ARCADIA ELECTRIC UTILITY

Utility Public Benefits Rider

Under a provision of the 1999 Wisconsin Act 9, a municipal electric utility shall charge each customer a public benefits fee. The public benefits fees collected by the municipal utility shall be considered trust funds of the Department of Administration (DOA) and not income of the utility. Fifty percent of the public benefits fees charged by the municipal utility shall be used for low-income programs and the remainder will be used for energy efficiency programs. Low-income programs may include assistance to low-income households for weatherization and other energy conservation services, payment of energy bills or early identification or prevention of energy crises. Energy efficiency programs may include those programs designed to reduce the demand for natural gas or electricity or improving the efficiency of its use during any period.

Act 9 states that each electric utility municipal must collect an average of $16 per meter per year. The actual amount of fees paid by a customer cannot exceed the lesser of 3 percent of all other billed electric charges or $750 per month over the period October 29, 2000, through June 30, 2008. These fees are not subject to Gross Receipts or Sales Taxes. A municipal utility may determine the amount that a particular class of customers or members is required to pay under Act 9 and may charge different fees to different classes of customers or members.

Arcadia Electric Utility, in compliance with Act 9 and, as of the Effective Date established below, has set the fees for each retail electric customer rate classification as follows:

Rg-1 Residential Service	$0.40 per month
Gs-1 Commercial	$1.50 per month
Cp-1 Small Power Service	$2.00 per month
Cp-2 Large Power/Industrial	$4.46 per month

Arcadia Electric Utility has elected to spend 100 percent of the public benefits fees collected from its retail electric customers to support local Energy Efficiency and Low Income Commitment to Community Programs. Questions regarding public benefits fees or Arcadia Electric Utility's Commitment to Community Programs should be directed to Ryan Sheehy at (608) 323-3359 extension 30.

This PSCW filing is informational only. Approval of these fees is the responsibility of DOA.

Power Cost Adjustment Clause

All metered rates shall be subject to a positive or negative power cost adjustment charge equivalent to the amount by which the current cost of power (per kilowatt-hour of sales) is greater or lesser than the base cost of power purchased and produced (per kilowatt-hour of sales).

The current cost per kilowatt-hour of energy billed is equal to the cost of power purchased and produced for the most recent month, divided by the kilowatt-hours of energy sold. The monthly adjustment (rounded to the nearest one one-hundredth of a cent) is equal to the current cost less the base cost. The base cost of power (U) is $0.0256 per kilowatt-hour.

Periodic changes shall be made to maintain the proper relative structure of the rates and to insure that power costs are being equitably recovered from the various rate classes. If, after final wholesale rates have been authorized, the monthly adjustment (A) exceeds $0.0141 per kilowatt-hour, the company shall file a request with the Public Service Commission of Wisconsin within 30 days for changes in rates to incorporate a portion of the power cost adjustment into the base rates.

For purposes of calculating the power cost adjustment charge, the following formula shall be used:

$$A = \frac{C}{S} - U$$

A is the power cost adjustment rate in dollars per kilowatt-hour rounded to four decimal places applied on a per kilowatt-hour basis to all metered sales of electricity.

S is the total kilowatt-hours sold during the most recent month.

U is the base cost of power, which equals the average cost of power purchased and produced per kilowatt-hour of sales for the test year period. This figure remains constant in each subsequent monthly calculation at $0.0256 per kilowatt-hour until otherwise changed by the Public Service Commission of Wisconsin.

C is the cost of power purchased in dollars in the most recent month <u>(net of wholesale interruptible credits) PLUS amounts credited to retail customers for interruptible service in the current month</u>. Cost of power purchased for calculation of C are the monthly amounts which would be recorded in the following account of the Uniform System of Accounts

Class A & B utilities	Accounts 501, 536, 547 and 555
Class C utilities	Accounts 501, 531, 539 and 545
Class D utilities	Accounts 501, 521, 531 and 540

RATE FILE

Sheet No.	1 of 1
Schedule No.	Rg-1
Amendment No.	40

Public Service Commission of Wisconsin

ARCADIA ELECTRIC UTILITY

Residential Service

Application: This rate will be applied to residential single-phase customers for ordinary household purposes. Single-phase motors may not exceed 5 horsepower individual-rated capacity without utility permission.

Customers who do not meet this criteria will be served under the applicable rate.

Customer Charge: $5.50 per month.

Energy Charge: $0.0601 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh varies monthly. See schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be the customer charge.

Prompt Payment of Bills: A charge of 3 percent but not less than 30 cents will be added to bills not paid within 20 days from date of issuance. A late payment charge shall be applied only once to any given amount outstanding. This charge is applicable to all customers.

RATE FILE

Sheet No.	1 of 1
Schedule No.	Gs-1
Amendment No.	40

Public Service Commission of Wisconsin

ARCADIA ELECTRIC UTILITY

General Service

Application: This rate will be applied to single and three-phase customers. This includes commercial, institutional, government, farm, and other customers. The monthly Maximum Measured Demand of customers served on this rate shall not exceed 40 kilowatts for three or more months in a consecutive 12-month period.

Gs-1 customers estimated to be near the 40 kW limit shall have demand meters installed and will be transferred into the appropriate demand class as soon as the application conditions of that class have been met.

Customer Charge:
Single-phase: $ 5.50 per month.
Three-phase: $12.00 per month.

Energy Charge: $0.0601 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh varies monthly. See schedule PCAC.

Minimum Monthly Bill: The minimum monthly bill shall be the customer charge.

Prompt Payment of Bills: Same as Rg-1.

Determination of Maximum Measured Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatt-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month.

Small Power Service

Application: This rate will be applied to customers for all types of service if their monthly Maximum Measured Demand is in excess of 40 kilowatts (kW) per month for three or more months in a consecutive 12-month period, unless the customer exceeds the application conditions of the large power or industrial power schedules, Cp-2 and Cp-3, respectively.

Customers billed on this rate shall continue to be billed on this rate until their monthly Maximum Measured Demand is less than 40 kW per month for 12 consecutive months. The utility shall offer customers billed on this rate a one time option to continue to be billed on this rate for another 12 months if their monthly Maximum Measured Demand is less than 40 kW per month. However, this option shall be offered with the provision that the customer waives all rights to billing adjustments arising from a claim that the bill for service would be less on another rate schedule than under this rate schedule.

Customer Charge: $25.00 per month.

Demand Charge: $5.00 per kW of billed demand.

Energy Charge: $0.0304 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh varies monthly. See schedule PCAC.

Prompt Payment of Bills: Same as Rg-1.

Minimum Monthly Bill: The minimum monthly bill shall be equal to the customer charge, plus $1.50 per kW of the highest monthly Maximum Measured Demand occurring in the current month or preceding 11-month period.

(continued on next page)

Small Power Service (continued)

Discounts: The monthly bill for service will be subject to the following discounts applied in the sequence listed below.

Primary Metering Discount: Customers metered on the primary side of the transformer shall be given a 2.00 percent discount on the monthly energy charge, distribution demand charge, and demand charge. The PCAC and the monthly customer charge will not be eligible for the primary metering discount.

Transformer Ownership Discount: Customers who own and maintain their own transformers or substations shall be given a credit of $0.75 per kW of distribution demand. Customer-owned substation equipment shall be operated and maintained by the customer. Support and substation equipment is subject to utility inspection and approval.

Determination of Maximum Measured Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatt-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month.

Determination of Billed Demand:
The Billed demand for Small Power customers shall be the Maximum Measured Demand.

Large Power Service

Application: This rate will be applied to customers for all types of service if their monthly Maximum Measured Demand is in excess of 200 kilowatts (kW) per month for three or more months in a consecutive 12-month period, unless the customer exceeds the application conditions of the industrial power schedule, Cp-3.

Cp-2 customers with maximum measured demand in excess of 500 kW per month shall have the option of receiving service under the Large Power Interruptible Service, Cp-5, tariff.

Customers billed on this rate shall continue to be billed on this rate until their monthly Maximum Measured Demand is less than 200 kW per month for 12 consecutive months. The utility shall offer customers billed on this rate a one time option to continue to be billed on this rate for another 12 months if their monthly Maximum Measured Demand is less than 200 kW per month. However, this option shall be offered with the provision that the customer waives all rights to billing adjustments arising from a claim that the bill for service would be less on another rate schedule than under this rate schedule.

Customer Charge: $70.00 per month.

Distribution Demand Charge: $1.50 per kW of distribution demand.

Billed Demand Charge: $4.50 per kW of Maximum Measured Demand.

Power Factor Demand Charge: $4.50 per kW of Power Factor Demand

Energy Charge: $0.0262 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh varies monthly. See schedule PCAC.

Prompt Payment of Bills: Same as Rg-1.

Minimum Monthly Bill: The minimum monthly bill shall be equal to the customer charge, plus the distribution demand charge.

(continued on next page)

Large Power Service (continued)

Determination of Maximum Measured Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatt-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month.

Determination of Distribution Demand: The Distribution Demand shall be the highest monthly Maximum Measured Demand occurring in the current month or preceding 11-month period.

Discounts: The monthly bill for service will be subject to the following discounts applied in the sequence listed below.

> Primary Metering Discount: Customers metered on the primary side of the transformer shall be given a 2.00 percent discount on the monthly energy charge, distribution demand charge, and demand charge. The PCAC and the monthly customer charge will not be eligible for the primary metering discount.
> Transformer Ownership Discount: Customers who own and maintain their own transformers or substations shall be given a credit of $0.75 per kW of distribution demand. Customer-owned substation equipment shall be operated and maintained by the customer. Support and substation equipment is subject to utility inspection and approval.

Determination of Billed Demand: The Billed Demand is the Maximum Measured Demand except when the customer qualifies and elects to participate in the Large Power Interruptible Service tariff, Cp-5.

Determination of Power Factor Demand: For Cp-2 Customers, the Power Factor Demand shall be determined each month by the following formula:

$$\text{Power Factor Demand} = \frac{\text{Maximum Measured Demand} \times 90\%}{\text{Average Monthly Power Factor}} - \text{Maximum Measured Demand}$$

The Average Monthly Power Factor is obtained by the following formula, where A = monthly use of kilowatt-hours and B = monthly use of lagging reactive kilovolt-ampere-hours as obtained from a reactive component meter. Any reactive component meter used shall be equipped with ratchets to prevent registration of leading Power Factor.

$$\text{Average Monthly Power Factor} = \frac{A}{\sqrt{A^2 + B^2}}$$

Industrial Power Service

Application: This rate will be applied to customers for all types of service if their monthly Maximum Measured Demand is in excess of 1,000 kilowatts (kW) per month for three or more months in a consecutive 12-month period.

Cp-3 customers shall have the option of receiving service under the Large Power Interruptible Service, Cp-5, tariff.

Customers billed on this rate shall continue to be billed on this rate until their monthly Maximum Measured Demand is less than 1,000 kW per month for 12 consecutive months. The utility shall offer customers billed on this rate a one time option to continue to be billed on this rate for another 12 months if their monthly Maximum Measured Demand is less than 1,000 kW per month. However, this option shall be offered with the provision that the customer waives all rights to billing adjustments arising from a claim that the bill for service would be less on another rate schedule than under this rate schedule.

Customer Charge: $100.00 per month.

Distribution Demand Charge: $1.50 per kW of distribution demand.

Billed Demand Charge: $4.62 per kW of Maximum Measured Demand.

Power Factor Demand Charge: $4.62 per kW of Power Factor Demand

Energy Charge: $0.0230 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh varies monthly. See schedule PCAC.

Prompt Payment of Bills: Same as Rg-1.

Minimum Monthly Bill: The minimum monthly bill shall be equal to the customer charge, plus the distribution demand charge.

Determination of Maximum Measured Demand: The Maximum Measured Demand in any month shall be that demand in kilowatts necessary to supply the average kilowatt-hours in 15 consecutive minutes of greatest consumption of electricity during each month. Such Maximum Measured Demand shall be determined from readings of permanently installed meters or, at the option of the utility, by any standard methods or meters. Said demand meter shall be reset to zero when the meter is read each month.

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Industrial Power Service (continued)

Determination of Distribution Demand: The Distribution Demand shall be the highest monthly Maximum Measured Demand occurring in the current month or preceding 11-month period.

Discounts: The monthly bill for service will be subject to the following discounts applied in the sequence listed below.

Primary Metering Discount: Customers metered on the primary side of the transformer shall be given a 2.00 percent discount on the monthly energy charge, distribution demand charge, and demand charge. The PCAC and the monthly customer charge will not be eligible for the primary metering discount.

Transformer Ownership Discount: Customers who own and maintain their own transformers or substations shall be given a credit of $0.75 per kW of distribution demand. Customer-owned substation equipment shall be operated and maintained by the customer. Support and substation equipment is subject to utility inspection and approval.

Determination of Billed Demand: The Billed Demand is the Maximum Measured Demand except when the customer qualifies and elects to participate in the Large Power Interruptible Service tariff, Cp-5.

Determination of Power Factor Demand: For Cp-3 Customers, the Power Factor Demand shall be determined each month by the following formula:

$$\text{Power Factor Demand} = \frac{\text{Maximum Measured Demand} \times 90\%}{\text{Average Monthly Power Factor}} - \text{Maximum Measured Demand}$$

The Average Monthly Power Factor is obtained by the following formula, where A = monthly use of kilowatt-hours and B = monthly use of lagging reactive kilovolt-ampere-hours as obtained from a reactive component meter. Any reactive component meter used shall be equipped with ratchets to prevent registration of leading Power Factor.

$$\text{Average Monthly Power Factor} = \frac{A}{\sqrt{A^2 + B^2}}$$

ARCADIA ELECTRIC UTILITY

Conjunctive Metering Rider

Application: Available to customers on the Cp-2 or Cp-3 schedule customers with multiple service entrances of non-contiguous meters on contiguous and non-contiguous property. Under this option, customers may choose to receive a single bill for multiple metered service points.

The options described in this rider are voluntary.

Billing Determinants: All the provisions of the Cp-2 and Cp-3 rates schedules shall apply. The rates of the class originally served under will apply to billing determinants, regardless of the level attained by the conjunction coincident demand.

Determination of Customer Charges: The monthly customer charge will equal the Cp-2, or Cp-3, customer charge times the number of individually metered locations.

Determination of Distribution Demand: The Distribution Demand will equal the sum of the distribution demands of each metered locations.

Determination of Maximum Coincident Demand: The Maximum Coincident Demand in any month shall be the greatest demand resulting from the combination of all separately metered services, which occurs in any 15 consecutive minutes during each month.

Determination of Billed Demand: The Billed Demand is the Maximum Coincident Demand.

Determination of Power Factor Demand: The Power Factor Demand for Cp-4 customers shall be determined each month by the following formula:

$$\text{Power Factor Demand} = \frac{\text{Maximum Coincident Demand} \times 90\%}{\text{Group Coincident Monthly Power Factor}} - \text{Maximum Coincident Demand}$$

Determination of Group Coincident Power Factor: The Group Coincident Monthly Power Factor shall be the weighted average power factor for all metering points and is calculated using the same equations for Power Factor as shown in Cp-2 and Cp-3.

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Conjunctive Metering Rider (continued)

General Provisions:

1. All customers served on the Cp-2 and Cp-3 rate schedules must be notified annually that conjunctive metering is available upon request.

2. Customers selecting this rider shall make a one-time, nonrefundable payment of $100 per metering point for the software/hardware needed to accomplish conjunctive metering.

3. The utility will install the necessary metering equipment to permit conjunctive metering within a reasonable time.

4. Customers who are conjunctive metered may terminate it upon written notice to the utility. The customer must be notified by the utility that he/she is responsible for any increases in bills that may result by eliminating conjunctive metering.

5. Cp-2 or Cp-3 customers with multiple service entrances may only be served under this rider if all multiple metering points in the tariff class are combined together for conjunctive metering.

ARCADIA ELECTRIC UTILITY

Voluntary Interruptible Service Rider

Application: This rider is available on a voluntary basis to customers served under the Cp-2 and Cp-3 Rate Schedules with a minimum Maximum Measured Demand of 500 kilowatts for at least three (3) of the previous 12 months.

The customer must be willing to create an average Interruptible Demand of at least 300 kW to be served under this tariff.

Rates: All provisions of the Cp-2 or Cp-3 Schedule shall apply to any customer receiving service under this rider. The following conditions and charges shall also apply. Customers who qualify for this tariff and elect to receive service under this tariff shall sign a written agreement with the utility and shall be referred to as Interruptible Customers.

Interruptible Demand Charge: $2.50 (Cp-2) or $2.62 (Cp-3) per kW per month of Interruptible Demand. (These charges are based on an interruptible credit of $2.00 per kW.)

Determination of Billed Demand: The Billed Demand is equal to the Interruptible Customer's nominated Contracted Firm Demand.

Nomination of Contracted Firm Demand: An Interruptible Customer must nominate a Contracted Firm Demand. The demand nomination shall be in whole kilowatts unadjusted for power factor. The demand nomination may be modified only with the written concurrence of the Arcadia Electric Utility. Generally, changes to the demand nomination will be allowed if such changes are in accordance with the tariff provisions under which the utility purchases wholesale electric service. Changes in demand nominations may be required if they are necessary to meet the terms of the Interruptible Customer's contract with the utility.

Determination of Interruptible Demand: The Interruptible Demand is the difference between the Maximum Measured Demand and the Contracted Firm.

Notification of Interruptions: Upon being notified to interrupt, the Interruptible Customer must reduce its load to the level of its Contracted Firm Demand or below immediately or within one hour as determined by the terms of the contract.

Conditions of Interruptions: Interruptions will be made at the sole discretion of the utility or the utility's wholesale supplier. Interruptions will be limited in time, duration, and total number of hours as is specified in the wholesale supplier's wholesale tariff.

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Voluntary Interruptible Service Rider (Continued)

Penalties for Failure to Interrupt:
The utility shall charge the Interruptible Customer an amount per kW of demand equal to six months of interruptible credit ($12.00 per kW) times the average uncontrolled load of the Interruptible Customer for the season.

Uncontrolled load is the Interruptible Customer's measured demand above the Contracted Firm Demand during periods of interruption. The average uncontrolled load will be calculated based on the peak hours used by the wholesale supplier to compute the utility's demand. There are two seasons in each calendar year. The summer season is from May 1 through October 31 and the winter season is from November 1 through April 30.

Any additional penalties that are imposed upon the Arcadia Electric Utility by the wholesale supplier, due to the failure of the Interruptible Customer to interrupt its load under the terms of their contract, will be the sole responsibility of the Interruptible Customer.

Interconnection of Generating Equipment: A customer operating electric generating equipment shall not connect it in parallel with the utility's system without the written consent of the utility nor without providing, at the customer's expense, protective and relaying equipment satisfactory to the utility.

Cost of Notification Equipment: The interruptible customer shall be responsible for the cost of a dedicated telephone line used to communicate notices of interruption from the utility's wholesale supplier to the Interruptible Customer.

Contract: Customers receiving service under this rider must enter into a contract with the utility with a term equivalent to the term of the wholesale supplier's interruptible tariff. The utility's wholesale supplier shall be notified of this contract. The contract shall be automatically renewed on the anniversary date unless the Interruptible Customer provides written notice to the utility to discontinue interruptible service. Interruptible service under this rider may also be terminated by the utility as a result of a change in wholesale suppliers or as the result of changes in wholesale tariffs.

RATE FILE

Sheet No.	1 of 1
Schedule No.	Ms-1
Amendment No.	40

Public Service Commission of Wisconsin

ARCADIA ELECTRIC UTILITY

Street, Security, and Athletic Field Lighting Service

Application: This schedule will be applied to municipal street lighting, private security lighting, and athletic field lighting. The utility will furnish, install, and maintain street and security lighting units. Athletic field lighting units shall be owned and maintained by the customer.

Investment charge:

Overhead:

150 W HPS	-	$ 6.00 per lamp per month

Ornamental:

100 W HPS	-	$ 6.00 per lamp per month
150 W HPS (Concrete Pole)	-	$ 9.00 per lamp per month
250 W HPS (Metal Pole)	-	$ 9.50 per lamp per month
1,000 W HPS (Metal Pole)	-	$13.85 per lamp per month

Athletic Field Lighting:

New Athletic field	$1,000.00 per year, entire field

Energy Charge: $0.0261 per kilowatt-hour (kWh).

Power Cost Adjustment Clause: Charge per all kWh varies monthly. See schedule PCAC.

Prompt Payment of Bills: Same as Rg-1.

Conditions:

1. One or more lamps of each type, wattage, and burning schedule of street and security light shall be metered and the average value of similar units used to estimate monthly usage by similar units on the system.
2. Athletic field light shall be metered.
3. Any maintenance performed by the utility on athletic field lighting units not owned by the utility shall be reimbursed to the utility on a time plus material basis.

RATE FILE

Sheet No.	1 of 1
Schedule No.	OC-1
Amendment No.	40

Public Service Commission of Wisconsin

ARCADIA ELECTRIC UTILITY

Other Charges and Billing Provisions

Budget Payment Plan: A budget payment plan, which is in accordance with ch. PSC 113, Wis. Adm. Code, is available from the utility. The utility does not use a fixed budget year. The utility will calculate the monthly budgeted amount by spreading the estimated annual bill over eleven months, with the last month consisting of any end of year adjustments.

Reconnection Billing: All customers whose service is disconnected in accordance with the disconnection rules as outlined in ch. PSC 113, Wis. Adm. Code, shall be required to pay a reconnection charge. The charge shall be **$35.00** during regular office hours. After regular office hours the minimum reconnection charge of **$35.00** applies plus any overtime labor costs, not to exceed a total maximum charge of **$60.00**.

Reconnection of a Seasonal Customer's Service: Reconnection of a service for a seasonal customer who has been disconnected for less than one year shall be subject to the same reconnection charges outlined above. A seasonal customer shall also be charged for all minimum bills which would have been incurred had the customer not temporarily disconnected service.

Insufficient Fund Charge: A **$15.00** charge will be applied to the customer's account when a check rendered for utility service is returned for insufficient funds. This charge may not be in addition to, but may be inclusive of, the water utility's insufficient fund charge when the check was for payment of both electric and water service.

Average Depreciated Embedded Cost: The embedded cost of the distribution system (excluding the standard transformer and service facilities) is determined by the Public Service Commission for each customer classification. The average depreciated embedded cost by customer classification is as follows:

Residential Service: **$164**

Apartment and Rental Units Separately Metered: **$164** per unit metered.

Subdividers and Residential Developers: **$164** per unit.

General Service: (Including Multi-Unit Dwellings If Billed on One Meter): **$740.00**.

Power Service: CP-1: **$32.60** per kW, of average billed CP-1demand.
CP-2: **$23.80** per kW, of average billed CP-2demand.
CP-3: **$18.55** per kW, of average billed CP-1demand.

Street Lighting: **$5.40**

EFFECTIVE: July 25, 2003
PSCW AUTHORIZATION: Order in docket 210-ER-103, dated July 18, 2003

ARCADIA ELECTRIC UTILITY

Parallel Generation (20 kW or less) - Net Energy Billing

1. Effective In

   All territories served by the utility.

2. Availability

   Available for single-phase and three-phase customers where a part or all of the electrical requirements of the customer are supplied by the customer's generating facilities, where such facilities have a total generating capability of 20 kW or less, where such facilities are connected in parallel with the utility and where such facilities are approved by the utility.

3. Rate

   The customer shall be billed monthly on a net energy basis and shall pay the fixed charge and energy charge specified in the rate schedule under which he is served. If, in any month, the customer's bill has a credit balance of $25 or less, the amount shall be credited to subsequent bills until a debit balance is reestablished. If the credit balance is more than $25, the utility shall reimbursed the customer by check upon request. Monthly credits shall be computed by taking the net excess kilowatt-hours produced times the sum of the applicable energy charge plus monthly power cost adjustment clause (PCAC).

4. Metering and Services Facilities

   A customer who is served under a regular rate schedule shall have any ratchet and/or other device removed from his meter to allow reverse power flow and measurement of net energy used. Customers eligible for net energy billing but with existing metering facilities equipped with ratchets or other devices preventing reverse registration (i.e. time-of-use metering facilities) may request that the utility install the necessary metering to permit such billing.

5. Customer Obligation

   See Pgs-2 Sections 10 and 11.

Customer-Owned Generation Systems (Greater than 20 kW)

1. Effective In

   All territories served by the utility

2. Availability

   Available for single-phase and three-phase customers where a part or all of the electrical requirements of the customer are supplied by the customer's generating facilities, where such facilities have a total generating capability of greater than 20 kW and less than or equal to 100 kW, where such facilities are connected in parallel with the utility. Customers not desiring to sell energy under this rate have the right to negotiate a buy-back rate.

   The energy rate indicated below is the minimum for electrical energy. Customers with generating facilities greater than 100 kW can negotiate a buy-back rate. Should the utility be unwilling to pay the minimum rate for electrical energy, the utility shall agree to transport such electrical energy to another utility who will pay such minimum rate. The utility shall recover actual costs of such transportation from the generating customer.

3. Rate

   Customers shall receive monthly payments for all electricity delivered to the utility and shall be billed by the utility for metering and associated billing expenses specified in the latest rates of the wholesale supplier unless the latest rates of the wholesale supplier do not properly reflect avoided costs. In such event, the Commission, upon request, may determine appropriate rates. The utility shall have on file a copy of the latest customer-owned generation system rates for its wholesale supplier.

4. On-Peak and Off-Peak Hours and Holidays

   On-peak and off-peak hours and holidays are those specified in the wholesale suppliers latest rates.

5. Minimum Charge

   The monthly minimum charge paid by the customer shall be the customer charge.

6. Power Factor

   The customer shall operate on a net power factor of not less than 90 percent.

Customer-Owned Generation Systems (Greater than 20 kW) continued

7. Negotiated Rates

Customers with generation systems greater than 100 kW can negotiate a buy-back rate.

Customers with generation systems greater than 20 kW and less than or equal to 100 kW have the right to negotiate a buy-back rate. The buy-back rate can not be greater than the full avoided cost.

The following are the required procedure guidelines:

a. The utility must respond to the customer-owned generating system within 30 days of the initial written receipt of the customer-owned generating system proposal and within 30 days of receipt of a subsequent customer-owned generating system proposal;

b. The utility's rejection of the customer-owned generating system proposal must be accompanied by a counter-offer relating to the specific subject matter of the customer-owned generating system proposal; and

c. If the utility is unable to respond to the customer-owned generating system proposal within 30 days it shall inform the customer-owned generating system of:

   1) Specific information needed to evaluate the customer-owned generating system proposal.

   2) The precise difficulty encountered in evaluating the customer-owned generating system proposal.

   3) The estimated date that it will respond to the customer-owned generating system proposal.

d. The Commission may become involved in the utility negotiations upon showing by either utility or the customer-owned generating system that a reasonable conclusion cannot be reached under the above guidelines. The Commission may provide a waiver to the guidelines and order new negotiation requirements so that a reasonable conclusion can be reached.

e. A copy of all negotiated buy-back rates shall be sent to the Commission. These rates shall not be effective until the contract is placed on file by the Commission.

8. Charges for Energy Supplied by the Utility

Energy supplied by the utility to the customer shall be billed in accordance with the standard applicable rate schedules of the utility.

Customer-Owned Generation Systems (Greater than 20 kW) continued

9. Maintenance Rate

A customer-owned generation facility may be billed lower demand charges for energy purchased during scheduled maintenance provided written approval is obtained in advance from the utility. Demand charges other than "Customer Demand" shall be prorated if maintenance is scheduled such that the utility does not incur additional capacity costs. Said probation shall be the demand charge times the number of authorized days of scheduled maintenance divided by the number of days in the billing period.

10. Contract Required

A contract is required between the utility and the customer-owned generation facility. The contract shall specify safety, system protection, and power quality rules that generators must comply with. The contract shall require a minimum of $100,000 liability insurance or proof of financial responsibility for the customer-owned generation system. Contracts with customer-owned generation facilities selling energy under the standard (non-negotiated) rate have no specific term or length. Contracts with customer-owned generation facilities selling energy under a negotiated rate shall contain performance requirements and be of sufficient length to ensure the utility avoids the costs for which the customer-owned generation facility has been paid.

11. Customer Obligation

a. Metering Facilities

The customer shall furnish, install and wire the necessary service entrance equipment, meter sockets, meter enclosure cabinets, or meter connection cabinets that may be required by the utility to properly meter usage and sales to the utility.

b. Interconnection Costs

The owner of the generating facility shall be required to pay all interconnection costs, including metering, incurred by the utility. Said costs, including financing costs, shall be paid by the owner within two years of the installation date of the interconnection facilities.

c. Liability Insurance

The owner of the generating facility shall be required to have liability insurance on the generating facility of at least $100,000 or be able to prove financial responsibility.

Customer-Owned Generation Systems (Greater than 20 kW) continued

d. Interconnection and Operation (Safety and Power Quality) Requirements

Electric Service to a customer-owned electric generation installation may be disconnected for failure to comply with these requirements.

1) Interconnection of a generating facility with the utility system shall not be permitted until application has been made to and approval received from the electric utility. The utility may withhold approval only for good reason such as failure to comply with applicable utility or governmental rules or laws. The utility shall require a contract specifying reasonable technical connection and operating aspects for the parallel generating facility.

2) The utility may require that for each generating facility there be provided between the generator or generators and the utility system, a lockable load-break disconnect switch. For installations interconnected at greater 600 volts a fused cutout switch may be substituted, where practicable. The switches shall be accessible to the utility for the purpose of isolating the parallel generating facility from the utility system when necessary.

3) The utility shall require a separate distribution transformer for a customer having a generating facility where necessary, for reasons of public and employee safety or where the potential exists for the generating facility causing problems with the service of other customers. Ordinarily the requirement should not be necessary for an induction-type generator with a capacity of 5 kW or less, or other generating units of 10 kW or less that utilize line-connected inverters.

4) Where necessary, to avoid the potential for a facility causing problems with the service of other customers, the utility should limit the capacity and operating characteristics of single-phase motors. Ordinarily single-phase generators should be limited to a capacity of 10 kW or less.

5) The utility shall require that each generating facility have a system for automatically isolating the generator from the utility's system upon loss of the utility supply, unless the utility desires that the local generation be continued to supply isolated load. For synchronous and induction generators such protection against continued operation when isolated from the utility system will ordinarily consist of over-current protection, fuse or circuit breaker, plus a voltage or frequency controlled contractor which would automatically disconnect the unit whenever its output voltage or frequency drifted outside predetermined limits, such as plus or minus 10 percent of the rated values.

Customer-Owned Generation Systems (Greater than 20 kW) continued

Other suitable protective systems against abnormal voltages of frequencies may be accepted by the utility.

6) The utility shall require that the customer discontinue parallel generation operation when it so requests and the utility may isolate the generating installation from its system at times:

   a) When considered necessary to facilitate maintenance or repair of utility facilities.

   b) When considered necessary during system emergencies.

   c) When considered necessary during such times as the generating facility is operating in a hazardous manner, or is operating such that it adversely affects service to other customers or to nearby communication systems or circuits.

7) The owner of the generating facility shall be required to make the equipment available and permit entry upon the property by electric and communication utility personnel at reasonable times for the purposes of testing isolation and protective equipment, and evaluating the quality of power delivered to the utility's system; and testing to determine whether the local generating facility is the source of any electric service or communication systems problems.

8) The power output of the generating facility shall be maintained such that the frequency and voltage are compatible with normal utility service and do not cause that utility service to fall outside the prescribed limits of Commission rules and other standard limitations.

9) The generating facility shall be operated so that variations from acceptable voltage levels and other service impairing disturbances do not result in adverse effects on the service or equipment of other customers, and in a manner which does not produce undesirable levels of harmonics in the utility power supply.

10) The owner of the generating facility shall be responsible for providing protection for the owner's installation equipment and for adhering to all applicable national, state and local codes. The design and configuration of certain generating equipment such as that utilizing line-commutated inverters sometimes requires an isolation transformer as part of the generating installation for safety and for protection of generating facilities.

Customer-Owned Generation Systems (Greater than 20 kW) continued

12. Utility Obligation

    a. Metering Facilities

    The utility shall install appropriate metering facilities to record all flows of energy necessary to bill in accordance with the charges and credits of the rate schedule.

    b. Notice to Communication Firms

    Each electric utility shall notify telephone utility and cable television firms in the area when it knows that customer-owned generating facility is to be interconnected with its system. This notification shall be as early as practicable to permit coordinated analysis and testing in advance of interconnection, if considered necessary by the electric or telephone utility or cable television firm.

13. Right to Appeal

    The owner of the generating facility interconnected or proposed to be interconnected with a utility system may appeal to the Commission should any requirement of the utility service rules filed in accordance with the provisions of s. PSC 113.70, Wis. Adm. Code, or the required contract be considered to be excessive or unreasonable. Such appeal will be reviewed and the customer notified of the Commission's determination.

Public Service Commission of Wisconsin

ARCADIA ELECTRIC UTILITY

ELECTRIC RULES

GENERAL SERVICE AND EXTENSION RULES
TABLE OF CONTENTS

Section Number	Name	Sheet Number
101	CONTRACT PROVISIONS	
101.1	Term of Contract	5
101.2	Definition and Classification of Customers	5
101.3	Application of Rates and Combined Metering	7
101.4	Availability of Service Voltages	7
101.5	Dual Voltages	8
101.6	Emergency Systems	8
	Application for Service	*
	Customer Deposits	*
	BILLING	
	Regular Billing	*
	Budget Payment Plan (See OC-1)	*
	Estimated Bill	*
	Billing for Fractional Month Service	*
	Failure of Meters to Register Properly	*
	Billing for Energy Lost Due to Grounds on Customer's Equipment	*
	Determination of Demand	*
	Diversion of Service	*
	PAYMENT OF BILLS	
	Late Payment Charge	*
	Disconnection and Refusal of Service	*
	Deferred Payment Agreement	*
	Notice of Disconnection	*
102	OTHER PROVISIONS	
102.1	Insufficient Fund Charge (Also see OC-1)	8
102.2	Reconnection Billing (Also see OC-1)	8
102.3	Reconnection of a Seasonal Customer's Service (Also see OC-1)	8

*See Wis. Admin. Code ch. PSC 113.

ELECTRIC RULES

TABLE OF CONTENTS (continued)

Section Number	Name	Sheet Number
102	OTHER PROVISIONS (continued)	
102.4	Overbilling of Customers	8
	Access to Customer's Premises	*
	Continuity of Service	*
	Voltage Regulation	*
103	DEFINITIONS OF DISTRIBUTION AND SERVICE FACILITIES	
103.1	Overhead Service Drop	9
103.2	Underground Service Lateral	9
103.3	Distribution Facilities	9
103.4	Underground Service Extension	9
103.5	Service Entrance Equipment	9
103.6	Service Facilities	9
104	UTILITY FACILITIES ON CUSTOMER'S PREMISES	10
105	CUSTOMER'S RESPONSIBILITY FOR UTILITY'S EQUIPMENT	10
106	EXTENSION OF NEW SERVICE FACILITIES	
106.1	Application for Extension of New Service	11
106.2	Wiring Affidavit	11
106.3	Ownership of Extension	11
106.4	Right-of-way for Extensions	12
106.5	Construction Standards and Facilities Provided by Utility	12
106.6	Point of Termination	13
106.7	Meters	14
106.8	Metering Facilities	14
106.9	Number of Service Drops or Laterals Per Customer	14
106.10	Overhead Service Drop	15
106.11	Underground Service Lateral	15
106.12	Transformers	15
106.13	Nonstandard Service Facilities	16
106.14	Extraordinary Investment by Utility for Extension	16

*See Wis. Admin. Code ch. PSC 113.

ELECTRIC RULES

TABLE OF CONTENTS (continued)

Section Number	Name	Sheet Number
107	INSTALLATION CHARGES AND EMBEDDED COST CREDITS	
107.1	Definitions of Equipment, Installation Charges and Embedded Cost Credits	16
107.2	Total Cost of Installation by Customer Classifications	18
108	REFUNDS OF CUSTOMER CONTRIBUTIONS BY TYPE OF CUSTOMER	
108.1	Eligibility for Refunds	19
108.2	Application of the Refund	20
109	OVERHEAD SERVICE EXTENSIONS	
109.1	Applicability	20
109.2	Contributions for Overhead Extension	20
109.3	Combination Single-Phase and Three-Phase Construction	21
110	UNDERGROUND SERVICE EXTENSIONS	
110.1	General Rules on Underground Service Extensions	21
110.2	Stipulations on Availability of Underground Service Extension	21
110.3	Contributions for Underground Extensions	22
110.4	Contribution for Added Costs Due to Unusual Conditions	22
110.5	Combination of Overhead and Underground Extension	23
110.6	Underground Distribution Areas	23
111	MODIFICATIONS TO EXISTING DISTRIBUTION AND SERVICE FACILITIES	
111.1	Relocation and Rebuilding of Existing Distribution Facilities	26
111.2	Replacement of Overhead Distribution Facilities with Underground Distribution Facilities	26
111.3	Upgrade of Distribution Facilities Due to Change in Load	27
111.4	Upgrade of Service Facilities	27

*See Wis. Admin. Code ch. PSC 113.

ELECTRIC RULES

TABLE OF CONTENTS (continued)

Section Number	Name	Sheet Number
112	EXTENSION OR MODIFICATION OF TRANSMISSION FACILITIES TO RETAIL CUSTOMERS	28
113	TEMPORARY SERVICE	28
114	TEMPORARY SERVICE FOR CONSTRUCTION	29
115	EMERGENCY SERVICE	29
116	GENERAL RULES ON CUSTOMER UTILIZATION EQUIPMENT	30
117	MOTORS AND MOTOR CONTROL	31
118	MISCELLANEOUS EQUIPMENT	33
119	PRIVATE POWER PLANTS	33
120	PAYMENT FOR CONTRIBUTION IN AID OF CONSTRUCTION	34
	GASEOUS TUBE LIGHTING	*
	ELECTRIC WELDERS	*
121	STRAY VOLTAGE SERVICE	34

*See Wis. Admin. Code ch. PSC 113.

ELECTRIC RULES

101 CONTRACT PROVISIONS

101.1 Term of Contract

All agreements for service shall be for a period of one year unless otherwise specified in the contract. Contracts are automatically renewed at the end of their term under conditions stated in the contract.

No agent or employee of the utility shall have the power to, or shall amend, modify, alter, or waive any of the rates or rules of the utility or bind the utility by making any representation not incorporated in the contract.

Contracts shall not be transferred unless authorized by the utility; new occupants of premises previously receiving service must make official application to the utility before commencing the use of service.

Customers who have been receiving service must notify the utility when discontinuing service; otherwise, they will be liable for the use of the service by their successors should said successors refuse to pay.

101.2 Definition and Classification of Customers

An electric customer or unit of service shall consist of any contiguous aggregation of space or area occupied for a distinct purpos4e such as a residence, apartment, flat, store, farm, office, factory, etc., which is equipped with one or more fixtures for rendering service separate and distinct from other users. The public portions of buildings, such as hallways, toilets, etc., may be treated separately depending on the requirements.

Unless otherwise defined, the ultimate use of energy purchased by the customer(s) determines the rate schedule applicable to their installation. Electric customers in general may be classified as follows:

Residential Customers
General Service Customers
Power Service Customers
Public Street and Highway Lighting Customers
Miscellaneous Customers

ELECTRIC RULES

101.2 Definition and Classification of Customers (continued)

101.2a Residential Customers

A residential customer is defined to include each separate house, apartment, flat or other living quarters occupied by a person or persons constituting a distinct household and using energy for general household purposes. Lighting use may be extended to include the use of energy for lighting the land and buildings which are adjacent to, connected with, and used exclusively by the residence being served.

101.2b General Service Customers

A general service customer is defined to include each separate business enterprise, occupation or institution, taking service through a single meter, occupying for its exclusive use any unit or units of space such as an entire building, entire floor, suite of rooms or a single room, and using energy for general purposes as the schedule of rates applicable to the particular installation may permit.

101.2c Small, Large, and Industrial Power Service Customers

A power service customer is defined to include each residence, separate business enterprise or institution occupying for its exclusive use, any unit or units of space, such as an entire building, entire floor, suite of rooms or a single room, and using energy for driving motors or other electrical loads larger than permitted on the utility's other rate schedules.

101.2d Public Street and Highway Lighting Customers

A public street or highway lighting customer is defined to include governmental agencies which take service for the purpose of lighting public streets, highways or traffic signs.

101.2e Miscellaneous Customers

Customers using electric service for purposes not included in the above classifications are defined as miscellaneous customers.

ELECTRIC RULES

101.3 Application of Rates and Combined Metering

The schedules of rates apply when electricity is furnished in any month to one customer at one location for a class of service through one meter. The schedules of rates are based on delivery and billing service to the ultimate user for retail service and do not permit resale or distribution.

For all extensions of new or increased service, each unit must be separately metered before service will be rendered.

Where a customer occupies more than one unit of space, each unit will be metered separately and a separate bill will be computed and rendered based on the readings of each individual meter unless a customer makes arrangements with a utility to provide the approved circuits and loops by which the different units can be connected and all energy metered through one meter.

Where a commercial and one or more residential units are combined so as to obtain ectric service through one meter, the general service rate will be applied.

101.4 Availability of Service Voltages

Service may be taken at the following service voltages:

Singe-phase	120/240 volt, 3 Wire – Available for Residential and small General Service installations
	120/208 volt, 4 Wire – Available for Apartments and small General Service installations
Three-phase	120/208 volt, 4-wire, grounded wye – Available for Power Service Loads such as office buildings, schools, and shopping centers
	277/480 volt, 4-wire, grounded wye – Available where warranted by the magnitude of the load.

Other specific voltages may be available, if approved by the utility.

ELECTRIC RULES

101.5 Dual Voltages

If a customer requires service at a voltage other than that offered by the utility or at more than one voltage, the customer shall furnish and maintain the additional equipment required. If the customer's service requires two or more transformer settings or points of delivery to a structure, the customer shall also furnish and maintain the additional equipment required.

101.6 Emergency Systems

Where emergency systems in buildings are so wired as to require a separate meter, the energy so metered will be billed as a separate customer. Emergency systems are systems supplying power and illumination essential to safety, life and property where such systems or circuits are legally required by municipal, state, federal or other codes, or by any governmental agency having jurisdiction.

Emergency illumination shall include only the required exit lights and other lights specified as necessary to provide sufficient illumination.

102 OTHER PROVISIONS

102.1 Insufficient Fund Charge (see Schedule OC-1)

102.2 Reconnection Billing (see Schedule OC-1)

102.3 Reconnection of a Seasonal Customer's Service (see Schedule OC-1)

102.4 Overbilling of Customers

In the event the utility becomes aware of an overbilling of a customer, the utility shall promptly correct the billing error and notify the customer of the circumstances surrounding the overbilling. The utility shall then determine the time period during which the overbilling occurred. In making this determination, the utility shall apply PSC rules and utility rules and tariffs.

Once the utility has determined the period of overbilling, the utility shall calculate the amount that it has overbilled the customer. The utility shall then make a refund to the customer of the amount of the overbilling, together with interest as calculated pursuant to Wis. Admin. Code ch. PSC 113.

Except as otherwise provided in Wis. Admin. Code ch. PSC 113, the maximum refund to the customer shall be for a time period not to exceed six years from the date the overbilling was discovered pursuant to Wis. Stat. § 893.93(1)(a).

All overbilling disputes arising under this section shall be taken to the PSC for resolution.

ELECTRIC RULES

103 DEFINITION OF DISTRIBUTION AND SERVICE FACILITIES

103.1 Overhead Service Drop

The overhead service between the last pole or other aerial support of the distribution system and the point of attachment to the customer's service entrance equipment. It is normally located over the customer's property.

103.2 Underground Service Lateral

The underground service between the distribution system, including any risers at a pole or other structure, and the service entrance equipment. It is normally located on the customer's property.

103.3 Distribution Facilities

All primary and secondary voltage wire or cable and its supports, trenches, connection equipment, enclosures, and control equipment which is used to extend the distribution system from existing facilities to a point of connection with the service facilities. The cost of right-of-way preparation and restoration to the original condition where appropriate shall be included in the cost of distribution facilities.

103.4 Underground Service Extension

Consists of an underground service lateral and necessary distribution line, if any. In no case shall it consist of separate segments of underground construction separated by overhead construction. The length of each underground service extension shall be the length of the cable route from the beginning of the trench to the point of termination at the applicant's service facilities.

103.5 Service Entrance Equipment

Consists of the meter socket and related overhead masthead or conduit for underground service. This equipment is provided by the customer and is generally located on or in the customer's building.

NOTE: All self-contained meter sockets must be equipped with a fully rated 200 amp lever bypass

103.6 Service Facilities

The standard transformer, standard overhead service drop or standard underground service lateral and standard meter.

ELECTRIC RULES

104 UTILITY FACILITIES ON CUSTOMER'S PREMISES

This rule shall apply to the distribution facilities required to service either a group of customers in multi-tenancy premises or a single customer where, in either case, the utility finds that it is necessary to install portions of such facilities on the premises being served. Such customer or property owner, when requested by the utility, shall make provision on their property for the installation of utility-owned facilities required for service(s) in accordance with the following:

Utility facilities shall consist of those which, in the opinion of the utility, are necessary to furnish adequate service at the utility-owned junction boxes on or adjacent to the enclosure of the utility substation or at customer-owned service entrance facilities. The utility will not supply wiring in or on a building beyond the junction box or on a building beyond the service entrance facilities. The utility will design such installations and will install facilities, which in its opinion, are most economical or feasible to the utility, under the conditions met. At each installation the utility shall have the option of extending its primary conductors to two or more substations conveniently located with respect to the customers to be served or to furnish service to all customers from the substation. Where the utility's installation is located in a property owner's building, the applicable provisions of the Wisconsin State Electrical Code shall be observed.

A customer or property owner shall furnish, own and maintain the necessary indoor conduits, indoor or outdoor enclosures, vaults, building structural supports and accessories as specified by the utility.

If a customer or property owner requests any changes in the plan proposed by the utility, the customer shall pay the utility the estimated excess cost of the substituted installation. The utility may require that these costs be paid in advance of construction or may, at the utility's option, offer customers an installment payment plan.

105 CUSTOMERS' RESPONSIBILITY FOR UTILITY'S EQUIPMENT

The customer shall be responsible for all damage to the utility's equipment, and for all loss resulting from interference or tampering therewith, caused by the customer or the customer's permittees, including compensation for consumed energy not recorded upon the meter (see Wis. Admin. Code ch. PSC 113.)

Meters, service entrance switches, and service entrance outlets are sealed by the utility and such seals shall not be broken or tampered with in any manner without the consent of the utility except in cases of emergency. The utility should be notified as soon as possible after a seal has been broken.

ELECTRIC RULES

106 EXTENSION OF NEW SERVICE FACILITIES

106.1 Application For Extension of New Service

Each request for extension of new service will require a written application for service in which the applicant agrees to pay any required contribution in aid of construction. The utility may require that the contribution in aid of construction be paid in advance of construction or may, at the utility's option, offer customers an installment payment plan.

106.2 Wiring Affidavit

The contractor or person responsible for the installation of the customer's electric wiring, appliances and other equipment related to each type of service shall deliver a notarized affidavit on a form supplied by the utility attesting to the fact that the work complies with the Wisconsin State Electrical Code and the service rules of the utility. Affidavits must clearly indicate the nature of the work done (such as residential wiring, residential fixtures, garage wiring, range, heaters, motors, or other wiring or equipment). For those cases involving wiring changes or additions which require the meter(s) to be replaced or relocated, or which require inspection by the utility, the affidavit shall include an itemized copy of the connected load, including lights, motors and appliances. Where such changes require new service entrances at a new location, the existing service entrance should not be disconnected before the new service entrance is ready for connection and operation.

If, upon inspection by the utility, installations are found to contain discrepancies, such discrepancies shall be corrected before permanent connection of service will be completed. Or, at its option, the utility may mail the customer a written request demanding conformity within a 10-day period or any prior service connection made by the utility will be disconnected.

The utility normally connects the service entrance wires to the service wires. No one else shall make these connections without the specific approval from the utility, in which case the customer shall assume responsibility for any damage which may result from making these connections. The utility will not be responsible for damage or injury resulting from unauthorized disconnection or reconnection of service wires.

106.3 Ownership of Extension

The title to every extension at all times is with the utility. The utility reserves the right at all times to add additional customers to an extension and make new extensions to an existing extension, under the provisions of these rules, without procuring the consent of any customer or customers contributing to the original construction costs, and without incurring any liability for refunding contributions except as additional customers may be added as provided for herein. (See Wis. Admin. Code ch. PSC 113, Refunds.)

ELECTRIC RULES

106.4 Right-of-way For Extensions

106.4a Overhead Facilities

The applicant(s) for service shall furnish right-of-way easements and permits with clearing rights, without cost to the utility adequate for the line extensions necessary to serve them and along a route approved by the utility. Clearing shall either:

(1.) Be done by the applicant(s); or

(2.) Be done by the utility. In this case, the applicant shall, in advance of the clearing work, make a contribution to the utility in an amount equal to the utility's estimate of the cost thereof. Such a contribution shall be nonrefundable, except that after completion of the extension the utility will determine the actual cost of clearing work, recompute the contribution required, and will refund the excess, if any, of the contribution over that required as based on such actual cost.

106.4b Underground Facilities

The applicant(s) shall secure for the utility, without cost to the utility, such easements as the utility may require for the installation, maintenance or replacement of the underground lateral and necessary distribution line extension.

The applicant shall inform the utility of any known or expected underground obstructions within the cable routes on their property (septic tanks, drainage tile, etc.). Any earth fill added to bring the cable route to final grade prior to the underground construction shall not contain large rocks, boulders, debris or rubbish.

In the event of future changes in grade levels by the customer that would materially change the depth of cover over underground conductors, or affect transformer locations, the landowner shall notify the utility in advance of grading, and shall pay the utility its cost of moving or replacing its equipment to accommodate the change in grade. Such charge will also be made for changes in buildings, structures, foundations, walls, or other obstructions.

106.5 Construction Standards and Facilities Provided by Utility

The utility shall provide safe, reliable service with extensions that conform, to the extent possible, to each of the following standards:

ELECTRIC RULES

106.5 Construction Standards and Facilities Provided by Utility (continued)

(1.) Route. The utility shall make the extension over the most direct route which is the least expensive and least environmentally degrading. The customer shall provide or shall be responsible for the cost of all right-of-way easements, and permits necessary for the utility to install, maintain or replace distribution facilities. The customer shall either clear and grade such property or pay the utility to clear and grade such property. The customer is responsible for the cost of restoration of the property after the utility has completed installation and backfilling where applicable.

(2.) Design. The utility shall design and install facilities to deliver service to the customer and the area at the lowest reasonable cost. The facilities shall comply with accepted engineering and planning practices. The design shall consider reasonable needs for probable growth in the area and local land use planning. Unwarranted excess capacity which would result in unnecessary cost increases to the utility and its customers shall be avoided. The utility shall be responsible for the incremental cost of distribution facilities which are in excess of standard design for the customer and normal area growth.

(3.) Efficient Use. The utility's extension rules shall discourage the inefficient use of electricity by appropriately relating costs to the charges made for extensions.

(4.) Cost Estimates. The utility shall engineer and estimate the cost of each extension based on reasonable current costs. Current costs may be estimated using job specific costs, average costs per foot or unit, or other costing method as appropriate.

106.6 Point of Termination

The applicant for new service may select, with the approval of the utility, the point at which the utility will deliver service at applicant-owned terminating facilities. The applicant will furnish, own and maintain circuits, meter socket and equipment beyond such point, except for metering equipment.

It is necessary that a customer's service entrance facilities be located at a point most readily accessible to the utility's distribution system. It is desirable, and often necessary, to avoid crossing adjacent property with service drops or laterals. If the distribution system is established in the rear of the premises, the service entrance must be brought to the rear of the building. Where the distribution system is located on the street or where no distribution system has been established, the customer shall request the utility to specify an acceptable location of the service entrance facilities. The utility will furnish this information in writing upon request.

ELECTRIC RULES

106.7 Meters

Meters will be furnished and installed by the utility. The customer, however, must furnish the meter socket and all necessary extra wiring to meet the meter connection and must furnish a safe and convenient place for the meter(s).

In the event a customer desires an additional meter installed for their own convenience, the installation shall be entirely at the cost of the customer, including the cost of the meter.

106.8 Metering Facilities

Meter sockets shall be installed by the customer on the exterior of the building.

In rural areas, a yard pole may be furnished by the utility and located at a point central to the buildings to be served. The meter socket shall be installed by the customer on this pole. All service equipment beyond this point is the responsibility of the customer.

When only a residence is built in the rural area and underground service is used, the meter may be placed on the pole if permission is obtained from the utility prior to installation. A customer-owned yard light may not be installed on this pole unless permission is obtained from the utility. Any meter located other than as described above shall be approved in writing by the utility prior to installation or it shall be changed by the customer to conform to the utility standards.

106.9 Number of Service Drops or Laterals Per Customer

The utility shall provide standard overhead service drops and standard underground service laterals at no charge to the customers.

Not more than one service drop or service lateral will be installed to the same building or utilization point except:

(1.) Where more than one point of delivery is necessary because of voltage regulation, governmental requirements or regulatory orders.

(2.) In large installations (large power only) where, in the opinion of the utility, more than one service drop or lateral is necessary to meet the load requirements.

(3.) In row houses and other multiple occupancy buildings having areas separated by fire walls in compliance with the Wisconsin State Electrical Code.

ELECTRIC RULES

106.9 Number of Service Drops or Laterals Per Customer (continued)

If an existing customer with a single-phase service drop or lateral requests three-phase service, the customer shall rewire their equipment to operate from the three-phase service drop or lateral before three-phase service will be extended. The single-phase service drop or lateral will be removed from service after the three-phase service has been extended.

106.10 Overhead Service Drop

A standard overhead service drop shall be furnished by the utility to a suitable support on the customer's premises. The utility will provide supplemental information to the customer indicating the equipment that the customer shall install, own and maintain. This material will also indicate what Wisconsin State Electric Code provisions and city ordinances must be complied with for the installation of this equipment. A standard overhead service is less than or equal to 100 feet.

106.11 Underground Service Lateral

A standard underground service lateral shall be furnished by the utility to suitable service equipment on the customer's premises. This equipment shall be installed on the customer's building at a location approved by the utility. A standard underground service is less than or equal to 100 feet.

The utility will provide supplemental information indicating what equipment the customer shall install, own and maintain for underground service and indicate what provisions of the Wisconsin State Electric Code and city ordinances must be complied with for the installation of this equipment.

106.12 Transformers

The utility shall provide standard design transformers necessary to serve the customer's load at no charge. A standard design transformer is a transformer with capacity less than or equal to 1,500 kVA. If a customer requests or requires additional capacity, the utility shall add to the total cost of installation a charge equal to the cost of the necessary transformer(s) less a credit for the cost of the maximum capacity standard transformer

106.13 Nonstandard Service Facilities

If the proposed extension requires nonstandard service facilities or if the customer requests nonstandard facilities, the utility may require that the customer pay a contribution in advance of construction for the cost of the facilities in excess of the cost of standard design facilities.

106.14 Extraordinary Investment by Utility for Extension

Proposed extensions may be reviewed for economic considerations. If the cost of an extension exceeds five times the average embedded cost to serve a customer in the same class as the customer for whom the extension is to be made, the utility may require a contract with the customer. Under the terms of the contract, the customer may be required to pay the recurring estimated operation and maintenance expenses associated with that portion of the extension that is in excess of five times the average embedded cost at the time the extension was made. The reasons and supporting analysis for each contract will be furnished the customer and the Public Service Commission of Wisconsin (Commission), in writing. The utility will inform the customer of the customer's right to ask the Commission for a review of the extension costs and contract provisions. The utility will notify the Commission in writing, when a service extension is denied, including the reasons for denial.

107 INSTALLATION CHARGES AND EMBEDDED COST CREDITS

107.1 Definition of Equipment, Installation Charges and Embedded Cost Credits

For purposes of implementing these installation charges the following definitions shall apply:

107.1a Customer Classifications

Customer classifications are based on usage characteristics. Each classification has a distinct installation charge and embedded cost credit. For definitions of customer classifications see Section 101.2. For definitions of distribution and service facilities installed in new installations see Section 103. Examples of customer classifications are as follows:

(1.) Residential Service
(2.) General Service
(3.) Power Service
(4.) Street Lighting
(5.) Miscellaneous

ELECTRIC RULES

107.1b Total Cost of Installation

The total cost of an extension shall be defined as the cost of the extension of primary and secondary lines, (excluding the standard meter, the necessary standard service drop or service lateral and individual standard transformer capacity); reconstruction of existing main feeders including changing from single-phase to three-phase or construction of new feeders made necessary solely by addition of such customers; the cost of tree trimming or right of way clearing; securing easements; moving conflicting facilities; and all other costs incident to furnishing service. The customer is responsible for the cost of restoration of the property after the utility has completed installation and backfilling where applicable. This definition applies to both overhead and underground distribution systems. If it is found to be advisable for the utility to install facilities in excess of that required to serve the new customer applying for service, the added cost of these facilities will not be used in determining the cost of the extension.

107.1c Installation Charge

The installation charge is the total cost of installation less the average depreciated embedded cost of the distribution system (excluding cost of the standard transformer and service facilities). Seasonal customers shall receive one-half the average embedded cost allowance of a year-round customer for the same customer classification.

107.1d Average Depreciated Embedded Cost

The embedded cost of the distribution system (excluding the standard transformer and service facilities) is determined by the Public Service Commission for each customer classification, as indicated below. The average depreciated embedded cost by customer classification is listed in Schedule OC-1.

(1.) Residential Service: The average depreciated embedded cost is determined by dividing the original cost less the estimated accrued depreciation of the distribution system and less customer contributions and advances for construction allocated to this customer classification by the number of customers in the group.

(2.) Apartment and Rental Units Separately Metered: The owner of an apartment or rental unit applying for an extension of service shall receive the same average depreciated embedded cost credit, that applies for residential service, per unit metered.

ELECTRIC RULES

107.1d Average Depreciated Embedded Cost (continued)

(3.) Subdividers and Residential Developers: The same average depreciated embedded cost credit, that applies for residential service, would apply per unit energized within five years from the installation of the contributed extension.

(4.) General Service (Including Multi-Unit Dwellings If Billed on One Meter): The average depreciated embedded cost credit is determined the same way as Residential.

(5.) Power Service: The embedded allowance is determined by dividing the original cost less the estimated accrued depreciation of the distribution system and less customer contributions and advances for construction allocated to this customer classification by the estimated average billed demand of these customers. When there is an upgrade, the average billed demand is the difference between the averaged billed demand before and after the upgrade.

(6.) Street Lighting: The dollar amount per fixture is determined by dividing the overall depreciated cost of the distribution facilities allocated to the street lighting class, less credits for past customer contributions and advances for construction, by the total number of lighting fixtures in that classification.

All average depreciated embedded costs (by rate class) shall be subject to review by the Public Service Commission, as part of each general rate case proceeding.

107.2 Total Cost of Installation by Customer Classification

107.2a Residential, General Service, Power Service, and Street Lighting Classes:

Will be charged the total installation cost less the average depreciated embedded cost as defined in Section 107.1d.

107.2b Residential and Commercial Developers and Subdividers:

Residential and Commercial developers and subdividers of single- and two-family subdivisions shall pay, as a minimum, a partially refundable contribution which is the estimated cost of distribution facilities to be installed for the area being developed. The average depreciated embedded cost is refundable as structures are built and connected to the electric utility facilities, as defined in Section 107.1d.

ELECTRIC RULES

107.2c Installation Charges for Multi-Family Residential Housing Units:

Will be the total installation cost less the average depreciated embedded cost, as defined in Section 107.1d, per each living unit in the multi-family building.

107.2d Other Installation Charges

In addition to the installation charges provided above, the utility may require the customer to pay, in advance of construction, the estimated direct costs for those distribution service facilities which,

(1.) Are in excess of standard utility design and construction,

(2.) Follow a route different than the most direct route as in ch. PSC 113, as determined by the utility, or

(3.) Require abnormally high installation costs due to abnormal soil conditions, including trenching in rocky soil, frozen ground, or other similar conditions. (Winter construction will normally apply between December 1 and April 1.)

All such payments for these conditions are subject to partial refund as additional customers connect.

107.2e Adjustments to Estimates of the Total Cost of Installation

Section 107.2 explains the method for estimating the total cost of installation. The utility shall adjust its estimate of construction costs to reflect the costs that are actually incurred. Upon completion of an installation which differs from the utility's original cost estimate, a recalculation of the customer contribution shall be made.

108 REFUNDS OF CUSTOMER CONTRIBUTIONS BY TYPE OF CUSTOMER

108.1 Eligibility for Refunds

The utility shall make refunds to a customer who made a contribution for an extension (a contributed extension) when the utility makes an extension from the contributed extension to a second customer which does not require a contribution from the second customer (a non-contributed extension).

In all cases, refunds to the customer making the original contributions shall be limited to the first five years from the installation date. The utility shall make the refund to the customer who made the original contribution or the current property owner of record unless it has a written record from that customer assigning the refund rights to another customer.

108.2 Application of the Refund

(1.) When additional customers are connected to an existing extension, which required an installation charge from the original customer for whom the extension was first made, that original customer may receive a refund from the utility.

(2.) If the cost of adding a new customer to an existing extension is less than the average depreciated embedded cost, the new customer will be charged nothing. The original contributor of the extension shall be refunded the difference between the average depreciated embedded cost and the cost of adding the new customer.

(3.) If the cost of additional distribution facilities exceeds the average depreciated embedded cost of a customer classification, the construction will be considered a new extension. In this case no refund is due the original contributor.

(4.) The original contributor shall receive refunds, if any, for only the first five years from the date the original extension is energized.

(5.) Refunds shall be made to the original contributing customer by the utility within 20 days after the additional customer's cost of installation is determined.

The amount of the refund shall be based on the embedded cost allowance in effect at the time the contributed extension was installed or the current embedded cost allowance, whichever is greater. In no case shall the total refund exceed the total installation charge.

109 OVERHEAD SERVICE EXTENSIONS

109.1 Applicability

The rules of this section apply to the extension of overhead electric service to all classes of retail customers requesting new service in all areas served by the utility.

The utility will extend electric service to a new customer(s) or existing customer(s) furnished by means of extending its overhead distribution system, except that three-phase service may be furnished by means of phase conversion equipment from a single-phase line.

109.2 Contributions for Overhead Extension

The charge for all overhead extensions shall be the total cost of installation as defined in Section 107.2 less the average depreciated embedded cost (see Section 107.1d).

109.3 Combination Single-Phase and Three-Phase Construction

In the event an extension is partially or completely supported on structures used for supporting transmission circuits, or in the event the extension is built to serve both single-phase customers and three-phase customers, the utility will compute, and apportion among the customers served, the extension contribution requirements and contribution refund rights in a fair and equitable manner consistent with the pertinent facts, and will retain in its files a memorandum of such computation and apportionment. The contribution requirement of the single-phase customers shall not be greater than would have been the case if an extension (complying with present engineering standards) had been constructed to only serve single-phase customers.

110 UNDERGROUND SERVICE EXTENSIONS

110.1 General Rules on Underground Service Extensions

The utility will extend utility-standard underground service to all classes of retail customers requesting new service in all areas served by the utility.

110.2 Stipulations on Availability of Underground Service Extensions

Underground service extensions to be furnished by the utility are limited to those which may be placed in locations where grade levels and other conditions are satisfactory to the utility, such as across residential or farm yards or commercial premises or along driveways. The route of the underground construction must be clear of any trees, brush, fences or other surface obstructions that would interfere with normal operation of trenching equipment. Trench backfill shall consist of the original soil and shall not be power tamped. Lawn and landscaping restoration shall be the applicant's responsibility.

Underground service extension in locations such as beneath undeveloped land, quarries, gravel pits, swamps and water will not be furnished except by written approval of the utility for each installation.

The utility will not install an underground service extension where engineering, operating, construction, safety or legal problems would, in the utility's judgment, make it inadvisable to perform the installation, unless these problems can be resolved by the payment of contributions and/or the charges as provided for in these extension rules.

Notification must be given to the utility sufficiently in advance of construction so that a sequence of construction can be provided for and the work coordinated with other utilities involved.

ELECTRIC RULES

110.2 Stipulations on Availability of Underground Service Extensions (continued)

If the trench cannot for any reason be dug prior to the freezing of the soil, the utility may temporarily install secondary voltage conductors in suitable mechanical protection on top of the ground and dig the trench when the ground is thawed.

The utility shall not be prevented from installing underground electric equipment where necessary by reason of physical conditions or congestion in the area, when this type of construction is the most economical type for the conditions.

110.3 Contributions for Underground Extensions

The charge for all underground extensions shall be the total cost of the installation as defined in Section 107, less the average depreciated embedded cost as defined in Section 107.1d.

110.4 Contribution for Added Costs Due to Unusual Conditions

For unusual construction costs a contribution is required which may be subject to a partial refund as additional customers attach. The cost shall include:

(1.) An amount equal to the estimated cost of boring or pavement cutting required or where conductors must be installed in rocky soil, frozen ground, or other similar conditions.

(2.) An amount equal to the cost of any special requirements such as municipal requirements, rearrangement of facilities due to a change of plans or the need for an underground service extension different from or more elaborate than the utility's standard underground construction.

(3.) An amount equal to the estimated extra cost of trenching through any area where normal plowing and trenching methods cannot be used (for example, ledge rock, boulders, land-fill, etc.).

Upon completion of the construction, if the actual amount of such extra cost is less than the estimated amount, the utility will refund the difference between the estimated and actual costs.

ELECTRIC RULES

110.5 Combination of Overhead and Underground Extension

In accepting an application for underground electric service under this schedule, the utility does not undertake to avoid the construction of overhead lines in the neighborhood, which may be necessary to serve customers who demand and have the right to receive service from overhead lines. However, in order to avoid duplication of facilities, applicants for electric service whose premises can be served from an underground distribution system that has previously been installed adjacent to the applicant's premises shall be required to be served by an underground lateral from such system and shall pay the contributions and charges required in these extension rules.

110.6 Underground Distribution Areas

110.6a General Rules on Underground Distribution Areas

The utility will install utility-standard single-phase underground electric distribution system in accordance with this schedule where required by ordinance or when requested by and agreed to by the property owner(s) or developer or subdivider of the land area to be served. (However, all lines exceeding 15,000 volts in such areas may be overhead.)

Electric distribution facilities provided for under this rule are only for providing service to permanent buildings. The utility will own and maintain the underground conductors and appurtenances, and the character and location of such facilities shall be at the discretion of the utility.

110.6b Establishment of Underground Distribution Areas

(1.) Subdivisions

a. For purposes of this schedule a subdivision shall be defined as a division of lands consisting of five or more contiguous lots. Lots directly across a street from each other are considered to be contiguous.

b. To qualify as an underground distribution area the property owner(s) or land developer or subdivider shall have provided a suitable recorded plat of the subdivision with deed restrictions, all satisfactory to the utility, to require all utility service to be supplied by underground lines and prohibiting overhead lines, except for lines exceeding 15,000 volts, and with easements shown.

ELECTRIC RULES

110.6b Establishment of Underground Distribution Areas (continued)

c. An area which qualifies as a subdivision may be established as an underground distribution area in either of the two following ways:

(1) All new subdivisions not already receiving electric service are defined as underground distribution areas where by ordinance the electric distribution systems are required to be underground.

(2) A group of property owners or land developer or subdivider may request that an area be served by an underground distribution system. Such area shall be specifically defined and of reasonably regular shape.

(2.) Mobile Home Courts: A new mobile home court or an expansion of an existing mobile home court, may be established as an under-ground distribution area where:

a. The court consists of five or more established mobile home locations, all of which are contiguous.

b. Occupancy of the mobile homes is to be on a year-round basis.

c. The owner of the mobile home court provides for the utility a written commitment that all utility service will be supplied by underground lines and prohibiting any overhead lines, except for lines exceeding 15,000 volts.

(3.) Condominium Developments and Apartment House Complexes: A new residential condominium development, apartment house complex or an expansion of an existing such housing facility may be established as an underground distribution area where:

a. The condominium or apartment complex consists of five or more dwelling units.

b. The developer provides for the utility a written commitment that all utility service will be supplied by underground lines and prohibiting any overhead lines, except for lines exceeding 15,000 volts.

ELECTRIC RULES

110.6b Establishment of Underground Distribution Areas (continued)

(4.) Easements: The property owner(s) or land developer or subdivider shall have secured for the utility, at no cost to the utility, such easements as the utility may require for the installation, operation and maintenance of its facilities including but not limited to easements for its transformers and switches. The property owner(s) or land developer or subdivider shall inform the utility of any known or expected underground obstructions within the cable routes. Any earth fill added to easements to bring the grade to final level shall not contain any large rocks, boulders, debris or rubbish.

In subdivisions, easements shall be provided along side lot lines as necessary for underground cables to street light locations approved by appropriate governmental authority.

(5.) Expansion of Underground Distribution Areas: An established underground distribution area may be expanded to include such lots or building sites as are contiguous to it which are not already served by overhead lines. The owners of such lots shall be responsible for seeing that the lots meet the requirements specified above for the underground distribution area to which it is contiguous.

110.6c Contribution and Charges for Extension

(1.) Contribution for Construction Within Underground Distribution Area: All of the provisions of contributions for construction of underground extensions will apply except that the extension allowance will apply to those lots at which dwelling units are occupied or under construction (construction has proceeded above the foundation level) only. The utility may require that the contribution in aid of construction be paid in advance of construction or may, at the utility's option, offer the property owner(s), land developer, or subdivider an installment payment plan.

(2.) Distribution Line to Underground Distribution Area: Where an extension of the utility's existing distribution system is required in order to reach the underground distribution area, said extension will normally be overhead construction. The extension allowance for the overhead distribution line will apply to those lots on which dwelling units are occupied or under construction (construction beyond the foundation level) only. The utility may require that the contribution in aid of construction be paid in advance of construction or may, at the utility's option, offer customers an installment payment plan. If required by statute or ordinance, or if required by the conditions in the judgment of the utility, all or a portion of the extension will be underground. A refundable contribution as provided in Section 110.6c(1), will apply.

ELECTRIC RULES

111 MODIFICATIONS TO EXISTING DISTRIBUTION AND SERVICE FACILITIES

111.1 Relocation and Rebuilding of Existing Distribution Facilities

(1.) Where responsibility can be determined by the utility, the customer responsible for relocation, rebuilding, or other modification of existing distribution facilities shall pay a contribution based on the following:

	Estimated direct cost of new facilities
Less:	Accrued depreciation of facilities to be removed
Less:	Estimated net salvage of the facilities to be removed
Plus:	Estimated cost of removal of existing distribution facilities
Equals:	Charge for modifications to existing facilities

The costs and credits of the above shall be determined from the available records of the utility. The utility shall endeavor to maintain records that permit a reasonable calculation of these costs and credits. The contribution shall be refundable when the extension is less than the embedded allowance as per Section 108, Refunds to Customers.

(2.) Where the utility chooses to relocate its distribution system and it is practicable to bring a service drop or lateral to the existing service entrance facilities, the utility will make the necessary changes in the customer's wiring and service equipment without expense to the customer.

(3.) In the event that the utility is ordered by a unit of government to move its distribution facilities, a new service drop will be installed, where practicable, to the existing service location without expense to the customer. If, in the opinion of the utility, it is not practicable to utilize the existing service entrance facilities, the utility will specify a new service location. The utility is not required to furnish new service entrance, cable, conduct, or service equipment unless it makes a practice of supplying this equipment. The utility shall, however, run a service drop to the nearest point on each building served from the new location and remove the old service drop without expense to the customer.

111.2 Replacement of Overhead Distribution Facilities with Underground Distribution Facilities

A customer requesting the utility to replace existing overhead distribution facilities with underground distribution facilities shall pay the contribution in aid of construction and receive refunds as shown in Section 111.1(1) above.

ELECTRIC RULES

111.3 Upgrade of Distribution Facilities Due to Change in Load

Customers who request an upgrading of the utility distribution facilities due to a change in the character of their load shall pay for the construction costs incurred by the utility to provide the requested additional facilities.

(1.) Demand Schedule: Customers who are served under a demand rate schedule shall receive an embedded cost allowance. The kilowatts of demand to be used in determining the allowance shall be the customer's average billed demand after the upgrade less the customer's average billed demand before the upgrade.

(2.) Customers Transferring to a Different Energy-Only Classification: If a customer served under an energy-only sub-classification prior to the upgrade qualifies for a different energy-only sub-classification after the upgrade, the customer shall receive a cost allowance equal to the difference between the two embedded cost allowances.

(3.) Customers Transferring to a Demand Classification: If a customer is served under an energy-only classification prior to the upgrade, the customer shall receive an embedded cost allowance. The kilowatts of demand to be used in determining the allowance shall be the customer's average billed demand after the upgrade less an estimate of the customer's prior average demand.

111.4 Upgrade of Service Facilities

(1.) Overhead Service Drop: The utility shall not charge the customer to upgrade an overhead service drop with a larger size overhead service drop up to the maximum standard size.

(2.) Underground Service Lateral: The utility shall not charge the customer to upgrade an underground service lateral with a larger size underground service lateral up to the maximum standard size.

(3.) Overhead Service Drop to Underground Service Lateral: The utility shall require a contribution from a customer requesting to have an overhead service drop upgraded to an underground service lateral. The contribution shall be equal to the cost of the underground service lateral less the cost of an equivalent overhead service drop.

(4.) Transformers: The utility shall not charge the customers to upgrade their transformer to the maximum standard capacity.

ELECTRIC RULES

112 EXTENSION OR MODIFICATION OF TRANSMISSION FACILITIES TO RETAIL CUSTOMERS

Before a utility extends or modifies its transmission facilities to a retail customer, the utility shall require a contract between the utility and the customer which describes the facilities to be constructed, such as the cost of construction, apportions the responsibility for the construction costs between the utility and the customer, and provides a supporting analysis for the construction and the cost apportionment. The utility shall submit the contract to the Commission for approval. The Commission shall review the contract to assess whether existing ratepayers would be adversely affected by the proposed extension or modification. If the Commission does not respond to the utility within 20 working days from the date of receipt, the contract is approved.

113 TEMPORARY SERVICE

The utility will extend its service to fairs, carnivals and like short-time gatherings and uses (not including short-time uses in the nature of auxiliary, stand-by or seasonal use) under the following rules:

(1.) The customer will agree to reimburse the utility for its expenditures in extending service.

(2.) The cost of extending service shall include all items of labor and materials, with the customary overhead charges, necessary to furnish the customer with the service requested. It shall also include any costs involved in the dismantling of materials and their return to stock. Where materials dismantled have a salvage value, the cost of extending service will be credited with such salvage value.

(3.) All energy will be measured at one standard voltage at some convenient point designated by the utility.

(4.) The customer will make the necessary arrangements and provide for the necessary equipment in the event more than one voltage is required.

(5.) The cost of all construction (labor and materials) necessary to distribute energy on the premises occupied by the customer will be borne by the customer.

(6.) The utility may require the customer to make an advance deposit sufficient to cover the costs of extending service and the estimated bill for energy.

(7.) The rates applicable in the area where temporary service is rendered shall be applied in determining the customer's bill.

ELECTRIC RULES

114 TEMPORARY SERVICE FOR CONSTRUCTION

(1.) The customer will agree to reimburse the utility for its expenditures in extending service.

(2.) Temporary service shall be given to a customer connection only when constructed in accordance with the sketch as provided by the utility. The post supporting the unit shall be located as near as possible to the location of permanent service to the building. Abnormal conditions involving compliance with the foregoing provision will be cleared with the utility and permission granted by the utility prior to locating the customer connection.

(3.) All temporary service shall be maintained in a safe manner in order to keep the utility harmless from injury to persons or property. The service shall remain temporary only for a reasonable time and must be made permanent when the utility directs such action.

(4.) Should the customer elect to receive permanent service the installation charges for extension of new electric service as provided for in Section 107 will apply. Credit shall be given for the payment already made for that portion of the temporary service facilities which can be used for permanent service without modification.

115 EMERGENCY SERVICE

A customer purchasing electric service from the utility under any of the utility's filed rates for firm service, and requesting a reserve line or a separate service connection other than that from which regular service is obtained should consult the utility to determine if such service is available.

The utility may supply emergency service facilities under the terms of a special contract, providing the customer shall pay all costs associated with such facilities. The utility will then provide the emergency service distribution facilities required.

ELECTRIC RULES

116 GENERAL RULES ON CUSTOMER UTILIZATION EQUIPMENT

The rules in this section are designed to assist in maintaining a high standard of electric service for all classes of customers with maximum economy based on electric service rules of the Public Service Commission governing the variation of voltage at customer service entrances.

Before installing any utilization equipment, it shall be the customer's responsibility to notify the utility of the planned addition. The utility will advise customers concerning a specific installation on request. The utility will not test or investigate any customer's equipment except when necessary to determine the cause of substandard voltage conditions. The utility shall, at all reasonable times, have the right to enter a customer's premises to examine the customer's equipment. The utility may refuse to connect service or will suspend service when such equipment does not conform to these rules and it has not been corrected after reasonable notice.

All wiring and other electrical equipment on the premises furnished by the customer shall be installed and maintained by the customer at all times in conformity with the requirements of the Wisconsin State Electrical Code and with the Rules and Regulations of the utility.

Electrical apparatus to be used in connection with and operated by energy furnished by the utility shall be of such design and construction, and installed and operated in such manner, so as not to interfere unreasonably with the utility's service to other consumers. In the event that such apparatus does not comply with the above requirements, the utility may discontinue service until the conditions causing interference with the utility's service to other consumers have been remedied by the customer. The utility may require the installation of a separate power service to serve equipment which does not conform to the rules which govern lighting service or to serve other devices which are likely to interfere with standard voltage regulation.

Where a customer connects single-phase equipment to a three-phase service, the single-phase equipment shall be connected to prevent unbalance of the loads on the three-phase service in excess of 10 percent. A power factor of 90 percent (or as otherwise specified in the company's tariffs) shall be maintained by the customer. When these requirements cannot be met, the customer shall apply for a separate single-phase service.

It shall be the customer's responsibility to install any protective devices such as time-delay under-voltage relays, phase reversal relays, devices to protect against unbalanced phase operation of three-phase equipment and any other device necessary to prevent damage to utilization equipment which might result from imperfections in the supply of power.

ELECTRIC RULES

117 MOTORS AND MOTOR CONTROL

In order to prevent impairment of service to other customers, it is necessary to establish limits for the allowable starting currents for motors. Before selecting motor equipment, the customer should consult the utility to determine the specific voltages available at any location.

When a motor is used to drive equipment that requires varying torque during each cycle of operation, such as a compressor or reciprocating pump, the combined installation should have enough momentum in its moving parts so that its operation will not interfere unduly with service to other customers.

(1.) Types of motor service available on general service lighting rates, single-phase only are as follows:

a. Single-phase fractional horsepower motors: Automatically controlled and frequently started, whose locked rotor currents do not exceed 23 amperes may be connected to 120-volt circuits.

b. Single-phase motors, one horsepower or less: Manually controlled or infrequently started, whose locked rotor currents do not exceed 50 amperes may be connected to 120-volt circuits. No single-phase motor larger than 1 horsepower shall be operated on a 120-volt circuit.

c. Infrequently started single-phase motors of 10 horsepower or less may be connected to 240-volt other circuits if their locked rotor currents do not exceed the values shown in the next section describing motor service available on power rates.

d. In urban areas infrequently started three-phase motors of 10 horsepower or less, connected through single-phase to three-phase converters may be used on other circuits.

e. Single-phase motors above 10 horsepower are not permitted in rural areas.

ELECTRIC RULES

117 MOTORS AND MOTOR CONTROL (continued)

(2.) Types of motor service available on power rates and combined light and power rates, single-phase and three-phase are as follows:

a. Motors with long periods of continuous operation under maximum load conditions and having not more than four starts per hour may be connected if their locked rotor currents do not exceed those listed in the following table. Consult the utility where these conditions cannot be met, or where equipment ratings and/or starting characteristics exceed the values in the table below:

Motor Starting Table

Motors Rated	Total Locked Rotor Current Not to Exceed
120 Volts, Single-Phase	50 Amperes
240 Volts, Single-Phase 2 Horsepower or Less	60 Amperes
2 to 6.5 Horsepower	60 Amperes Plus 20 Amperes Per Horsepower in Excess of 2 Horsepower
6.5 to 15 Horsepower	150 Amperes Plus 10 Amperes Per Horsepower in Excess of 6.5 Horsepower
240 Volts, Three-Phase 2 Horsepower or Less	50 Amperes
2 to 19.9 Horsepower	50 Amperes Plus 14 Amperes Per Horsepower in Excess of 2 Horsepower
20 to 40 Horsepower	300 Amperes Plus 4 Amperes Per Horsepower in Excess of 20 Horsepower
50 Horsepower and Over	8 Amperes Per Horsepower

ELECTRIC RULES

117 MOTORS AND MOTOR CONTROL (continued)

b. Motors above 10 horsepower rating are to be three-phase.

c. New installation of motors of 50 horsepower or larger should be approved by the utility as to motor type, starting and protective equipment, and as to availability of an adequate power supply at the proposed location.

d. Motors subject to frequent starts, such as elevator and hoist motors, when connected to the secondary distribution system, should have their starting current limited to 100 amperes.

e. For motors of higher voltage rating than shown in the motor starting table, the allowable currents are inversely proportional to the voltages.

118 MISCELLANEOUS EQUIPMENT

X-ray equipment operated on lighting or combined lighting and power services shall have input currents not exceeding 24 amperes without specific approval of the utility.

All other equipment not specifically provided for in this section will be subject to approval of the utility on the basis of starting currents specified herein for motors with the same frequency of starting. Customers are advised to consult the utility before connecting any such apparatus.

119 PRIVATE POWER PLANTS

No generator may be electrically connected to the utility's lines or equipment without the written consent of the utility and with adequate physical arrangements to prevent hazard to life and damage to utility property.

ELECTRIC RULES

119 PRIVATE POWER PLANTS (continued)

After advance written notice and advance approval by the utility, a customer may install their own standby emergency generating equipment and connect it to the customer's wiring systems, provided the connection is through a double-throw switch or other means which will prevent accidental electrical connection of the generator to the utility's facilities at any time. All cost of installation and equipment shall be borne by the customer. The customer shall not operate such equipment until inspection by the utility has been completed. In the event that any customer wishes to engage in parallel operation with the facilities of the utility, service will not be rendered to such customer until a written contract has been entered upon between the customer and the utility and the conditions of delivery of electric energy are fully outlined therein.

Reference Wisconsin Electrical Code.

120 PAYMENT FOR CONTRIBUTION IN AID OF CONSTRUCTION

The utility may require that the required contribution in aid of construction be paid in advance of construction or may, at the utility's option, offer customers an installment payment plan. If a utility offers an installment payment plan to its customers, the installment plan shall be reviewed and placed on file at the Commission.

121 STRAY VOLTAGE SERVICE

(1.) Under normal operating conditions, a neutral-to-earth current or voltage may exist on the grounded or grounding conductors or other conductive objects on the customer's premises. The source of the current or voltage may be located on the premises, off the premises, or a combination of both. Upon the customer's request, the utility will investigate inquiries associated with neutral-to-earth current or voltage concerns.

(2.) Stray voltage is a 60 Hz steady state AC RMS voltage that can be measured across a 500-ohm shunt resistor which has been connected between two points which livestock may contact simultaneously. "Steady state" means the value of a current or voltage after all transients have decayed to a negligible value. "Transients" mean changes in the steady state current or voltage caused by faults, operation of protective devices, switching, reclosing, tap changing, motor starts or stops, motor stalls or other phenomena that are temporary in nature. The Public Service Commission of Wisconsin (PSCW) has defined the "level of concern" as 1 volt or 2 milliamperes (mA) AC RMS steady state at cow contact.

ELECTRIC RULES

(3.) If a customer requests stray voltage investigative analysis more than two times in a 12-month period, and the utility has not found stray voltage above the level of concern in any of these analyses, the utility may charge a fee for any further stray voltage analyses it performs during the remainder of the 12-month period. The fee may not exceed $320, which is estimated to be the cost of the additional requested service.

(4.) Following a determination by the utility that, under normal operating conditions, the contribution to animal contact current from off-farm sources is in excess of 1 mA, the utility shall implement, at its expense, measures to reduce this contribution to below 1.0 mA. For farm facilities housing livestock where stray voltage from off-farm sources is a concern, it may be necessary under certain conditions to modify the farm or utility electrical system, or both.

(5.) The utility shall, based on a technical and economic analysis of acceptable alternatives for lowering levels of stray voltage at the given location, determine whether long-term system modification should be on-farm, off-farm or both. If the utility, with the consent of the customer, chooses to install a long-term mitigation device (e.g., an electronic grounding system or equipotential plane) on farm property, the customer will assume ownership of the device. The utility will respond to reasonable customer requests regarding maintenance of the device. The customer is responsible for the daily monitoring and energy costs of the on-farm mitigation device, if any. The customer may be required to sign a Stray Voltage Reduction Agreement prior to installation of an on-farm mitigation device.

(6.) The utility will not install any mitigation device(s) where its stray voltage investigation reveals unsafe conditions, or the inspection report of a state certified commercial electrical inspector or a state certified master electrician reveals that conditions do not comply with applicable electrical codes. If the utility's investigation reveals unsafe conditions, the utility shall notify the customer of the problems found and the potential hazards, and shall recommend the customer take prompt action to remedy the hazard.

ELECTRIC RULES

(7.) In the event modification of on-farm or off-farms systems, to reduce off-farm stray voltage contribution, is not required, the customer may request separation of primary and secondary neutrals. The neutral reconnection device(s) ["isolator(s)"] used for this purpose shall be approved for use by the utility and the PSCW. Prior to installation, the customer shall submit an application form, a satisfactory farm wiring inspection report which has been issued by a state certified commercial electrical inspector or a state certified master electrician, and submit payment for all costs associated with the neutral separation. The customer may be required to sign a Customer Requested Neutral Separation Agreement and may also be required to sign a Hold Harmless/Indemnification Agreement and Release approved by the PSCW. Separation costs shall include labor, equipment, and materials [excluding the isolator(s)] necessary for both isolator(s) installation and a post-separation analysis of possible bypass circuitry. Costs may vary and may, therefore, be subject to a specific determination for each farm location. The isolator(s) shall be owned by the utility and shall be leased to the customer at a lease rate of $35.00 per isolator, per month. This lease rate includes an appropriate amortized fee to cover the cost of an annual inspection designed to assess isolator effectiveness and to ensure that the isolator(s) continues to perform its intended function of neutral reconnection under fault conditions. Lease agreement shall require monthly billings.

(8.) If within one year of the date of installation of a customer-requested isolator(s), the customer requests isolator(s) removal, the utility shall refund to the customer all lease amounts which the customer has paid to date.

(9.) Where modification of on-farm or off-farm systems to reduce off-farm contribution is required but cannot be accomplished within five working days, the utility may install a temporary isolator(s). The customer may be required to sign a Temporary Neutral Separation Agreement prior to installation. The utility must remove the isolator(s) and reconnect the neutrals within 90 days, unless it receives a waiver from the PSCW or the customer completes a Customer Requested Neutral Separation Agreement. Upon receiving a completed Customer Requested Neutral Separation Agreement, the utility (not the customer) will provide the inspection of farm wiring by a state certified master electrician or state certified commercial electrical inspector. If any wiring code violations are found and the customer corrects them within 60 days, the utility will keep the isolator(s) in place. Otherwise, it must remove the isolator(s) and substitute another mitigation technique to reduce off-farm stray voltage to 1.0 mA or less.

ELECTRIC RULES

(10.) Should the customer whose neutrals were temporarily separated as provided for in (9.) above desire the isolator(s) be left in place following the required reduction of off-farm stray voltage contribution, the customer may request the continuation of this service in accordance with the terms and conditions established in (7.) above. The agreement shall be contingent on receipt of a satisfactory wiring inspection report issued by a state certified commercial electrical inspector or a state certified master electrician. Initial installation costs will be waived.

(11.) At farm locations where primary and secondary neutrals have been separated at the request of the customer as provided for in (7.) and (9.) above, cost-free stray voltage investigative services may be limited to an annual investigation that determines the effectiveness of the isolator and isolation and an analysis of utility facilities only. If on-farm stray voltage analysis or additional determinations of isolation effectiveness are requested by the customer, the Utility may charge a $320 analysis fee.

(12.) Numerous locations exist where primary and secondary neutrals have been separated for various reasons prior to the order date, July 16, 1996. As stray voltage investigations are performed at these locations, either at customer request or incident to existing utility isolator removal efforts or system modifications, and the utility's stray voltage contribution under normal operating conditions is determined to be less then 1.0 mA, these customers shall become subject to all of the conditions set forth above.

(13.) Prior to July 16, 1996, the utilities shall perform the required stray voltage investigation and separate the primary and secondary neutrals within 45 days of the receipt of a PSCW-approved Isolation Request form and a satisfactory farm wiring inspection report which has been issued by a state certified commercial electrical inspector or a state certified master electrician. Subsequent to July 16, 1996, the utilities shall perform the investigation and separation within 30 days of the receipt of the above-referenced documentation. The utility shall not be required to initiate the neutral separation work requested prior to receipt by the utility of full payment for all costs associated with the neutral separation, as specified in (7.) above.

(14.) The utility may not install, or permit the continued use of, an isolator(s) at locations where livestock are not and/or no longer will be housed.

(15.) The company may supply service at one point to a customer for distribution by the customer to a number of buildings owned by the customer, provided that such buildings are located on contiguous properties including those directly across public thoroughfares.