquency early without incurring any prepayment penalties.
2. The agreement shall also include a provision for payment of the current account.
3. The utility may also require the customer to enter into a budget billing plan to pay the current bill.
4. When the customer makes the agreement in person, a signed copy of the agreement shall be provided to the customer.
5. The utility may offer the customer the option of making the agreement over the telephone or through electronic transmission.
6. When the customer makes the agreement over the telephone or through electronic transmission, the utility shall provide to the customer a written document reflecting the terms and conditions of the agreement within three days of the date the parties entered into the oral agreement or electronic agreement.
7. The document will be considered provided to the customer when addressed to the customer's last-known address and deposited in the U.S. mail with postage paid. If delivery is by other than U.S. mail, the document shall be considered provided to the customer when delivered to the last-known address of the person responsible for payment for the service.
8. The document shall state that unless the customer notifies the utility otherwise within ten days from the date the document is provided, it will be deemed that the customer accepts the terms as stated in the written document. The document stating the terms and conditions of the agreement shall include the address and a toll-free or collect telephone number where a qualified representative can be reached.
9. Once the first payment required by the agreement is made by the customer or on behalf of the customer, the oral or electronic agreement is deemed accepted by the customer.
10. Each customer entering into a first payment agreement shall be granted at least one late payment that is four days or less beyond the due date for payment, and the first payment agreement shall remain in effect.
11. The initial payment is due on the due date for the next regular bill.
12. A customer shall not be charged interest, or a late payment charge, on a payment agreement

where the customer is making payments consistent with the terms of the payment agreement.

(2) Second payment agreement. The utility shall offer a second payment agreement to a customer who is in default of a first payment agreement if the customer has made at least two consecutive full payments under the first payment agreement.

1. The second payment agreement shall be for a term at least as long as the term of the first payment agreement.

2. The customer shall be required to pay for current service in addition to the monthly payments under the second payment agreement and may be required to make the first payment up-front as a condition of entering into the second payment agreement.

3. The utility may also require the customer to enter into a budget billing plan to pay the current bill.

(3) Additional payment agreements. The utility may offer additional payment agreements to the customer.

d. Refusal by utility. A customer may offer the utility a proposed payment agreement. If the utility and the customer do not reach an agreement, the utility may refuse the offer orally, but the utility must provide a written refusal to the customer, stating the reason for the refusal, within three days of the oral notification. The written refusal shall be considered provided to the customer when addressed to the customer's last-known address and deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the written refusal shall be considered provided to the customer when handed to the customer or when delivered to the last-known address of the customer.

A customer may ask the commission for assistance in working out a reasonable payment agreement. The request for assistance must be made to the commission within ten days after the written refusal is provided. During the review of this request, the utility shall not disconnect the service.

20.4(11) *Bill payment terms.* The bill shall be considered provided to the customer when deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the bill shall be considered provided when delivered to the last-known address of the customer. There shall not be less than 20 days between the providing of a bill and the date by which the account becomes delinquent. Bills for customers on more frequent billing intervals under subrule 20.3(6) may not be considered delinquent less than 5 days from the date the bill is provided. However, a late payment charge may not be assessed if payment is received within 20 days of the date the bill is provided.

a. The date of delinquency for all residential customers or other customers whose consumption is less than 3,000 kWh per month shall be changeable for cause; such as, but not limited to, 15 days from the approximate date each month upon which income is received by the person responsible for payment. In no case, however, shall the utility be required to delay the date of delinquency more than 30 days beyond the date of preparation of the previous bill.

b. In any case where net and gross amounts are billed to customers, the difference between net and gross is a late payment charge and is valid only when part of a delinquent bill payment. A utility's late payment charge shall not exceed 1.5 percent per month of the past due amount. No collection fee may be levied in addition to this late payment charge. This rule does not prohibit cost-justified charges for disconnection and reconnection of service.

c. If the customer makes partial payment in a timely manner, and does not designate the service or product for which payment is made, the payment shall be credited pro rata between the bill for utility services and related taxes.

d. Each account shall be granted not less than one complete forgiveness of a late payment charge each calendar year. The utility's rules shall be definitive that on one monthly bill in each period of eligibility, the utility will accept the net amount of such bill as full payment for such month after expiration of the net payment period. The rules shall state how the customer is notified that the

eligibility has been used. Complete forgiveness prohibits any effect upon the credit rating of the customer or collection of late payment charge.

e. Budget billing plan. Utilities shall offer a budget billing plan to all residential customers or other customers whose consumption is less than 3,000 kWh per month. A budget billing plan should be designed to limit the volatility of a customer's bill and maintain reasonable account balances. The budget billing plan shall include at least the following:

(1) Be offered to each eligible customer when the customer initially requests service. The plan may be estimated if there is insufficient usage history to create a budget billing plan based on actual use.

(2) Allow for entry into the budget billing plan anytime during the calendar year.

(3) Provide that a customer may request termination of the plan at any time. If the customer's account is in arrears at the time of termination, the balance shall be due and payable at the time of termination. If there is a credit balance, the customer shall be allowed the option of obtaining a refund or applying the credit to future charges. A utility is not required to offer a new budget billing plan to a customer for six months after the customer has terminated from a budget billing plan.

(4) Use a computation method that produces a reasonable monthly budget billing amount, which may take into account forward-looking factors such as fuel price and weather forecasts, and that complies with requirements of this subrule. The computation method used by the utility shall be described in the utility's tariff and shall be subject to commission approval. The utility shall give notice to customers when it changes the type of computation method in the budget billing plan.

The amount to be paid at each billing interval by a customer on a budget billing plan shall be computed at the time of entry into the plan and shall be recomputed at least annually. The budget billing amount may be recomputed monthly, quarterly, when requested by the customer, or whenever price, consumption, or a combination of factors results in a new estimate differing by 10 percent or more from that in use.

When the budget billing amount is recomputed, the budget billing plan account balance shall be divided by 12, and the resulting amount shall be added to the estimated monthly budget billing amount. Except when a utility has a budget billing plan that recomputes the budget billing amount monthly, the customer shall be given the option of applying any credit to payments of subsequent months' budget billing amounts due or of obtaining a refund of any credit in excess of $25.

Except when a utility has a budget billing plan that recomputes the budget billing amount monthly, the customer shall be notified of the recomputed payment amount not less than one full billing period prior to the date of delinquency for the recomputed payment. The notice may accompany the bill prior to the bill that is affected by the recomputed payment amount.

(5) Irrespective of the account balance, a delinquency in payment shall be subject to the same collection and disconnection procedures as other accounts, with the late payment charge applied to the budget billing amount. If the account balance is a credit, the budget billing plan may be terminated by the utility after 30 days of delinquency.

20.4(12) *Customer records.* The utility shall retain records as may be necessary to effectuate compliance with subrules 20.4(14) and 20.6(6), but not less than five years. Records for customer shall show where applicable:

a. kWh meter reading.
b. kWh consumption.
c. kW meter reading.
d. kW measured demand.
e. kW billing demand.
f. Total amount of bill.

20.4(13) *Adjustment of bills.*

a. Meter error. Whenever a meter creeps or whenever a metering installation is found upon any test to have an average error of more than 2.0 percent for watthour metering; or a demand metering error of more than 1.5 percent in addition to the errors allowed under accuracy of demand metering; an adjustment of bills for service for the period of inaccuracy shall be made in the case of overregistration and may be made in the case of underregistration. The amount of the adjustment shall be calculated on the basis that the metering equipment should be 100 percent accurate with respect to the testing equipment used to make the test. For watthour metering installations the average accuracy shall be the arithmetic average of the percent registration at 10 percent of rated test current and at 100 percent of rated test current giving the 100 percent of rated test current registration a weight of four and the 10 percent of rated test current registration a weight of one.

b. Determination of adjustment. Recalculation of bills shall be on the basis of actual monthly consumption except that if service has been measured by self-contained single-phase meters or three-wire network meters and involves no billing other than for kWh, the recalculation of bills may be based on the average monthly consumption determined from the most recent 36 months, consumption data.

When the average error cannot be determined by test because of failure of part or all of the metering equipment, it shall be permissible to use the registration of check metering installations, if any, or to estimate the quantity of energy consumed based on available data. The customer must be advised of the failure and of the basis for the estimate of quantity billed. The periods of error shall be used as defined in immediately following subparagraphs (1) and (2).

(1) Overregistration. If the date when overregistration began can be determined, such date shall be the starting point for determination of the amount of the adjustment. If the date when overregistration began cannot be determined, it shall be assumed that the error has existed for the shortest time period calculated as one-half the time since the meter was installed, or one-half the time elapsed since the last meter test, unless otherwise ordered by the commission.

The overregistration due to creep shall be calculated by timing the rate of creeping and assuming that the creeping affected the registration of the meter for 25 percent of the time since the more recent of either metering installation or last previous test.

(2) Underregistration. If the date when underregistration began can be determined, it shall be the starting point for determination of the amount of the adjustment except that billing adjustment shall be limited to the preceding six months. If the date when underregistration began cannot be determined, it shall be assumed that the error has existed for one-half of the time elapsed since the more recent of either meter installation or the last meter test, except that billing adjustment shall be limited to the preceding six months, unless otherwise ordered by the commission.

The underregistration due to creep shall be calculated by timing the rate of creeping and assuming that this creeping affected the registration for 25 percent of the time since the more recent of either metering installation or last previous test, except that billing adjustment shall be limited to the preceding six months.

c. Refunds. If the recalculated bills indicate that $5 or more is due an existing customer or $10 or more is due a person no longer a customer of the utility, the tariff shall provide refunding of the full amount of the calculated difference between the amount paid and the recalculated amount. Refunds shall be made to the two most recent customers who received service through the metering installation found to be in error. In the case of a previous customer who is no longer a customer of the utility, a notice of the amount subject to refund shall be mailed to such previous customer at the last-known address, and the utility shall, upon demand made within three months thereafter, refund the same.

Refunds shall be completed within six months following the date of the metering installation test.

d. Back billing. A utility may not back bill due to underregistration unless a minimum back bill

amount is specified in its tariff. The minimum amount specified for back billing shall not be less than, but may be greater than, $5 for an existing customer or $10 for a former customer. All recalculations resulting in an amount due equal to or greater than the tariff specified minimum shall result in issuance of a back bill.

Back billings shall be provided no later than six months following the date of the metering installation test.

e. Overcharges. When a customer has been overcharged as a result of incorrect reading of the meter, incorrect application of the rate schedule, incorrect connection of the metering installation, or other similar reasons, the amount of the overcharge shall be adjusted, refunded, or credited to the customer. The time period for which the utility is required to adjust, refund, or credit the customer's bill shall not exceed five years unless otherwise ordered by the commission.

f. Undercharges. When a customer has been undercharged as a result of incorrect reading of the meter, incorrect application of the rate schedule, incorrect connection of the meter, or other similar reasons, the amount of the undercharge may be billed to the customer. The period for which the utility may adjust for the undercharge shall not exceed five years unless otherwise ordered by the commission. The maximum back bill shall not exceed the dollar amount equivalent to the tariffed rate for like charges (e.g., usage-based, fixed, or service charges) in the 12 months preceding discovery of the error, unless otherwise ordered by the commission.

g. Credits and explanations. Credits due a customer because of meter inaccuracies, errors in billing, or misapplication of rates shall be separately identified.

20.4(14) *Refusal or disconnection of service.* A utility shall refuse service or disconnect service to a customer, as defined in subrule 20.1(3), in accordance with tariffs that are consistent with these rules.

a. The utility shall give written notice of pending disconnection except as specified in paragraph 20.4(15)*"b."* The notice shall set forth the reason for the notice and the final date by which the account is to be settled or specific action taken. The notice shall be considered provided to the customer when addressed to the customer's last-known address and deposited in the U.S. mail with postage prepaid. If delivery is by other than U.S. mail, the notice shall be considered provided when delivered to the last-known address of the customer. The date for disconnection of service shall be not less than 12 days after the notice is provided. The date for disconnection of service for customers on shorter billing intervals under subrule 20.3(6) shall not be less than 24 hours after the notice is posted at the service premises.

One written notice, including all reasons for the notice, shall be given where more than one cause exists for disconnection of service. In determining the final date by which the account is to be settled or other specific action taken, the days of notice for the causes shall be concurrent.

b. Service may be disconnected without notice:

(1) In the event of a condition on the customer's premises determined by the utility to be hazardous.

(2) In the event of customer use of equipment in a manner that adversely affects the utility's equipment or the utility's service to others.

(3) In the event of tampering with the equipment furnished and owned by the utility. For the purposes of this subrule, a broken or absent meter seal alone shall not constitute tampering.

(4) In the event of unauthorized use.

c. Service may be disconnected or refused after proper notice:

(1) For violation of or noncompliance with the utility's rules on file with the commission.

(2) For failure of the customer to furnish the service equipment, permits, certificates, or rights-of-way that are specified to be furnished, in the utility's rules filed with the commission, as conditions of obtaining service, for the withdrawal of that same equipment, for the termination of those same

permissions or rights, or for the failure of the customer to fulfill the contractual obligations imposed as conditions of obtaining service by any contract filed with and subject to the regulatory authority of the commission.

(3) For failure of the customer to permit the utility reasonable access to the utility's equipment.

d. Service may be refused or disconnected after proper notice for nonpayment of a bill or deposit, except as restricted by subrules 20.4(16) and 20.4(17), provided that the utility has complied with the following provisions when applicable:

(1) Given the customer a reasonable opportunity to dispute the reason for the disconnection or refusal.

(2) Given the customer, and any other person or agency designated by the customer, written notice that the customer has at least 12 days in which to make settlement of the account to avoid disconnection and a written summary of the rights and responsibilities available. Customers billed more frequently than monthly pursuant to subrule 20.3(6) shall be given posted written notice that they have 24 hours to make settlement of the account to avoid disconnection and a written summary of the rights and responsibilities. All written notices shall include a toll-free or collect telephone number where a utility representative qualified to provide additional information about the disconnection can be reached. Each utility representative must provide the representative's name and have immediate access to current, detailed information concerning the customer's account and previous contacts with the utility.

(3) The summary of the rights and responsibilities must be approved by the commission. Any utility providing electric service and defined as a public utility in Iowa Code section 476.1 that does not use the standard form set forth below for customers billed monthly shall submit to the commission electronically its proposed form for approval. A utility billing a combination customer for both gas and electric service may modify the standard form to replace each use of the word "electric" with the words "gas and electric" in all instances.

CUSTOMER RIGHTS AND RESPONSIBILITIES TO AVOID SHUTOFF OF ELECTRIC SERVICE FOR NONPAYMENT

1. What can I do if I receive a notice from the utility that says my service will be shut off because I have a past due bill?

a. Pay the bill in full;

b. Enter into a reasonable payment plan with the utility (see #2 below);

c. Apply for and become eligible for low-income energy assistance (see #3 below);

d. Give the utility a written statement from a doctor or public health official stating that shutting off your electric service would pose an especial health danger for a person living at the residence (see #4 below); or

e. Tell the utility if you think part of the amount shown on the bill is wrong.

However, you must still pay the part of the bill you agree you owe the utility (see #5 below).

2. How do I go about making a reasonable payment plan? (Residential customers only)

a. Contact the utility as soon as you know you cannot pay the amount you owe. If you cannot pay all the money you owe at one time, you are to be offered a payment plan that spreads payments evenly over at least 12 months. The plan may be longer depending on your financial situation.

b. If you have not made the payments you promised in a previous payment plan with the utility and still owe money, you may qualify for a second payment agreement under certain conditions.

c. If you do not make the payments you promise, the utility may shut off your utility service on one day's notice, unless all the money you owe the utility is paid or you enter into another payment agreement.

3. How do I apply for low-income energy assistance? (Residential customers only)

a. Applications are taken at your local community action agency. If you are unsure where to apply,

call 211 or 800.244.7431, or visit https://hhs.iowa.gov/programs/programs-and-services/liheap. To prevent disconnection, contact the utility prior to disconnection of your service.

b. To avoid disconnection, you must apply for energy assistance or weatherization before your service is shut off. Notify your utility that you may be eligible and have applied for energy assistance. Once your service has been disconnected, it will not be reconnected based on approval for energy assistance.

c. Being certified eligible for energy assistance will prevent your service from being disconnected from November 1 through April 1.

4. What if someone living at the residence has a serious health condition? (Residential customers only)

Contact the utility if you believe this is the case. Contact your doctor or a public health official and ask the doctor or health official to contact the utility and state that shutting off your utility service would pose an especial health danger for a person living at your residence. The doctor or public health official must provide a written statement to the utility office within five days of when your doctor or public health official notifies the utility of the health condition; otherwise, your utility service may be shut off. If the utility receives this written statement, your service will not be shut off for 30 days. This 30-day delay is to allow you time to arrange payment of your utility bill or find other living arrangements. After 30 days, your service may be shut off if full payment or payment arrangements have not been made.

5. What should I do if I believe my bill is not correct?

You may dispute your utility bill. You must tell the utility that you dispute the bill. You must pay the part of the bill you think is correct. If you do this, the utility will not shut off your service for up to 45 days from the date the bill was mailed while you and the utility work out the dispute over the part of the bill you think is incorrect. You may ask the Iowa Utilities Commission for assistance in resolving the dispute. (See #9 below.)

6. When can the utility shut off my utility service because I have not paid my bill?

a. Your utility can shut off service between the hours of 6 a.m. and 2 p.m., Monday through Friday.

b. The utility will not shut off your service on nights, weekends, or holidays for nonpayment of a bill.

c. The utility will not shut off your service if you enter into a reasonable payment plan to pay the overdue amount (see #2 above).

d. The utility will not shut off your service if the temperature is forecasted to be 20 degrees Fahrenheit or colder during the following 24-hour period, including the day your service is scheduled to be shut off.

e. If you have qualified for low-income energy assistance, the utility cannot shut off your service from November 1 through April 1. However, you will still owe the utility for the service used during this time.

f. The utility will not shut off your service if you have notified the utility that you dispute a portion of your bill and you pay the part of the bill that you agree is correct.

g. If one of the heads of household is a service member deployed for military service, utility service cannot be shut off during the deployment or within 90 days after the end of deployment. In order for this exception to disconnection to apply, the utility must be informed of the deployment prior to disconnection. However, you will still owe the utility for service used during this time.

7. How will I be told the utility is going to shut off my service?

a. You must be given a written notice at least 12 days before the utility service can be shut off for nonpayment. This notice will include the reason for shutting off your service.

b. If you have not made payments required by an agreed-upon payment plan, your service may be

disconnected with only one day's notice.

c. The utility must also try to reach you by telephone or in person before it shuts off your service. From November 1 through April 1, if the utility cannot reach you by telephone or in person, the utility will put a written notice on the door of or another conspicuous place at your residence to tell you that your utility service will be shut off.

8. If service is shut off, when will it be turned back on?

a. The utility will turn your service back on if you pay the whole amount you owe.

b. If you make your payment during regular business hours, or by 7 p.m. for utilities permitting such payment or other arrangements after regular business hours, the utility must make a reasonable effort to turn your service back on that day. If service cannot reasonably be turned on that same day, the utility must do it by 11 a.m. the next day.

c. The utility may charge you a fee to turn your service back on which may be higher in the evening or on weekends, so you may ask that your service be turned on during normal utility business hours.

9. Is there any other help available besides my utility?

If the utility has not been able to help you with your problem, you may contact the Iowa Utilities Commission toll-free at 877.565.4450. You may also write the Iowa Utilities Commission at 1375 E. Court Ave., Des Moines, IA 50319, or email at customer@iuc.iowa.gov. Low-income customers may also be eligible for free legal assistance from Iowa Legal Aid, and may contact Legal Aid at 800.532.1275.

(4) If the utility has adopted a service limitation policy pursuant to subrule 20.4(23), the following paragraph shall be appended to the end of the standard form for the summary of rights and responsibilities, as set forth in subparagraph 20.4(15)*"d"*(3):

Service limitation: We have adopted a limitation of service policy for customers who otherwise could be disconnected. Contact our business office for more information or to learn if you qualify.

(5) When disconnecting service to a residence, the utility made a diligent attempt to contact, by telephone or in person, the customer to inform the customer of the pending disconnection and the customer's rights and responsibilities. During the period from November 1 through April 1, if the attempt at customer contact fails, the premises shall be posted at least one day prior to disconnection with a notice informing the customer of the pending disconnection and rights and responsibilities available to avoid disconnection.

If an attempt at personal or telephone contact of a customer occupying a rental unit has been unsuccessful, the utility shall make a diligent attempt to contact the landlord of the rental unit, if known, to determine if the customer is still in occupancy and, if so, the customer's present location. The landlord shall also be informed of the date when service may be disconnected. The utility shall make a diligent attempt to inform the landlord at least 48 hours prior to disconnection of service to a tenant.

If the disconnection will affect occupants of residential units leased from the customer, the premises of any building known by the utility to contain residential units affected by disconnection must be posted, at least two days prior to disconnection, with a notice informing any occupants of the date when service will be disconnected and the reasons for the disconnection.

(6) Disputed bill. If the customer has received notice of disconnection and has a dispute concerning a bill for electric utility service, the utility may require the customer to pay a sum of money equal to the amount of the undisputed portion of the bill pending settlement and thereby avoid disconnection of service. A utility shall delay disconnection for nonpayment of the disputed bill for up to 45 days after the providing of the bill if the customer pays the undisputed amount. The 45 days shall be extended if requested of the utility by the commission in the event the customer files a written complaint with the commission in compliance with 199—Chapter 6(476,546).

(7) Reconnection. Disconnection of a residential customer may take place only between the hours of 6 a.m. and 2 p.m. on a weekday and not on weekends or holidays. If a disconnected customer makes payment or other arrangements during normal business hours, or by 7 p.m. for utilities permitting such payment or other arrangements after normal business hours, all reasonable efforts shall be made to reconnect the customer that day. If a disconnected customer makes payment or other arrangements after 7 p.m., all reasonable efforts shall be made to reconnect the customer not later than 11 a.m. the next day.

(8) Severe cold weather. A disconnection may not take place where electricity is used as the only source of space heating or to control or operate the only space heating equipment at a residence when the actual temperature or the 24-hour forecast of the National Weather Service for the residence's area is predicted to be 20 degrees Fahrenheit or colder. If the utility has properly posted a disconnect notice but is precluded from disconnecting service because of severe cold weather, the utility may immediately proceed with appropriate disconnection procedures, without further notice, when the temperature in the residence's area rises above 20 degrees Fahrenheit and is forecasted to remain above 20 degrees Fahrenheit for at least 24 hours, unless the customer has paid in full the past due amount or is otherwise entitled to postponement of disconnection.

(9) Health of a resident. Disconnection of a residential customer shall be postponed if the disconnection of service would present an especial danger to the health of any permanent resident of the premises. An especial danger to health is indicated if a person appears to be seriously impaired and may, because of mental or physical problems, be unable to manage the person's own resources, to carry out activities of daily living or to be protected from neglect or hazardous situations without assistance from others. Indicators of an especial danger to health include but are not limited to: age, infirmity, or mental incapacitation; serious illness; physical disability, including blindness and limited mobility; and any other factual circumstances that indicate a severe or hazardous health situation.

The utility may require written verification of the especial danger to health by a physician or a public health official, including the name of the person endangered; a statement that the person is a resident of the premises in question; the name, business address, and telephone number of the certifying party; the nature of the health danger; and approximately how long the danger will continue. Initial verification by the verifying party may be by telephone if written verification is forwarded to the utility within five days.

Verification shall postpone disconnection for 30 days. In the event service is terminated within 14 days prior to verification of illness by or for a qualifying resident, service shall be restored to that residence if a proper verification is thereafter made in accordance with the foregoing provisions. If the customer does not enter into a reasonable payment agreement for the retirement of the unpaid balance of the account within the first 30 days and does not keep the current account paid during the period that the unpaid balance is to be retired, the customer is subject to disconnection pursuant to paragraph 20.4(15)*"f."*

(10) Winter energy assistance (November 1 through April 1). If the utility is informed that the customer's household may qualify for winter energy assistance or weatherization funds, there shall be no disconnection of service for 30 days from the date the utility is notified to allow the customer time to obtain assistance. Disconnection shall not take place from November 1 through April 1 for a resident who is a head of household and who has been certified to the public utility by the community action agency as eligible for either the low-income home energy assistance program or weatherization assistance program, as well as members of the household named in the application. A utility may develop an incentive program to delay disconnection on April 1 for customers who make payments throughout the November 1 through April 1 period. All such incentive programs shall be set forth in tariffs approved by the commission.

(11) Deployment. If the utility is informed that one of the heads of household as defined in Iowa

Code section 476.20 is a service member deployed for military service, as defined in Iowa Code section 29A.90, disconnection cannot take place at the residence during the deployment or prior to 90 days after the end of the deployment.

e. Abnormal electric consumption. A customer who is subject to disconnection for nonpayment of bill, and who has electric consumption that appears to the customer to be abnormally high, may request the utility to assist in identifying the factors contributing to this usage pattern and to suggest remedial measures. The utility shall assist by discussing patterns of electric usage that may be readily identifiable, suggesting that an energy audit be conducted, and identifying sources of energy conservation information and financial assistance that may be available to the customer.

f. A utility may disconnect electric service after 24-hour notice (and without the written 12-day notice) for failure of the customer to comply with the terms of a payment agreement.

g. The utility shall, prior to November 1, mail customers a notice describing the availability of winter energy assistance funds and the application process. The notice must be of a type size that is easily legible and conspicuous and must contain the information set out by the state agency administering the assistance program. A utility serving fewer than 25,000 customers may publish the notice in a customer newsletter in lieu of mailing. A utility serving fewer than 6,000 customers may publish the notice in an advertisement in a local newspaper of general circulation or shopper's guide.

20.4(15) *Insufficient reasons for denying service.* The following shall not constitute sufficient cause for refusal of service to a customer:

a. Delinquency in payment for service by a previous occupant of the premises to be served.

b. Failure to pay for merchandise purchased from the utility.

c. Failure to pay for a different type or class of public utility service.

d. Failure to pay the bill of another customer as guarantor thereof.

e. Failure to pay the back bill provided in accordance with paragraph 20.4(14)*"d"* (slow meters).

f. Failure to pay a bill provided in accordance with paragraph 20.4(14)*"f."*

g. Failure of a residential customer to pay a deposit during the period November 1 through April 1 for the location at which the customer has been receiving service in the customer's name.

h. Delinquency in payment for service by an occupant if the customer applying for service is creditworthy and able to satisfy any deposit requirements.

i. Delinquency in payment for service arising more than ten years prior, as measured from the most recent of:

(1) The last date of service for the account giving rise to the delinquency,

(2) Physical disconnection of service for the account giving rise to the delinquency, or

(3) The last voluntary payment or voluntary written promise of payment made by the customer, if made before the ten-year period described in this paragraph has otherwise lapsed.

j. Delinquency in payment for service that arose on or before September 4, 2010, pursuant to an oral contract, except in cases of fraud or deception that prevented the utility from timely addressing such delinquencies with the customer.

20.4(16) *When disconnection prohibited.*

a. No disconnection may take place from November 1 through April 1 for a resident who has been certified to the public utility by the local community action agency as being eligible for either the low-income home energy assistance program or weatherization assistance program.

b. If the utility is informed that one of the heads of household as defined in Iowa Code section 476.20 is a service member deployed for military service, as defined in Iowa Code section 29A.90, disconnection cannot take place at the residence during the deployment or prior to 90 days after the end of the deployment.

20.4(17) *Estimated demand.* Upon request of the customer and provided the customer's demand is estimated for billing purposes, the utility shall measure the demand during the customer's normal

operation and use the measured demand for billing.

20.4(18) *Servicing utilization control equipment.* Each utility shall service and maintain any equipment it uses on customer's premises and shall correctly set and keep in proper adjustment any thermostats, clocks, relays, time switches, or other devices that control the customer's service in accordance with the provisions in the utility's rate schedules.

20.4(19) *Customer complaints.* Complaints concerning the charges, practices, facilities, or service of the utility shall be investigated promptly and thoroughly. The utility shall keep such records of customer complaints as will enable it to review and analyze its procedures and actions.

a. Each utility shall provide in its filed tariff a concise, fully informative procedure for the resolution of customer complaints.

b. The utility shall take reasonable steps to ensure that customers unable to travel shall not be denied the right to be heard.

c. The final step in a complaint hearing and review procedure shall be a filing for commission resolution of the issues.

20.4(20) *Change in type of service.* If a change in the type of service or a change in voltage to a customer's substation is effected at the insistence of the utility and not solely by reason of increase in the customer's load or change in the character thereof, the utility shall share equitably in the cost of changing the equipment of the customer affected as determined by the commission in the absence of agreement between utility and customer. In general, the customer should be protected against or reimbursed for the following losses and expenses to an appropriate degree:

a. Loss of value in electrical power utilization equipment,

b. Cost of changes in wiring, and

c. Cost of removing old and installing new utilization equipment.

20.4(21) *Limitation of service.* The utility shall have the option of adopting a policy for service limitation at a customer's residence as a measure to be taken in lieu of disconnection of service to the customer. The service limiter policy shall be set out in the utility's tariff and contain the following conditions:

a. A service limitation device shall not be activated without the customer's agreement.

b. A service limitation device shall not be activated unless the customer has defaulted on all payment agreements for which the customer qualifies under the commission's rules and the customer has agreed to a subsequent payment agreement.

c. The service limiter shall provide for usage of a minimum of 3,600 watts. If the service limiter policy provides for different usage levels for different customers, the tariff shall set out specific nondiscriminatory criteria for determining the usage levels. Electric-heating residential customers may have their service limited if otherwise eligible, but such customers shall have consumption limits set at a level that allows them to continue to heat their residences. For purposes of this subrule, "electric heating" means heating by means of a fixed-installation electric appliance that serves as the primary source of heat and not, for example, one or more space heaters.

d. A provision that, if the minimum usage limit is exceeded such that the limiter function interrupts service, the service limiter function must be capable of being reset manually by the customer, or the service limiter function must reset itself automatically within 15 minutes after the interruption. In addition, the service limiter function may also be capable of being reset remotely by the utility. If the utility chooses to use the option of resetting the meter remotely, the utility shall provide a 24-hour toll-free number for the customer to notify the utility that the limiter needs to be reset and the meter shall be reset immediately following notification by the customer. If the remote reset option is used, the meter must still be capable of being reset manually by the customer or the service limiter function must reset itself automatically within 15 minutes after the interruption.

e. There shall be no disconnect, reconnect, or other charges associated with service limiter

interruptions or restorations.

f. A provision that, upon installation of a service limiter or activation of a service limiter function on the meter, the utility shall provide the customer with information on the operation of the limiter, including how it can be reset, and information on what appliances or combination of appliances can generally be operated to stay within the limits imposed by the limiter.

g. A provision that the service limiter function of the meter shall be disabled no later than the next working day after the residential customer has paid the delinquent balance in full.

h. A service limiter customer that defaults on the payment agreement is subject to disconnection after a 24-hour notice pursuant to paragraph 20.4(15)*"f."*

These rules are intended to implement Iowa Code sections 476.6, 476.8, 476.20, and 476.54.

199—20.5(476) Engineering practice.

20.5(1) *Requirement for good engineering practice.* The electric plant of the utility shall be constructed, installed, maintained, and operated in accordance with accepted good engineering practice in the electric industry to assure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.

20.5(2) *Standards incorporated by reference.* The utility shall use the applicable provisions in the publications listed below as standards of accepted good practice, unless otherwise ordered by the commission.

a. Iowa Electrical Safety Code, as defined in 199—Chapter 25(478).

b. National Electrical Code, ANSI/NFPA 70-2020, as amended on April 1, 2021.

c. American National Standard Requirements for Instrument Transformers, ANSI/IEEE C57.13.1-2016, as approved August 21, 2017; and C57.13.3-2016, as approved August 21, 2017.

d. American National Standard for Electric Power Systems and Equipment Voltage Ratings (60 Hertz), ANSI C84.1-2020, as published September 3, 2020.

e. Recommended Practice for Grounding of Industrial and Commercial Power Systems, IEEE 3003.1-2019, as approved June 13, 2019.

f. IEEE Standard 1159-2019, IEEE Recommended Practice for Monitoring Electric Power Quality or any successor standard, as approved June 13, 2019.

g. IEEE Standard 519-2014, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems as approved March 27, 2014.

h. At railroad crossings, 199—42 (476), "Engineering standards for electric and communications lines" subrule.

20.5(3) *Adequacy of supply and reliability of service.* The generating capacity of the utility's plant, supplemented by the electric power regularly available from other sources, must be sufficiently large to meet all normal demands for service and provide a reasonable reserve for emergencies.

In appraising adequacy of supply the commission will segregate electric utilities into two classes viz., those having high capacity transmission interconnections with other electrical utilities and those that lack such interconnection and are therefore completely dependent upon the firm generating capacity of the utility's own generating facilities.

a. In the case of utilities having interconnecting ties with other utilities, the commission will, upon appraising adequacy of supply, take appropriate notice of the utility's recent past record, as of the date of appraisal, of any widespread service interruptions and any capacity shortages along with the consideration of the supply regularly available from other sources, the normal demands, and the required reserve for emergencies.

b. In the case of noninterconnected utilities, the commission will give attention to the maximum total coincident customer demand that could be satisfied without the use of the single element of plant equipment, the disability of which would produce the greatest reduction in total net plant productive capacity and also give attention to the normal demands for service and to the reasonable reserve for

emergencies.

This rule is intended to implement Iowa Code sections 476.8 and 478.18.

199—20.6(476) Metering.

20.6(1) *Inspection and testing program.* Each utility shall adopt a written program for the inspection and testing of its meters to determine the necessity for adjustment, replacement, or repair. The frequency of inspection and methods of testing shall be based on the utility's experience, manufacturer's recommendations, and accepted good practice. The publications listed in subrule 20.6(3) are representative of accepted good practice. Each utility shall maintain inspecting and testing records for each meter and associated device until three years after its retirement.

20.6(2) *Program content.* The written program shall, at minimum, address the following subject areas:

a. Classification of meters by capacity, type, and any other factor considered pertinent.

b. Checking of new meters for acceptable accuracy before being placed in service.

c. Testing of in-service meters, including any associated instruments or corrective devices, for accuracy, adjustments, or repairs. This may be accomplished by periodic tests at specified intervals or on the basis of a statistical sampling plan, but shall include meters removed from service for any reason.

d. Periodic calibration or testing of devices or instruments used by the utility to test meters.

e. The limits of meter accuracy considered acceptable by the utility.

f. The nature of meter and meter test records that will be maintained by the utility.

20.6(3) *Accepted good practice.* The American National Standard Code for Electricity Metering, ANSI C12.1-2022, as approved June 9, 2022, is considered to be representative of accepted good practice in matters of metering and meter testing.

20.6(4) *Meter adjustment.* All meters and associated metering devices shall, when tested, be adjusted as closely as practicable to the condition of zero error.

20.6(5) *Request tests.* Upon request by a customer, a utility shall test the meter servicing for that customer but it need not be more frequently than once in 18 months.

A written report of the test results shall be mailed to the customer within ten days of the completed test and a record of each test shall be kept and made available upon request. The utility shall give the customer or a representative of the customer the opportunity to be present while the test is conducted.

If the test finds the meter is accurate within the limits accepted by the utility in its meter inspection and testing program, the utility may charge the customer $25 or the cost of conducting the test, whichever is less. The customer shall be advised of any potential charge before the meter is removed for testing.

20.6(6) *Referee tests.* Upon written request by a customer or utility, the commission will conduct a referee test of a meter but it need not be more frequently than once in 18 months. The customer request shall be accompanied by a $30 deposit made payable to the utility.

Within five days of receipt of the written request and payment, the commission shall forward the deposit to the utility and notify the utility of the requirement for a test. The utility shall, within 30 days after notification of the request, schedule the date, time, and place of the test with the commission and customer. The meter shall not be removed or adjusted before the test. The utility shall furnish all testing equipment and facilities for the test. If the tested meter is found to be more than 2 percent fast or 2 percent slow, the deposit will be returned to the party requesting the test and billing adjustments shall be made as required in subrule 20.4(13). The commission shall issue its report within 15 days after the test is conducted, with a copy to the customer and the utility.

20.6(7) *Condition of meter.* No meter that is known to be mechanically or electrically defective, or to have incorrect constants, or that has not been tested and adjusted if necessary in accordance with

these rules shall be installed or continued in service. The capacity of the meter and the index mechanism shall be consistent with the electricity requirements of the customer.

20.6(8) *Comprehensive meter upgrade programs.*

a. A utility may forgo the meter testing procedures required under the utility's own inspection and testing program and subrule 20.6(2) if:

(1) The meters are removed or scheduled to be removed as part of a comprehensive meter upgrade program over a specified period not to exceed three years;

(2) The meters being removed have not previously been shown to be inaccurate or otherwise faulty;

(3) The utility either retains the removed meters for a period of one year from the removal date to allow customers the opportunity to challenge a meter's accuracy or tests a representative statistical sample based upon an industry standard such as ANSI C12.1-2022 of each type of meter being removed as part of the program and maintains the removed meters for a period of at least six months; and

(4) The utility tests any meter upon request of a customer based upon the customer's experience comparing the replaced and replacement meters.

b. Prior to forgoing its testing procedures under this subrule, a utility shall notify the commission that the utility is engaging in a comprehensive meter upgrade program. The notice shall state the option the utility is electing to pursue under subparagraph 20.6(8)*"a"*(3), the specified period of the program, and the expected number of meters to be upgraded. A utility electing to test a statistical sample of removed meters under subparagraph 20.6(8)*"a"*(3) shall also state the industry standard it will use to determine the sample size and provide the full text of the standard to the commission upon request.

c. A utility shall continue to follow the meter testing procedures for meters removed for any reason unrelated to the comprehensive meter upgrade program.

d. A utility shall resume the meter testing procedures required under the utility's own inspection and testing program and subrule 20.6(2) upon completion of the comprehensive meter upgrade program or the end of the specified period, whichever occurs first.

199—20.7(476) Standards of quality of service.

20.7(1) Standard frequency. The standard frequency for alternating current distribution systems shall be 60 cycles per second. The frequency shall be maintained within limits that will permit the satisfactory operation of customer's clocks connected to the system.

20.7(2) Voltage limits retail. Each utility supplying electric service to ultimate customers shall provide service voltages in conformance with the standard at paragraph 20.5(2)*"d."*

20.7(3) Voltage balance. Where three-phase service is provided the utility shall exercise reasonable care to assure that the phase voltages are in balance. In no case shall the ratio of maximum voltage deviation from average to average voltage exceed .02.

20.7(4) Voltage limits, service for resale. The nominal voltage shall be as mutually agreed upon by the parties concerned. The allowable variation shall not exceed 7.5 percent above or below the agreed-upon nominal voltage without the express approval of the commission.

20.7(5) Exceptions to voltage requirements. Voltage outside the limits specified will not be considered a violation when the variations:

a. Arise from the action of the elements.

b. Are infrequent fluctuations not exceeding five minutes in duration.

c. Arise from service interruptions.

d. Arise from temporary separation of parts of the system from the main system.

e. Are from causes beyond the control of the utility.

f. Do not exceed 10 percent above or below the standard nominal voltage, and service is at a

distribution line or transmission line voltage with the retail customer providing voltage regulators.

20.7(6) Voltage surveys and records. Voltage measurements shall be made at the customer's entrance terminals. For single-phase service the measurement shall be made between the grounded conductor and the ungrounded conductors. For three-phase service the measurement shall be made between the phase wires.

20.7(7) Each utility shall make a sufficient number of voltage measurements in order to determine if voltages are in compliance with the requirements as stated in subrules 20.7(2), 20.7(3), and 20.7(4). All records obtained under this subrule shall be retained by the utility for at least two years and shall be available for inspection by the commission's representatives. Notations on each chart shall indicate the following:

a. The location where the voltage was taken.

b. The time and date of the test.

c. The results of the comparison with a working standard indicating voltmeter.

20.7(8) Equipment for voltage measurements.

a. Secondary standard indicating voltmeter. Each utility shall have available at least one indicating voltmeter maintained with error no greater than 0.25 percent of full scale.

b. Working standard indicating voltmeters. Each utility shall have at least two indicating voltmeters maintained so as to have as-left errors of no greater than 1 percent of full scale.

c. Recording voltmeters. Each utility must have readily available at least two portable recording voltmeters with a rated accuracy of 1 percent of full scale.

20.7(9) Extreme care must be exercised in the handling of standards and instruments to assure that their accuracy is not disturbed. Each standard shall be accompanied at all times by a certificate or calibration card, duly signed and dated, on which are recorded the corrections required to compensate for errors found at the customary test points at the time of the last previous test.

20.7(10) Planned interruptions shall be made at a time that will not cause unreasonable inconvenience to customers, and interruptions planned for longer than one hour shall be preceded by adequate notice to those who will be affected.

20.7(11) Power quality monitoring. Each utility shall investigate power quality complaints from its customers and determine if the cause of the problem is on the utility's systems. In addressing these problems, each utility shall implement to the extent reasonably practical the practices outlined in the standard given at paragraph 20.5(2)*"f."*

20.7(12) Harmonics. A harmonic is a sinusoidal component of the 60 cycles per second fundamental wave having a frequency that is an integral multiple of the fundamental frequency. When excessive harmonics problems arise, each electric utility shall investigate and take actions to rectify the problem. In addressing harmonics problems, the utility and the customer shall implement to the extent practicable and in conformance with prudent operation the practices outlined in the standard at paragraph 20.5(2)*"g."*

This rule is intended to implement Iowa Code sections 476.2 and 476.8.

199—20.8(476) Safety.

20.8(1) *Protective measures.* Each utility shall exercise reasonable care to reduce those hazards inherent in connection with its utility service and to which its employees, its customers, and the general public may be subjected and shall adopt and execute a safety program designed to protect the public and fitted to the size and type of its operations. A utility shall include in its safety program procedures for notifying the commission and the public of an incident involving a component of a wind turbine, solar facility, storage facility, or any other generating facility where the incident has resulted in damage to adjacent property or members of the public.

20.8(2) *Accident investigation and prevention.* The utility shall give reasonable assistance to the commission in the investigation of the cause of accidents and in the determination of suitable means

of preventing accidents.

20.8(3) *Reportable accidents.* Each utility shall maintain a summary of all reportable accidents, as defined in the "Accident reports" rule of 199—Chapter 25(476,478), arising from its operations.

20.8(4) *Grounding of secondary distribution system.* Unless otherwise specified by the commission, each utility shall comply with, and encourage its customers to comply with, the applicable provisions of the acceptable standards listed in subrule 20.5(2) for the grounding of secondary circuits and equipment.

Ground connections should be tested for resistance at the time of installation. The utility shall keep a record of all ground resistance measurements.

The utility shall establish a program of inspection so that all artificial grounds installed by it shall be inspected within reasonable periods of time.

199—20.9(476) Electric energy automatic adjustment. The electric energy cost adjustment of the unit charge shall be an energy adjustment clause.

20.9(1) *Applicability.* A utility's electric energy adjustment shall recover from consumers only those costs which:

a. Are incurred in supplying energy;

b. Are beyond direct control of management;

c. Are subject to sudden important change in level;

d. Are an important factor in determining the total cost to serve; and

e. Are readily, precisely, and continuously segregated in the accounts of the utility.

20.9(2) *Energy adjustment clause.* Prior to any period in which a utility proposes to change the adjustment amount for each energy unit delivered to the customer, the utility shall determine and file for commission approval the adjustment amount to be charged for each energy unit delivered under rates set by the commission. The energy adjustment clause factors shall be printed on the customer's bill. The filing shall include all invoices (except invoices for fuel, freight, and transportation), worksheets, and detailed supporting data used to determine the amount of the adjustment. Spreadsheets, workbooks, and databases included in filings shall include all cell formulae and cell references. Utilities that participate in a wholesale energy market and use a forecasted energy adjustment clause shall provide information about key inputs and assumptions and explain the differences between the forecast and actual fuel costs. The estimated amount of fossil fuel should be detailed to reflect the amount of fuel, transportation, emission allowances, and other costs.

a. The utility shall keep and maintain journal entries to reflect a breakdown for each type of fuel: actual cost of fuel, transportation costs, and other costs. Items identified as other costs should be described and their inclusion as fuel costs shall be approved by the commission. The commission may direct that journal entries be filed. The utility shall also file detailed supporting data:

(1) To show the actual amount of sales of energy by month for which an adjustment was utilized, and

(2) To support the energy cost adjustment balance utilized in the monthly energy adjustment clause filings.

b. The energy adjustment shall provide for change of the price per kWh delivered under rates set by the commission based upon the formulas provided in the utility's tariff. The energy adjustment factor shall be rounded on a consistent basis to either the nearest 0.01¢/kWh or 0.001¢/kWh. The tariff shall define the components of the formula(s) and shall include reference to the specific accounts of the Uniform System of Accounts for each component.

(1) For each period as specified in the tariff, the calculation shall include but not be limited to:

1. The estimated energy cost and revenues;

2. The estimated electric energy to be delivered and entered in accounts 440, 442, and 444-7, excluding energy from distinct interchange deliveries entered into account 447, and including

intrautility energy service as included in accounts 448 and 929 of the Uniform System of Accounts during the month in which the energy adjustment charge will be used; and

3. The energy cost adjustment account balance.

(2) The base formula for the energy adjustment factor shall be:

Energy adjustment factor = (energy cost adjustment account balance + estimated energy costs and revenues) / estimated energy delivered

c. The estimated energy cost and revenues shall be the estimated cost and revenues associated with:

(1) Fossil and nuclear fuel consumed in the utility's own plants and the utility's share of fossil and nuclear fuel consumed in jointly owned or leased plants. Fossil fuel shall include natural gas used for electric generation and the cost of fossil fuel transferred from account 151 to account 501 or 547 of the Uniform System of Accounts. Nuclear fuel shall be that shown in account 518 of the Uniform System of Accounts except that if account 518 contains any expense for fossil fuel that has already been included in the cost of fossil fuel, it shall be deducted from the account. (Paragraph C of account 518 includes the cost of other fuels used for ancillary steam facilities.)

(2) The cost of steam purchased, or transferred from another department of the utility or from others under a joint facility operating agreement, for use in prime movers producing electric energy (accounts 503 and 521).

(3) A deduction shall be made of the expenses of producing steam chargeable to others, to other utility departments under a joint operating agreement, or to other electric accounts outside the steam generation group of accounts (accounts 504 and 522).

(4) The cost of water used for hydraulic power generation. Water cost shall be limited to items of account 536 of the Uniform System of Accounts. For pumped storage projects, the energy cost of pumping is included. Pumping energy cost shall be determined from the applicable costs of paragraph 20.9(2)*"c."*

(5) The energy costs paid for energy purchased under arrangements or contracts, as entered into account 555 of the Uniform System of Accounts, less the energy revenues to be recovered from corresponding sales, as entered in account 447 of the Uniform System of Accounts.

(6) Purchases from alternative energy production facilities under the commission's "Additional rate-regulated utility obligations regarding AEP facilities" rule at 199—Chapter 15(476).

(7) The weighted average costs of inventoried allowances used in generating electricity.

(8) The gains and losses, as described in subrule 20.17(9), from allowance transactions occurring during the month. Allowance transactions shall include vintage trades and emission for emission trades.

(9) Eligible costs or credits associated with the utility's annual reconciliation of its alternate energy purchase program under the "Alternate energy purchase programs" rule of 199—Chapter 15(476).

(10) Federal production tax credits unless the commission approves different ratemaking treatment.

(11) Other costs and revenues as specified in the utility's tariff and approved by the commission. For all other costs and revenues, the utility shall provide the type of cost, the dollar amount, and reference to the commission order approving the cost to be included in the energy adjustment clause.

d. The energy cost adjustment account balance shall be the cumulative balance of any excess or deficiency that arises out of the difference between commission recognized energy cost recovery and the amount recovered through application of energy charges to consumption under rates set by the commission. The calculation for the energy cost adjustment account balances shall include but is not limited to:

(1) The actual energy expense for the prior period and recorded in accounts 440, 442, and 444-6

of the Uniform System of Accounts;

(2) The actual electric energy delivered for the prior period and recorded in accounts 440, 442, and 444-7, excluding energy from distinct interchange deliveries entered into account 447, and including intrautility energy service as included in accounts 448 and 929 of the Uniform System of Accounts; and

(3) The beginning energy cost adjustment account balance (overrecovered or underrecovered amount) for the current period.

e. Reserve account for nuclear generation. A rate-regulated utility owning nuclear generation or purchasing energy under a participation power agreement on nuclear generation may establish a reserve account. The reserve account will spread the higher cost of energy used to replace the energy normally received from nuclear sources. A surcharge would be added to each kWh from the nuclear source. The surcharges collected are credited to the reserve account. During an outage or reduced level of operation, replacement energy cost would be offset through debit to the reserve account. The debit would be based upon the cost differential between replacement energy cost and the average cost (including the surcharge) of energy from the nuclear capacity. A reserve account shall have credit and debit limitations equal in dollar amounts to the total cost differential for replacement energy during a normal refueling outage.

f. A rate-regulated utility desiring to collect expensed allowance costs and the gains and losses from allowance transactions through the energy adjustment must file with the commission monthly reports including:

(1) The number and weighted average unit cost of allowances used during the month to offset emissions from the utility's affected units;

(2) The number and unit price of allowances purchased during the month;

(3) The number and unit price of allowances sold during the month;

(4) The weighted average unit cost of allowances remaining in inventory;

(5) The dollar amount of any gain from an allowance sale occurring during the month;

(6) The dollar amount of any loss from an allowance sale occurring during the month; and

(7) Documentation of any gain or loss from an allowance sale occurring during the month.

g. The energy adjustment clause factor may include other automatic adjustment mechanisms as approved by the commission.

20.9(3) *Utilities not making monthly changes to the adjustment amount.* Utilities that do not file monthly adjustments shall:

a. File the information pursuant to subrule 20.9(2) on a quarterly basis.

b. File an annual reconciliation of the EAC factor and an update to the EAC factor. The date of the annual reconciliation and update shall be specified in the utility's tariff. The reconciliation shall follow the requirements of subrule 20.9(2).

c. Include a semiannual adjustment if the absolute value of the cumulative over recovery or under recovery amount is greater than 20 percent of the forecasted net recoverable energy costs for the EAC year. The semiannual adjustment filing shall be filed six months after the annual reconciliation and update filing and shall follow the requirements of subrule 20.9(2), but will be limited to the remaining months of the year. The semiannual factor updates may utilize updated forecasts for the costs and sales for the remainder of the year.

20.9(4) *Review of energy adjustment clause.* At least biennially, but no more than annually, the commission shall require each utility that owns generation and utilizes an energy adjustment clause to provide fuel, freight, and transportation invoices from two months of the previous calendar year. The utility shall include an explanation of and demonstrate how these invoices correspond to the energy adjustment clause calculations. The explanation shall include inventory accounting information and average cost of fuel and transportation included in the energy adjustment clause calculations. The

commission will notify each utility by May 1 as to which two months' invoices will be required. These invoices shall be filed with the commission no later than the subsequent November 1.

20.9(5) *Annual reports.* With the first filing of the utility's EAC year, each utility participating in a wholesale market shall file a report explaining how participation results in reduced customer rates or reduces increases in customer rates, identifying current and evolving market issues that are expected to impact rates, and describing the utility's efforts to influence market issues for the benefit of customers.

199—20.10(476) Ratemaking standards.

20.10(1) *Coverage.* Standards for ratemaking shall apply to all rate-regulated utilities in the state of Iowa. The commission may, by rule or by order in specific cases, exempt a utility or class of utilities from any or all ratemaking standards. The standards are recommended to all service-regulated utilities in this jurisdiction.

20.10(2) *Cost of service.* Rates charged by an electric utility for providing electric service to each class of electric consumers shall be designed, to the maximum extent practicable, to reasonably reflect the costs of providing electric service to the class. The methods used to determine class costs of service shall to the maximum extent practical permit identification of differences in cost-incurrence, for each class of electric consumers, attributable to daily and seasonal time of use of service, and permit identification of differences in cost-incurrence attributable to differences in demand, energy, and customer components of cost.

The design of rates should reasonably approximate a pricing methodology for any individual utility that would reflect the price system that would exist in a competitive market environment. For purposes of determining revenue requirements among customer classes, embedded costs shall be preferred. For purposes of determining rate designs within customer classes, long-run marginal cost approaches are preferred although embedded cost approaches may be considered reasonable.

Nothing in this rule shall authorize or require the recovery by an electric utility of revenues in excess of, or less than, the amount of revenues otherwise determined to be lawful by the commission.

Guidelines for use in evaluating the acceptability of methods of class cost of service estimation include, but are not limited to, the following:

a. All usage of customer, demand, and energy components of service shall be considered new usage.

b. Customer classes shall be established on the primary basis of reasonably similar usage patterns within classes, even if this requires disaggregation or recombination of traditional customer classes.

c. Generating capacity estimates or allocations among and within classes shall recognize that utility systems are designed to serve both peak and off-peak demand, and shall attribute costs based upon both peak period demand and the contribution of off-peak period demand in determining generation mix. Generating capacity estimates and allocations among and within classes shall be based on load data for each class as described in paragraph "Class load data" of 199—Chapter 35(476).

d. Transmission and distribution capacity estimates or allocations among and within classes shall be demand-related based upon system usage patterns, and the load imposed by a class on the transmission or distribution capacity in question.

e. Customer cost component estimates or allocations shall include only costs of the distribution system from and including transformers, meters, and associated customer service expenses.

f. Methods of cost estimates or allocations among customer classes shall recognize the differences in voltage levels and other service characteristics, and line losses among customer classes.

g. Methods of class cost of service determination that are consistent with zero customer, demand, or energy component costs or major categories of these, such as generation, transmission, or

distribution, shall be considered unacceptable methods.

h. Long-run marginal cost methods of class cost of service determination shall clearly reflect changes in total costs to the utility with respect to changes in the outputs of customer, demand, or energy components of electric services.

i. The use of an inverse elasticity approach to adjust long-run marginal cost-based rates to the revenue requirement shall be unacceptable. Other approaches will be considered on a case-by-case basis.

20.10(3) *Declining block rates.* The energy-related cost component of a rate, or the amount attributable to the energy-related cost component of a rate, charged by an electric utility for providing electric service during any period to any class of electric consumers, shall not decrease as kWh consumption by such class increases during the period except to the extent that the utility demonstrates that the energy costs of providing electric service to such class decrease as consumption increases during the period.

20.10(4) *Time-of-day rates.* The rates charged by any electric utility for providing electric service to each class of electric consumers shall be on a time-of-day basis that reflects the cost of providing electric service to that class of electric consumers at different times of the day unless such rates are not cost-effective with respect to the class. These rates are cost-effective with respect to a class if the long-run benefits of the rate to the electric utility and its electric consumers in the class concerned are likely to exceed the metering costs and other costs associated with the use of the rates. Cost-based time-of-day rates shall be offered on an optional basis to electric consumers who do not otherwise qualify for the rates if consumers agree to pay the additional metering costs and other costs associated with the use of the rates.

20.10(5) *Seasonal rates.* The rates charged by an electric utility for providing electric service to each class of electric consumers may be on a seasonal basis that reflects the costs of providing service to the class of consumers at different seasons of the year to the extent that costs vary seasonally for the utility, if the commission determines that seasonal rates are appropriate in an individual case.

20.10(6) *Interruptible rates.* Each electric utility shall offer an interruptible rate that reflects the cost of providing interruptible service to the class of which the consumer is a member and the eligibility requirements for that interruptible service.

199—20.11(476) Customer notification of peaks in electric energy demand.

20.11(1) Pursuant to Iowa Code section 476.17, each investor-owned utility shall have a plan to notify its customers of an approaching peak demand on the day when peak demand is likely to occur. The plan shall be made available to the commission upon request.

20.11(2) The plan shall include, at a minimum, the following:

a. A description and explanation of the condition(s) that will prompt a peak alert.

b. A provision for a general notice to be given to customers prior to the time when peak demand is likely to occur and an explanation of when and how notice of an approaching peak in electric demand will be given to customers.

c. The text of the message or messages to be given in the general notice to customers. The message shall include the name of the utility providing the notice, an explanation that conditions exist that indicate a peak in electric demand is approaching, and an explanation of the significance of reductions in electricity use during a period of peak demand and the potential benefits of energy efficiency.

199—20.13(476) Periodic electric energy supply and cost review [476.6(12)].

Pursuant to Iowa Code section 476.6(12), the commission shall periodically conduct a contested case proceeding for the purpose of evaluating the reasonableness and prudence of a rate-regulated public utility's practices related to procurement of and contracting for fuel used in generating

electricity. When it determines to conduct a contested case proceeding, the commission shall notify a rate-regulated utility that it will be required to file an electric fuel procurement plan. The notification to the utility shall include a detailed list of what the commission will be examining as part of the review. The utility shall file its plan no later than 105 days after notification unless otherwise directed by the commission. A utility's procurement plan shall be organized to include information as follows:

20.13(1) *Index.* The plan shall include an index of all documents and information required to be filed in the plan, and the identification of the commission files in which the documents incorporated by reference are located.

20.13(2) *Purchase contracts and arrangements.* A utility's procurement plan shall include detailed summaries of the following types of contracts and agreements executed since the last procurement review:

a. All contracts and fuel supply arrangements for obtaining fuel for use by any unit in generation;

b. All contracts and arrangements for transporting fuel from point of production to the site where placed in inventory, including any unit generating electricity for the utility;

c. All contracts and arrangements for purchasing or selling allowances;

d. Purchased power contracts or arrangements, including sale-of-capacity contracts, involving over 25 MW of capacity;

e. Pool interchange agreements;

f. Multiutility transmission line interchange agreements; and

g. Interchange agreements between investor-owned utilities, generation and transmission cooperatives, or both, not required to be filed above, which were entered into or in effect since the last filing, and all such contracts or arrangements that will be entered into or exercised by the utility during the prospective 12-month period.

All procurement plans filed by a utility shall include all of the types of contracts and arrangements listed in subparagraphs (1) and (2) of this paragraph that will be entered into or exercised by the utility during the prospective 12-month period. In addition, the utility shall file an updated list of contracts that are or will become subject to renegotiation, extension, or termination within five years. The utility shall also update any price adjustment affecting any of the filed contracts or arrangements.

20.13(3) *Other contract offers.* The procurement plan shall include a list and description of those types of contracts and arrangements listed in paragraph 20.13(1)*"b"* offered to the utility since the last filing into which the utility did not enter. In addition, the procurement plan shall include a list of those types of contracts and arrangements listed in paragraph 20.13(1)*"b"* that were offered to the utility for the prospective 12-month period and into which the utility did not enter.

20.13(4) *Studies or investigation reports.* The procurement plans shall include all studies or investigation reports that have been considered by the utility in deciding whether to enter into any of those types of contracts or arrangements listed in paragraphs 20.13(1)*"b"* and *"c"* that will be exercised or entered into during the prospective 12-month period.

20.13(5) *Price hedge justification.* The procurement plan shall justify purchasing allowance futures contracts as a hedge against future price changes in the market rather than for speculation.

20.13(6) *Actual and projected costs.* The procurement plan shall include an accounting of the actual costs incurred in the purchase and transportation of fuel and the purchase of allowances for use in generating electricity associated with each contract or arrangement filed in accordance with paragraph 20.13(1)*"b"* for the previous 12-month period.

The procurement plan also shall include an accounting of all costs projected to be incurred by the utility in the purchase and transportation of fuel and the purchase of allowances for use in generating electricity associated with each contract or arrangement filed in accordance with paragraph 20.13(1)*"b"* in the prospective 12-month period.

If applicable, the reporting of transportation costs in the procurement plan shall include all known liabilities, including all unit train costs.

20.13(7) *Costs directly related to the purchase of fuel.* The utility shall provide a list and description of all other costs directly related to the purchase of fuels for use in generating electricity not required to be reported by paragraph *"f."*

20.13(8) *Compliance plans.* Each utility shall file its emissions compliance plan as submitted to the EPA. Revisions to the compliance plan shall be filed with each subsequent procurement plan.

20.13(9) *Evidence submitted.* Each utility shall submit all factual evidence and written argument in support of its evaluation of the reasonableness and prudence of the utility's procurement practice decisions in the manner described in its procurement plan. The utility shall file data sufficient to forecast fuel consumption at each generating unit or power plant for the prospective 12-month period. The commission may require the submission of machine-readable data for selected computer codes or models.

20.13(10) *Additional information.* Each utility shall file additional information as ordered by the commission.

199—20.14(476) Flexible rates.

20.14(1) *Purpose.* This rule is intended to allow electric utility companies to offer, at their option, incentive or discount rates to their customers.

20.14(2) *General criteria.*

a. Electric utility companies may offer discounts to individual customers, to selected groups of customers, or to an entire class of customers. However, discounted rates must be offered to all directly competing customers in the same service territory. Customers are direct competitors if they make the same end product (or offer the same service) for the same general group of customers. Customers that only produce component parts of the same end product are not directly competing customers.

b. In deciding whether to offer a specific discount, the utility shall evaluate the individual customer's, group's, or class's situation and perform a cost-benefit analysis before offering the discount.

c. Any discount offered should be such as to significantly affect the customer's or customers' decision to stay on the system or to increase consumption.

d. The consequences of offering the discount should be beneficial to all customers and to the utility. Other customers should not be at risk of loss as a result of these discounts; in addition, the offering of discounts shall in no way lead to subsidization of the discounted rates by other customers in the same or different classes.

20.14(3) *Tariff requirements.* If a company elects to offer flexible rates, the utility shall file for review and approval tariff sheets specifying the general conditions for offering discounted rates. The tariff sheets shall include, at a minimum, the following criteria:

a. The cost-benefit analysis must demonstrate that offering the discount will be more beneficial than not offering the discount.

b. The ceiling for all discounted rates shall be the approved rate on file for the customer's rate class.

c. The floor for the discount rate shall be equal to the energy costs and customer costs of serving the specific customer.

d. No discount shall be offered for a period longer than five years, unless the commission determines upon good cause shown that a longer period is warranted.

e. Discounts should not be offered if they will encourage deterioration in the load characteristics of the customer receiving the discount.

20.14(4) *Reporting requirements.* Each rate-regulated electric utility electing to offer flexible rates shall file annual reports with the commission within 30 days of the end of each 12 months. Reports

shall include the following information:

a. For all discounts initiated in the last 12 months, Section 1 of the report shall include:

(1) The identity of the new customers (by account number, if necessary);

(2) The value of the discount offered;

(3) The cost-benefit analysis results;

(4) The end-use cost of alternate fuels or energy supplies available to the customer, if relevant;

(5) The energy and demand components by month of the amount of electricity sold to the customer in the preceding 12 months.

b. Section 2 of the report relates to overall program evaluation. Amount of electricity refers to both energy and demand components when the customer is billed for both elements. For all discounts currently being offered, Section 2 of the report shall include:

(1) The identity of each customer (by account number, if necessary);

(2) The amount of electricity sold in the last 12 months to each customer at discounted rates, by month;

(3) The amount of electricity sold to each customer in the same 12 months of the preceding year, by month;

(4) The dollar value of the discount in the last 12 months to each customer, by month; and

(5) The dollar value of sales to each customer for each of the previous 12 months.

c. For all customers specifically evaluated and denied or having a discount terminated in the last 12 months, Section 3 of the report shall include:

(1) Customer identification (by account number, if necessary);

(2) The amount of electricity sold in the last 12 months to each customer, by month;

(3) The amount of electricity sold to each customer in the same 12 months of the preceding year, by month; and

(4) The dollar value of sales to each customer for each of the past 12 months.

d. No monthly report is required if the utility had no customers receiving a discount during the relevant period and had no customers that were evaluated for the discount and rejected during the relevant period.

20.14(5) *Rate case treatment.* In a rate case, 50 percent of any identifiable increase in net revenues will be used to reduce rates for all customers; the remaining 50 percent of the identifiable increase in net revenues may be kept by the utility. If there is a decrease in revenues due to the discount, the utility's test year revenues will be adjusted to remove the effects of the discount by assuming that all sales were made at full tariffed rates for the customer class. Determining the actual amount will be a factual determination to be made in the rate case.

199—20.15(476) Customer contribution fund.

20.15(1) *Applicability and purpose.* This rule applies to each electric public utility, as defined in Iowa Code sections 476.1, 476.1A, and 476.1B. Pursuant to Iowa Code section 476.66, each utility shall maintain a program plan to assist the utility's low-income customers with weatherization and to supplement assistance received under the federal low-income home energy assistance program for the payment of winter heating bills.

20.15(2) *Notification.* Each utility shall notify all customers of the customer contribution fund at least twice a year. The method of notice that will ensure the most comprehensive notification to the utility's customers shall be employed. Upon commencement of service and at least once a year, the notice shall be mailed or personally delivered to all customers, or provided by electronic means to those customers who have consented to receiving electronic notices. The other required notice may be published in a local newspaper(s) of general circulation within the utility's service territory. A utility serving fewer than 6,000 customers may publish its semiannual notices locally in a free newspaper, utility newsletter, or shopper's guide instead of a newspaper. At a minimum, the notice shall include:

a. A description of the availability of the fund;

b. A description of the purpose of the fund; and

c. A customer authorization form. This form shall include a monthly billing option and any other methods of contribution.

20.15(3) *Methods of contribution.* The utility shall provide for contributions as monthly pledges, as well as one-time or periodic contributions. A pledge by a customer or other party shall not be construed to be a binding contract between the utility and the pledger. The pledge amount shall not be subject to delayed payment charges by the utility. Each utility may allow persons or organizations to contribute matching funds.

20.15(4) *Annual report.* On or before September 30 of each year, each utility shall file with the commission a report of all the customer contribution fund activity for the previous fiscal year beginning July 1 and ending June 30. The report shall be in a form provided by the commission, contain an accounting of the total revenues collected and all distributions of the fund, and report all utility expenses directly related to the customer contribution fund.

199—20.16(476) Exterior flood lighting.

20.16(1) *Newly installed lighting.* All newly installed public utility-owned exterior flood lighting shall be solid-state lighting or lighting with equivalent or better energy efficiency.

20.16(2) *In-service lighting replacement schedule.* In-service lighting shall be replaced with solid-state lighting or lighting with equivalent or better energy efficiency when worn out due to ballast, lamp, or fixture failure for any other reason, such as vandalism or storm damage. A utility shall file with the commission as part of the utility's annual report required in 199—Chapter 23(476,546) a report stating the progress in converting to higher pressure sodium lighting or lighting with equivalent or higher energy efficiency.

20.16(3) *Efficacy standards.* Lighting other than solid-state has equivalent or better efficacy if one or more of the following can be established:

a. For fixtures, the mean lumens-per-watt lamp rating is greater than 100;

b. The new lighting uses no more energy per installation than comparable, suitably sized solid-state; or

c. The new lighting luminaries have a mean efficacy rating equal to or greater than 100 lumens per watt according to a DOE Lighting Facts label, testing under the DOE Commercially Available LED Product Evaluation and Reporting Program (CALiPER), Design Lights Consortium (DLC) or any other testing agency that follows Illuminating Engineering Society of North America LM-79-19, as approved May 14, 2019, test procedures.

199—20.17(476) Ratemaking treatment of emission allowances.

20.17(1) *Applicability and purpose.* This rule applies to all rate-regulated utilities providing electric service in Iowa. Under the Act, each electric utility is required to hold sufficient emission allowances to offset emissions at all affected and new units. The acquisition and disposition of emission allowances will be treated for ratemaking purposes as defined in this rule.

20.17(2) *Definitions.* The following words and terms, when used in this rule, shall have the meaning indicated below:

"Auction allowances" are allowances acquired or sold through EPA's annual allowance auction.

"Boot" means something acquired or forfeited to equalize a trade.

"Direct sale allowances" are allowances purchased from the EPA in its annual direct sale.

"Fair market value" is the amount at which an allowance could reasonably be sold in a transaction between a willing buyer and a willing seller other than in a forced or liquidation sale.

"Historical cost" is the amount of cash or its equivalent paid to acquire an asset, including any direct acquisition expenses. Any commissions paid to brokers shall be considered a direct acquisition

expense.

"Original cost" is the historical cost of an asset to the person first devoting the asset to public service.

"Statutory allowances" are allowances allocated by the EPA at no cost to affected units under the Act either through annual allocations as a matter of statutory right and those for which a utility may qualify by using certain compliance options or effective use of conservation and renewables.

20.17(3) *Valuing allowances for ratemaking purposes.*

a. Statutory allowances. Valued at zero cost to electric utility.

b. Direct sale allowances. Valued at historical cost.

c. Auction allowances. Valued at historical cost.

d. Purchased allowances. Valued at historical cost.

20.17(4) *Valuing allowance inventory accounts.* Allowance inventory accounts shall be valued at the weighted average cost of all allowances eligible for use during that year.

20.17(5) *Valuing allowances acquired as part of a package.* Allowances acquired as part of a package with equipment, fuel, or electricity shall be valued at their fair market value at the time the allowances were acquired.

20.17(6) *Valuing allowances acquired through exchanges.*

a. Exchanges without boot. Electric utilities shall value allowances received in exchanges based on the recorded inventory value of the allowances relinquished.

b. Exchanges with boot. Electric utilities shall value allowances as the sum of the inventory cost of the allowances given up and the monetary consideration paid in boot for the newly acquired allowances. In determining the historical cost of allowances received, a gain (or loss) shall be recorded to the extent that the amount of boot received exceeds a proportionate share of the recorded weighted average inventory cost of the allowance surrendered. The proportionate share shall be based upon the ratio of the monetary consideration received (i.e., boot) to the total consideration received (monetary consideration plus the fair market value of the allowances received). The historical cost of the allowances received shall be equal to the amount derived by subtracting the difference between the boot received and the gain from the old inventory cost.

20.17(7) *Valuing allowances transferred among affiliates.*

a. Allowances transferred from a utility to a parent or unregulated subsidiary shall be transferred at the higher of historical cost or fair market value.

b. Allowances transferred from an unregulated subsidiary or parent to a utility shall be transferred at the lesser of original cost or fair market value.

c. Allowances transferred from a utility to an affiliated utility shall be transferred at fair market value.

20.17(8) *Expense recognition and recovery of allowance costs.*

a. Expense recognition. Electric utilities shall charge allowances (including fractional amounts) to expense in the month in which related emissions occur.

b. Expense recovery. The expense associated with allowances used for compliance shall be passed through the energy adjustment as specified in rule 199—20.9(476). The expense associated with allowances used for compliance shall include expenses associated with vintage trades and emission for emission trades.

c. Allowance inventory shortage. If a utility emits more emissions in a month than it has allowances in inventory, the utility shall pass the estimated cost of acquiring the needed allowances through the energy adjustment. When the needed allowances are acquired, any difference between the estimated and actual cost of the allowances shall be passed through the energy adjustment as specified in rule 199—20.9(476).

20.17(9) *Gains/losses from allowance transactions.* The gains and losses, including net gains and

losses, from allowance transactions shall be passed through the energy adjustment as specified in rule 199—20.9(476). Allowance transactions shall include vintage trades and emission for emission trades.

20.17(10) *Allowance futures or option contracts.*

a. Price hedging. Electric utilities shall defer the costs or benefits from hedging transactions and include such amounts in inventory values when the related allowances are acquired, sold, or otherwise disposed of. Where the costs or benefits of hedging transactions are not identifiable with specific allowances, the amounts shall be included in inventory values when the futures contract is closed.

b. Speculation. Allowance transactions entered into for the purpose of speculation shall not affect allowance inventory pricing.

20.17(11) *Working capital reserve of allowances.* A working capital reserve of allowances shall be established in each utility's rate case proceeding based on the probability of forced outages, fuel quality variability, variability in load growth, nuclear exposure, the price and availability of allowances on the national market, and any other factors that the commission deems appropriate. The working capital reserve will earn at the utility's authorized rate of return.

20.17(12) *Allowances banked for future use.* Allowances banked for future use shall be considered plant held for future use in utility rate proceedings if a definitive plan and schedule for use of the allowances is deemed adequate by the commission.

20.17(13) *Prudence of allowance transactions.* The prudence of allowance transactions shall be determined by the commission in the periodic electric energy supply and cost review. The prudency review of allowance transactions and accompanying compliance plans shall be based on information available at the time the options or plans were developed. Costs recovered from ratepayers through the energy adjustment that are deemed imprudent by the commission shall be refunded with interest to ratepayers through the energy adjustment as specified in rule 199—20.9(476).

199—20.18(476,478) Service reliability requirements for electric utilities.

20.18(1) *Applicability.* This rule is applicable to investor-owned electric utilities and electric cooperative corporations and associations operating within the state of Iowa subject to Iowa Code chapter 476 and to the construction, operation, and maintenance of electric transmission lines by electric utilities as defined in subrule 20.18(4) to the extent provided in Iowa Code chapter 478.

20.18(2) *Purpose and scope.* Reliable electric service is of high importance to the health, safety, and welfare of the citizens of Iowa. The purpose of this rule is to establish requirements for assessing the reliability of the transmission and distribution systems and facilities that are under the commission's jurisdiction. This rule establishes reporting requirements to provide consumers, the commission, and electric utilities with methodology for monitoring reliability and ensuring quality of electric service within an electric utility's operating area. This rule provides definitions and requirements for maintenance of interruption data, retention of records, and report filing.

20.18(3) *General obligations.*

a. Each electric utility shall make reasonable efforts to avoid and prevent interruptions of service. However, when interruptions occur, service shall be reestablished within the shortest time practicable, consistent with safety.

b. The electric utility's electrical transmission and distribution facilities shall be designed, constructed, maintained, and electrically reinforced and supplemented as required to reliably perform the power delivery burden placed upon them in the storm and traffic hazard environment in which they are located.

c. Each electric utility shall carry on an effective preventive maintenance program and be capable of emergency repair work on a scale that its storm and traffic damage record indicates as appropriate to its scope of operations and to the physical condition of its transmission and distribution facilities.

d. In appraising the reliability of the electric utility's transmission and distribution system, the

commission will consider the condition of the physical property and the size, training, supervision, availability, equipment, and mobility of the maintenance forces, all as demonstrated in actual cases of storm and traffic damage to the facilities.

e. Each electric utility shall keep records of interruptions of service on its primary distribution system and make an analysis of the records for the purpose of determining steps to be taken to prevent recurrence of such interruptions.

f. Each electric utility shall make reasonable efforts to reduce the risk of future interruptions by taking into account the age, condition, design, and performance of transmission and distribution facilities and providing adequate investment in the maintenance, repair, replacement, and upgrade of facilities and equipment.

20.18(4) *Definitions.* Terms and formulas when used in this rule are defined as follows:

"Customer" means (1) any person, firm, association, or corporation, (2) any agency of the federal, state, or local government, or (3) any legal entity responsible by law for payment of the electric service from the electric utility which has a separately metered electrical service point for which a bill is provided. Each meter equals one customer. Retail customers are end-use customers who purchase and ultimately consume electricity.

"Customer average interruption duration index (CAIDI)" means the average interruption duration for those customers who experience interruptions during the year. It is calculated by dividing the annual sum of all customer interruption durations by the total number of customer interruptions.

$$\text{CAIDI} = \frac{\text{Sum of All Customer Interruption Durations}}{\text{Total Number of Customer Interruptions}}$$

"Distribution system" means that part of the electric system owned or operated by an electric utility and designed to operate at a nominal voltage of 25,000 volts or less.

"Electric utility" means investor-owned electric utilities and electric cooperative corporations and associations owning, controlling, operating, or using transmission and distribution facilities and equipment subject to the commission's jurisdiction.

"Electrical service point" means the point of connection between the electric utility's equipment and the customer's equipment.

"GIS" means a geospatial information system. This is an information management framework that allows the integration of various data and geospatial information.

"Interrupting device" means a device capable of being reclosed whose purpose is to interrupt faults and restore service or disconnect loads. These devices can be manual, automatic, or motor-operated. Examples may include transmission breakers, feeder breakers, line reclosers, motor-operated switches, fuses, or other devices.

"Interruption" means a loss of service to one or more customers or other facilities and is the result of one or more component outages. The types of interruption include momentary event, sustained, and scheduled. The following interruption causes shall not be included in the calculation of the reliability indices:

1. Interruptions intentionally initiated pursuant to the provisions of an interruptible service tariff or contract and affecting only those customers taking electric service under such tariff or contract;
2. Interruptions due to nonpayment of a bill;
3. Interruptions due to tampering with service equipment;
4. Interruptions due to denied access to service equipment located on the affected customer's private property;

5. Interruptions due to hazardous conditions located on the affected customer's private property;
6. Interruptions due to a request by the affected customer;
7. Interruptions due to a request by a law enforcement agency, fire department, other governmental agency responsible for public welfare, or any agency or authority responsible for bulk power system security; or
8. Interruptions caused by the failure of a customer's equipment; the operation of a customer's equipment in a manner inconsistent with law, an approved tariff, rule, regulation, or an agreement between the customer and the electric utility; or the failure of a customer to take a required action that would have avoided the interruption, such as failing to notify the company of an increase in load when required to do so by a tariff or contract.

"Interruption duration" as used herein in regard to sustained outages means a period of time measured in one-minute increments that starts when an electric utility is notified or becomes aware of an interruption and ends when an electric utility restores electric service, as long as the duration is not less than five minutes long.

"Interruption, momentary" means single operation of an interrupting device that results in a voltage of zero. For example, two breaker or recloser operations equals two momentary interruptions. A momentary interruption is one in which power is restored automatically.

"Interruption, momentary event" means an interruption of electric service to one or more customers of duration limited to the period required to restore service by an interrupting device. Note: Such switching operations must be completed in a specified time not to exceed five minutes. This definition includes all reclosing operations that occur within five minutes of the first interruption. For example, if a recloser or breaker operates two, three, or four times and then holds, the event shall be considered one momentary event interruption.

"Interruption, scheduled" means an interruption of electric power that results when a transmission or distribution component is deliberately taken out of service at a selected time, usually for the purposes of construction, preventive maintenance, or repair. If it is possible to defer the interruption, the interruption is considered a scheduled interruption.

"Interruption, sustained" means any interruption not classified as a momentary event interruption. It is an interruption of electric service that is not automatically or instantaneously restored, with duration of greater than five minutes.

"Loss of service" means the loss of electrical power, or a complete loss of voltage, to one or more customers. This does not include any of the power quality issues such as sags, swells, impulses, or harmonics. Also see definition of "interruption."

"Major event" will be declared whenever extensive physical damage to transmission and distribution facilities has occurred within an electric utility's operating area due to unusually severe and abnormal weather or event and:

1. Wind speed exceeds 90 mph for the affected area,
2. One-half inch of ice is present and wind speed exceeds 40 mph for the affected area,
3. Ten percent of the affected area total customer count is incurring a loss of service for a length of time to exceed five hours, or
4. 20,000 customers in a metropolitan area are incurring a loss of service for a length of time to exceed five hours.

"Metropolitan area" means any community, or group of contiguous communities, with a population of 20,000 individuals or more.

"Momentary average interruption frequency index (MAIFI)" means the average number of momentary electric service interruptions for each customer during the year. It is calculated by dividing the total number of customer momentary interruptions by the total number of customers served.

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$$\text{MAIFI} = \frac{\text{Total Number of Customer Momentary Interruptions}}{\text{Total Number of Customer Interruptions}}$$

"OMS" is a computerized outage management system.

"Operating area" means a geographical area defined by the electric utility that is a distinct area for administration, operation, or data collection with respect to the facilities serving, or the service provided within, the geographical area.

"Outage" means the state of a component when it is not available to perform its intended function due to some event directly associated with that component. An outage may or may not cause an interruption of service to customers, depending on system configuration.

"Power quality" means the characteristics of electric power received by the customer, with the exception of sustained interruptions and momentary event interruptions. Characteristics of electric power that detract from its quality include waveform irregularities and voltage variations, either prolonged or transient. Power quality problems shall include, but are not limited to, disturbances such as high or low voltage, voltage spikes and transients, flickers and voltage sags, surges, and short-time overvoltages, as well as harmonics and noise.

"Rural circuit" means a circuit not defined as an urban circuit.

"System average interruption duration index (SAIDI)" means the average interruption duration per customer served during the year. It is calculated by dividing the sum of the customer interruption durations by the total number of customers served during the year.

$$\text{SAIDI} = \frac{\text{Sum of All Customer Interruption Durations}}{\text{Total Number of Customers Served}}$$

"System average interruption frequency index (SAIFI)" means the average number of interruptions per customer during the year. It is calculated by dividing the total annual number of customer interruptions by the total number of customers served during the year.

$$\text{SAIFI} = \frac{\text{Total Number of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

"Total number of customers served" means the total number of customers served on the last day of the reporting period.

"Urban circuit" means a circuit where both 75 percent or more of its customers and 75 percent or more of its primary circuit miles are located within a metropolitan area.

20.18(5) *Record-keeping requirements.*

a. Required records for electric utilities.

(1) Each electric utility shall maintain a geospatial information system (GIS) and an OMS sufficient to determine a history of sustained electric service interruptions experienced by each customer. The OMS shall have the ability to access data for each customer in order to determine a history of electric service interruptions. Data shall be sortable by each of, and in any combination with, the following factors:

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1. State jurisdiction;
2. Operating area (if any);
3. Substation;
4. Circuit;
5. Number of interruptions in reporting period; and
6. Number of hours of interruptions in reporting period.

(2) Records on interruptions shall be sufficient to determine the following:

1. Starting date and time the utility became aware of the interruption;
2. Duration of the interruption;
3. Date and time service was restored;
4. Number of customers affected;
5. Description of the cause of the interruption;
6. Operating areas affected;
7. Circuit number(s) of the distribution circuit(s) affected;
8. Service account number or other unique identifier of each customer affected;
9. Address of each affected customer location;
10. Weather conditions at time of interruption;
11. System component(s) involved (e.g., transmission line, substation, overhead primary main, underground primary main, transformer); and
12. Whether the interruption was planned or unplanned.

(3) Each electric utility shall maintain as much information as feasible on momentary interruptions.

(4) Each electric utility shall keep information on cause codes, weather codes, isolating device codes, and equipment failed codes.

1. The minimum interruption cause code set should include: animals, lightning, major event, scheduled, trees, overload, error, supply, equipment, other, unknown, and earthquake.
2. The minimum interruption weather code set should include: wind, lightning, heat, ice/snow, rain, clear day, and tornado/hurricane.
3. The minimum interruption isolating device set should include: breaker, recloser, fuse, sectionalizer, switch, and elbow.
4. The minimum interruption equipment failed code set should include: cable, transformer, conductor, splice, lightning arrester, switches, cross arm, pole, insulator, connector, other, and unknown.
5. Utilities may augment the code sets listed above to enhance tracking.

(5) An electric utility shall retain for seven years the records required by 20.18(5)*"a"*(1) through (4).

(6) Each electric utility shall record the date of installation of major facilities (poles, conductors, cable, and transformers) installed on or after April 1, 2003, and integrate that data into its GIS database.

20.18(6) *Notification of major events.* Notification of major events as defined in subrule 20.18(4) shall comply with the requirements of rule 199—20.19(476,478).

20.18(7) *Annual reliability and service quality report for.* Each electric utility shall submit to the commission on or before May 1 of each year an annual reliability report for the previous calendar year for the Iowa jurisdiction. The report shall include the following information:

a. Description of service area. Urban and rural Iowa service territory customer count, Iowa operating area customer count, if applicable, and major communities served within each operating area.

b. System reliability performance.

(1) An overall assessment of the reliability performance, including the urban and rural SAIFI, SAIDI, and CAIDI reliability indices for the previous calendar year for the Iowa service territory and each defined Iowa operating area, if applicable. This assessment shall include outages at the substation, transmission, and generation levels of the system that directly result in sustained interruptions to customers on the distribution system. These indices shall be calculated twice, once with the data associated with major events and once without. This assessment should contain tabular and graphical presentations of the trend for each index as well as the trends of the major causes of interruptions.

(2) The urban and rural SAIFI, SAIDI, and CAIDI reliability average indices for the previous five calendar years for the Iowa service territory and each defined Iowa operating area, if applicable. The reliability average indices shall include outages at the substation, transmission, and generation levels of the system that directly result in sustained interruptions to customers on the distribution system. Calculation of the five-year average shall start with data from the year covered by the first Annual Reliability Report submittal so that by the fifth Annual Reliability Report submittal a complete five-year average shall be available. These indices shall be calculated twice, once with the data associated with major events and once without.

(3) The MAIFI reliability indices for the previous five calendar years for the Iowa service territory and each defined Iowa operating area for which momentary interruptions are tracked. The first annual report should specify which portions of the system are monitored for momentary interruptions, identify and describe the quality of data used, and update as needed in subsequent reports.

c. Reporting on customer outages.

(1) The reporting electric utility shall provide tables and graphical representations showing, in ascending order, the total number of customers that experienced set numbers of sustained interruptions during the year (i.e., the number of customers who experienced zero interruptions, the number of customers who experienced one interruption, two interruptions, three interruptions, and so on). The utility shall provide this for each of the following:

1. All Iowa customers, excluding major events.
2. All Iowa customers, including major events.

(2) The reporting electric utility shall provide tables and graphical representations showing, in ascending order, the total number of customers that experienced a set range of total annual sustained interruption duration during the year (i.e., the number of customers who experienced zero hours total duration, the number of customers who experienced greater than 0.0833 but less than 0.5 hour total duration, the number of customers who experienced greater than 0.5 but less than 1.0 hour total duration, and so on, reflecting half-hour increments of duration). The utility shall provide this for each of the following:

1. All Iowa customers, excluding major events.
2. All Iowa customers, including major events.

d. Major event summary. For each major event that occurred in the reporting period, the following information shall be provided:

(1) A description of the area(s) impacted by each major event;

(2) The total number of customers interrupted by each major event;

(3) The total number of customer-minutes interrupted by each major event; and

(4) Updated damage cost estimates to the electric utility's facilities.

e. Information on transmission and distribution facilities.

(1) Total circuit miles of electric distribution line in service at year's end, segregated by voltage level. Reasonable groupings of lines with similar voltage levels, such as but not limited to 12,000- and 13,000-volt three-phase facilities, are acceptable.

(2) Total circuit miles of electric transmission line in service at year's end, segregated by voltage level.

f. Plans and status report. A plan for service quality improvements, including costs, for the electric utility's transmission and distribution facilities that will ensure quality, safe, and reliable delivery of energy to customers.

g. Capital expenditure information. Reporting of capital expenditure information shall start with data from the year covered by the first Annual Reliability Report submittal so that by the fifth Annual Reliability Report submittal five years of data shall be available in each subsequent annual report.

(1) Each electric utility shall report on an annual basis the total of:

1. Capital investment in the electric utility's Iowa-based transmission and distribution infrastructure approved by its commission of directors or other appropriate authority. If any amounts approved by the commission of directors are designated for use in a recovery from a major event, those amounts shall be identified in addition to the total.

2. Capital investment expenditures in the electric utility's Iowa-based transmission and distribution infrastructure. If any expenditures were utilized in a recovery from a major event, those amounts shall be identified in addition to the total.

(2) Each electric utility shall report the same capital expenditure data from the past five years in the same fashion as in subparagraph 20.18(7)*"g"*(1).

h. Maintenance. Reporting of maintenance information shall start with data from the year covered by the first Annual Reliability Report submittal so that by the fifth Annual Reliability Report submittal five years of data shall be available in each subsequent annual report.

(1) Total maintenance budgets and expenditures for distribution, and for transmission, for each operating area, if applicable, and for the electric utility's entire Iowa system for the past five years. If any maintenance budgets and expenditures are designated for use in a recovery from a major event, or were used in a recovery from a major event, respectively, those amounts shall be identified in addition to the totals.

(2) Tree trimming.

1. The budget and expenditures described in subparagraph 20.18(7)*"h"*(1) shall be stated in such a way that the total annual tree trimming budget expenditures shall be identifiable for each operating area and for the electric utility's entire Iowa system for the past five years.

2. Total annual projected and actual miles of transmission line and of distribution line for which trees were trimmed for the reporting year for each operating area and for the electric utility's entire Iowa system for the reporting year, compared to the past five years. If the utility has utilized, or would prefer to utilize, an alternative method or methods of tracking physical tree trimming progress, it may propose the use of that method or methods to the commission in a request for waiver.

3. In the event the utility's actual tree trimming performance, based on how the utility tracks its tree trimming as described in numbered paragraph 20.18(7)*"h"*(2)"1," lags behind its planned trimming schedule by more than six months, the utility shall be required to file for the commission's approval additional tree trimming status reports on a quarterly basis. Such reports shall describe the steps the utility will take to remediate its tree trimming performance and backlog. The additional quarterly reports shall continue until the utility's backlog has been reduced to zero.

i. The annual reliability report shall include the number of poles inspected, the number rejected, and the number replaced.

20.18(8) *Inquiries about electric service reliability.*

A customer may request a report from an electric utility about the service reliability of the circuit supplying the customer's own meter. Within 20 working days of receipt of the request, the electric utility shall supply the report to the customer at a reasonable cost. The report should identify which interruptions (number and durations) are due to major events.

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199—20.19(476,478) Notification of outages.

20.19(1) *Notification.* The notification requirements in rule 20.19 are for the timely collection of electric outage information that may be useful to emergency management agencies in providing for the welfare of individual Iowa citizens. Each electric utility shall notify the commission when it is projected that an outage may result in a loss of service for more than six hours and the outage meets one of the following criteria:

a. Loss of service for more than six hours to substantially all of a municipality, including the surrounding area served by the same utility. A utility may use loss of service to 75 percent or more of customers within a municipality, including the surrounding area served by the utility, to meet this criterion;

b. Loss of service for more than six hours to 20 percent of the customers in a utility's established zone or loss of service to more than 5,000 customers in a metropolitan area, whichever is less;

c. A major event as defined in subrule 20.18(4); or

d. Any other outage considered significant by the electric utility. This includes loss of service for more than six hours to significant public health and safety facilities known to the utility at the time of the notification, even when the outage does not meet the criteria in paragraphs 20.19(1)*"a"* and *"b."*

20.19(2) *Information required.*

a. Notification shall be provided regarding outages that meet the requirements of subrule 20.19(1) by notifying the commission duty officer by email at dutyofficer@iuc.iowa.gov or, in appropriate circumstances, by telephone at 515.745.2332. Notification shall be made at the earliest possible time after it is determined the event may be reportable and should include the following information, as available:

(1) The general nature or cause of the outage;

(2) The area affected;

(3) The approximate number of customers that have experienced a loss of electric service as a result of the outage;

(4) The time when service is estimated to be restored; and

(5) The name of the utility, the name and telephone number of the person making the report, and the name and telephone number of a contact person knowledgeable about the outage.

The notice should be supplemented as more complete or accurate information is available.

b. The utility shall provide to the commission updates of the estimated time when service will be restored to all customers able to receive service or of significant changed circumstances, unless service is restored within one hour of the time initially estimated.

c. The utility shall notify the commission once service is fully restored to all customers after an outage meeting the requirements of subrule 20.19(1).

199—20.20(476) Electric vehicle charging service.

20.20(1) A commercial or public electric vehicle charging station is not a public utility under Iowa Code section 476.1 if the charging station receives all electric power from the electric utility in whose service area the charging station is located. If an electric vehicle charging station obtains electric power from a source other than the electric utility, the determination of whether the commercial or public electric vehicle charging station is a public utility shall be resolved by the commission.

20.20(2) A person, partnership, business association, or corporation, foreign or domestic, furnishing electricity to a commercial or public electric vehicle charging station shall comply with Iowa Code section 476.25 and, if applicable, with the terms and conditions of the public utility's tariffs or service rules.

20.20(3) A rate-regulated public utility shall not, through its filed tariff, prohibit electric vehicle charging or restrict the method of sale of electric vehicle charging at a commercial or public electric vehicle charging station.

20.20(4) Electric utilities and entities providing commercial or public electric vehicle charging service shall comply with all applicable statutes and regulations governing the provision of electric vehicle charging service, including but not limited to all taxing requirements, and shall, if necessary, file all appropriate tariffs.

199—20.21(476) Transmission cost adjustment (TCA).

20.21(1) *Transmission cost adjustment.* Pursuant to Iowa Code section 476.6(8)*"b,"* public utilities may automatically adjust rates and charges to recover transmission-related costs incurred by or charged to the public utility consistent with a tariff or agreement that is subject to the jurisdiction of FERC, provided that a schedule showing the automatic adjustment of rates and charges is first filed with and approved by the commission. The public utilities shall also file accounting information and invoices for any expenses incurred for construction and maintenance, along with any other documents filed with the respective regional transmission organization or the FERC, regarding these qualifying transmission-related costs. Transmission cost adjustments shall be computed and tracked separately for each customer classification or grouping previously approved by the commission and shall use the same unit of measure as the utility's tariffed rates. Changes in the customer classification and grouping on file are not automatic and require prior approval by the commission. If any eligible cost is recovered outside of the TCA, the cost may not be recovered through the TCA until the cost is removed from its current recovery mechanism. If any eligible cost is recovered outside of the TCA, the cost may not be recovered through the TCA until the cost is removed from base rates during a utility's rate case. The TCA factor shall be included as a separate line item on the customer's bill.

20.21(2) *TCA annual factor.* An annual TCA factor update shall be filed as a TF docket at least 30 days prior to the beginning of the utility's TCA year. The TCA update shall include information describing which eligible TCA costs are being recovered through the TCA and, if not recovered through the TCA, where eligible costs are being recovered. The annual TCA factors for each customer classification or grouping shall be based upon forecasted transmission costs allocated to Iowa retail customers, forecasted Iowa sales or demand, and allocation factors approved by the commission. The forecasted allocation factors shall be based on a three-year average of the actual allocation factors for each of the three previous calendar years. For customers billed by kWh, the factors shall be developed on a kWh basis. For customers billed by kW, the factors shall be developed on a kilowatt basis. In addition, the following is required to be included with this filing:

a. A listing of all transmission costs that are incurred by or charged to the public utility and are consistent with a tariff or agreement that is subject to the jurisdiction of the FERC, detailing where each transmission cost is currently being recovered (e.g., base rates, TCA).

b. A time series chart of each transmission cost eligible for inclusion in the TCA for the previous three calendar years.

20.21(3) *Annual reconciliation.* Within four months after the effective date of annual TCA factors, a utility shall file an annual reconciliation based upon actual costs and revenues attributed to Iowa customers for the prior calendar year. The annual reconciliation shall be filed in the same TF docket identified for the annual filing required in subrule 20.21(2). The reconciliation shall include updated allocators for each customer classification or grouping based on actual load data from the prior calendar year. The actual costs for the prior calendar year shall be allocated to each customer class based upon the updated allocation factors. The utility shall compare the actual transmission costs allocated to each customer class with the actual revenue billed through the TCA by customer class net of the prior year's reconciliation dollar amount for each customer class. Any resulting overcollection or undercollection for each class shall be divided by the forecasted sales or demand for each customer class for the remainder of the TCA period. The resulting adjustments shall be added to the effective TCA factors that were approved in the TCA annual factor filing under subrule 20.21(2). The adjusted TCA factor for customers billed by kWh shall be developed on a kWh basis, and for customers billed

on a kilowatt basis, the adjusted TCA factor shall be developed on a kilowatt basis.

20.21(4) *Other adjustments to the TCA factor.* A utility may propose other adjustments to the TCA factor throughout the 12-month TCA period to assist with accurate recovery of forecasted costs and revenues, subject to commission approval. Any midyear adjustments shall be filed in the same TF docket as the annual filing. If a utility proposes an adjustment to the TCA factor, other than the reconciliation required in subrule 20.21(3), the utility shall provide an explanation for the proposed adjustment and provide information to support the proposed adjustment. For any customer billed by kWh, the proposed adjustment shall be developed on a kWh basis. For any customer billed on a kilowatt basis, the proposed adjustment shall be developed on a kilowatt basis.

20.21(5) *Quarterly informational filings.* By the end of the month following the end of each calendar quarter, the utility shall file a report containing, at minimum, the current cumulative overcollection or undercollection balance, support for the overcollection or undercollection calculation, the total transmission cost for the current calendar year by category, and the supporting invoices and documentation for the most recent calendar quarter. The reports shall be filed in the same TF docket as the annual TCA filing.

20.21(6) *Semiannual transmission reports.* Each year at the beginning, and midpoint of a utility's TCA year, each utility shall file a report detailing the utility's transmission-related activities. These reports shall detail the utility's recent efforts to mitigate transmission costs and influence policy to the benefit of the utility and its ratepayers.

20.21(7) *Midcontinent Independent System Operator, Inc. (MISO) refunds.* Any utility utilizing a TCA mechanism that receives transmission-related refunds from MISO shall file a refund plan for commission approval, detailing how the utility will distribute the refund to customers. The refund plan must be filed once the amount and timing of the refund is known to the utility. The refund plan shall include an applicable interest rate for refund amounts held more than 30 days, the method of distributing the refund to customers, and the timing of distributing the refund to customers.

These rules are intended to implement Iowa Code sections 17A.3, 364.23, 474.5, 476.1, 476.2, 476.6, 476.8, 476.20, 476.54, 476.66, 478.18, and 546.7.