



SERVICE RULES AND REGULATIONS

Effective Date – 1/1/2024

ADAMS-COLUMBIA ELECTRIC COOPERATIVE



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General Information

1. The Cooperative

The Adams-Columbia Electric Cooperative headquartered at Friendship, Wisconsin is a cooperative corporation organized under the provisions of Chapter 185, Laws of Wisconsin, and laws amendatory thereof and supplementary thereto. The Cooperative provides electric service to its members in Adams, Columbia, Dane, Dodge, Green Lake, Jefferson, Marquette, Portage, Sauk, Waupaca, Waushara, and Wood Counties in the State of Wisconsin. Membership is available to all persons within the service area of the Cooperative on a non-discriminatory basis. Each member has one vote in the affairs of the Cooperative which are conducted by a Board of Directors who are elected from the membership by the members.

2. Purpose

These Rules and Regulations are designed to govern the supply and receiving of electrical power and energy from the Cooperative to the member and to ensure satisfactory, safe and non-discriminatory utility operation. They set forth the terms and conditions for initiating and maintaining electric service and apply to all classes of service and govern the terms of all agreements for service except that the Cooperative reserves the right to enter into special contracts as provided herein.

3. Modifications of Rates, Rules, and Regulations

The Cooperative reserves the right, in any manner permitted by law or ordinance to modify any of its rates, Rules and Regulations, or other provisions now or hereafter in effect. The Rates, Terms, Conditions and other matters agreed to in a fixed term contract shall be in harmony with the Cooperative's Rates, Rules and Regulations in effect at the time the contract is entered into and thereafter the contract is binding upon both parties and except as provided therein, the contract can be changed only by mutual agreement.

Additional charges may be added to the Facility Charge, or as a separate bill line item, for members requiring easement payments, line crossing charges, insurance charges or any other charge that a member may impose on the Cooperative. These fees will be prorated to a monthly basis and added to said member's electric bill.

4. [Definitions – General](#)

Access: The right of Ingress and Egress on member premises for the purpose of installation, repair, replacement, testing or inspection of cooperative facilities.

Accessible: The unobstructed availability of cooperative facilities for the purposes of repair, replacement, testing or inspection.

Accidental Grounds: Refers to a situation where an inadvertent short circuit or ground connection has occurred between a supply line and the earth or another grounded facility resulting in the unintended flow of current into such ground or earth.

Aid to Construction: Refers to the payment made by a member (or prospective member) to the Cooperative for investment in facilities to serve this member. This payment is provided as an offset of the construction costs to serve the member. All of the facilities so installed shall be owned, operated,

maintained and controlled by the Cooperative. Fees paid by the member through the aid-to-construction charges are not refundable (these fees are also called footage fees (non-refundable).

Camping Site/Service: Refers to mobile structures not within a park or campground setting that are not permanently mounted on a foundation and connected to a sewer and water system (a mobile home mounted on a foundation with sewer and water connections would be considered a complete dwelling unit capable of supporting a Resident or Non- Resident Member).

Cooperative: The Adams-Columbia Electric Cooperative, a Wisconsin non-profit membership corporation engaged in the distribution and sale of electric energy.

Commercial Service: Electric services to a farm, public building, structure or premises, a place of employment, campground or manufactured home community, public marina, pier, dock or wharf, recreational vehicle park. (Ref: SPS 316)

Consumer: Any person, firm, corporation, or other entity desiring electric service from the Cooperative. Generally, these consumers will become members of the corporation in accordance with the Cooperative's Bylaws. Prospective members may also be referred to as "applicants, developers or property owners."

Developer: A person who develops real estate on a speculative basis on the property under development (see also Spec Home Builder).

Facilities: All physical assets that comprise the electric distribution system, including but not limited to meters, poles, wire, transformers, switches, cabinets, and pedestals.

Facility Retention Fee: An amount paid by the member to keep electric facilities intact for an unused service (disconnected), or for reconnection of a service that has been idle (disconnected) for any period. The fee will equal the daily or equivalent monthly facility charge that would have been collected for the class of service being billed at the time of disconnection.

Industrial Service: Electric Services to very large businesses requiring transformers on the site totaling more than 1,000 KVA of capacity are defined as Industrial.

Land Development: Two or more contiguous land parcels where two or more parcels are being developed for sale.

Member: A consumer that has met the requirements of membership in the Cooperative including completion of the membership application.

Non-Resident Member: A member whose primary residence (legal voting address) is not at the location where electric service is provided. Used in billing to identify a tax collection distinction – also see Seasonal.

Obstructed Facilities: Any cooperative facility that is blocked, covered, or encumbered, thereby impeding, or preventing them from being read, inspected, repaired, replaced, or tested. Examples include but are not limited to meters or wire that have been built in or covered by façade, structure, or permanent improvement.

Resident Member: A member whose primary residence (legal voting address) is at the location where electric service is provided.

Seasonal: This term will designate member, facilities or premises which are active, in use or inhabited on a part-time basis, or during only certain months of the year.

Spec Home Builder: This term will designate someone who builds a home for the purpose of sale to others. Generally, the person owns the land and the building but does not plan on living in the dwelling to be completed.

UDC: Uniform Dwelling Code

Year-Around: This term will designate members, facilities or premises that are active, in use or inhabited on a regular daily basis during all months of the year.

[5. Definitions- Technical Terms](#)

Alternating Current (AC): Current that varies in direction and magnitude. This abbreviation can also be used to refer to a system that supplies an alternating voltage. In the United States the frequency of alternation is 60 cycles per second or 60 Hertz (Hz).

Ampere (A): The basic unit of electric current (also called amps).

Billing Demand: The peak of highest power consumption level during the billing period, usually measured in kilowatts over a 15- or 60-minute interval.

Billing Period: This term shall refer to the time period between two successive, scheduled meter readings.

Bus: Conductor, either rigid or flexible, that is connected between two or more fixed points relatively close together and held or supported in place by insulators or insulating material.

CBEMA: Computer and Business Equipment Manufacturer's Association. A group that establishes standards for the quality of power necessary for equipment to properly function.

Current: The flow of electrons through a conductor measured in amps. Similar to the flow of water measured in gallons in a water system.

Cycle: A time interval in which a characteristic (current, voltage), especially a regularly repeated event or sequence of events occurs.

Demand: Power (which is the product of voltage and current) being used by a member's equipment. Demand is often the term used for the power consumed by the member because the member's equipment demands (requires) this amount of power, usually measure over a 15- or 60-minute period.

Distribution Facilities: All wires, cables, poles, towers, fixtures, apparatus, and other equipment installed in the Cooperative's electric distribution system from the substation to the members service entrance.

Distributed Energy Resource (DER): A facility for the generation or storage of electricity with a capacity of no more than 15 megawatts that is located near the point where the electricity will be used or is in a location that will support the functioning of the electric power grid.

Electromotive Force (EMF): The force that causes electrons to move. Electro-Magnetic Fields (EMF) – Another definition of the abbreviation.

Energy: The use of power over a period of time. The electric utility standard unit of measure is kilowatt-hour (kWhrs).

Frequency: The number of repetitions of a particular pattern in a particular period of time. The frequency of the majority of the U.S. electrical system is 60 cycles per second (also called 60 Hertz).

Ground: Usually refers to a connection from the electric system neutral to the earth through a copper-clad metal rod driven into the earth but can be used for such a connection either intentional or accidental from any electric system wire to the earth.

Hertz (Hz): Alternating current frequency – same as cycles per second. Voltage and current alternate at 60 cycles per second or 60 Hz on most United States systems.

Horsepower (HP): Unit of mechanical power equivalent to 0.746 kW of electric power.

IEEE: Abbreviation for the Institute of Electrical and Electronics Engineers, a technical professional organization to promote standards development and continuing education of engineering professionals.

Kilo (K): Prefix meaning one thousand.

Kilovolt (kV) : One thousand volts.

Kilovolt Ampere (kVA): Unit of measure of power – volts multiplied by amps. One kVA is equal to one-thousand-volt amps. At 100% power factor it is equivalent to one kilowatt (as in resistance heat). One may also consider the Volt-Ampere product as including the reactive power due to the inductance and/or capacitance in the circuit in addition to resistive power.

Kilowatt (KW): One thousand watts. This is equivalent to about 1.34 horsepower.

Kilowatt-hour (kWh): Usage of power over time. One kilowatt-hour is the energy used by one kilowatt for one hour.

Load: Term used to describe the demand or energy consumption of a members' equipment.

Momentary Sag: A momentary decrease in rms AC voltage (10% - 90% of the nominal voltage) at the power frequency of duration from 0.5 cycles to a few seconds. 0.1 p.u. – 0.9 p.u.

Momentary Swell: A short duration increase in rms supply with an increase in voltage ranging from 1.1 p.u. to 1.8 p.u. of nominal supply.

Phase: The time or angular relationship of the voltage or current waveforms with respect to one another, or to another quantity. Also used to describe one of the wires of a poly-phase system.

Power: The ability to perform work. Power is the product of voltage and current ($P = V \times I$). Power is the measure of energy at one instant in time. Power is measured in watts, kilowatts, and megawatts for electrical use.

Power Factor (pf): Ratio of real power (in kilowatts) to apparent (or total) power (in kilovolt-amperes) consumed by a device or group of devices.

Primary: This term usually designates distribution facilities on the supply side of the service transformer. Primary voltages will usually be at 7.2/12.5 kV or 14.4/24.94 kV, but not less than 2.4 kV

Secondary: This term designates distribution facilities on the member side (load side) of the service transformer. Secondary voltages will usually be 120, 208, 240, 277 or 480 volts or combinations thereof.

Single Phase: Only one of the three phase wires is available or needed and is accompanied by a neutral wire to provide the return path. The single phase is indicated by a single letter, either A, B, or C.

Steady-State: The RMS value of a quantity, such as voltage, after all sags, swells and transients have decayed to a negligible value.

Transient: A sub-cycle disturbance in the AC waveform that is evidenced by a sharp but brief discontinuity of the waveform. May be of either polarity and may be additive to or subtractive from the nominal waveform. Ref: IEEE 1100-1992.

Three phase: That portion of a circuit or the system that has all three phases of power available, or where three phases are required. All three letters, ABC, indicate three phases. With three-phase power the voltage (and current) wave forms of one phase are time delayed (out of phase) with respect to the other available phases.

Transformer: A device used to change one level of current or voltage to another. Transformers on the distribution system to serve the members are called distribution transformers, or “tubs”. Very small transformers at any voltage level for relaying, metering, or control are called potential transformers (PTs) or current transformers (CTs).

Voltage: The measure of electric pressure, force, or potential. Similar to the pressure in a water pipe. Electrical potential is measured in volts. Distribution system potential or voltage is usually 7,200/12,470 in rural areas.

Volt (V): Unit of measure for electrical pressure or force.

Watt: Measure of electric power, generally defined as equal to Volts multiplied by Amps.

[6. Definitions – Stray Voltage Terms](#)

Active Suppression: The use of an electrical device that senses neutral-to-reference-ground voltage and produces a voltage to null or cancel the unwanted voltage. Refer to USDA’s Handbook #696.

Animal Contact: Two points that an animal can contact, i.e., become part of an electrical circuit that conducts sufficient electrical current to cause a deleterious response by the animal. The circuit consists of the voltage source, a conductive path from the voltage source to the animal, contact between this path and the animal, the animal, contact between the animal and the return path and the return path from the animal back to the voltage source. Refer to USDA’s Handbook #696.

Bonding: Electrical connecting of hardware to grounding system of the electrical service. Required by the National Electric Code, Article 250. Low electrical resistance connection between two conductive materials. Refer to USDA’s handbook #696.

Current: The flow of electrons through a pathway, due to a difference in electrical potential (voltage). Refer to USDA’s Handbook #696.

Equipotential Plane: A surface with zero or near-zero electrical potential (voltage) difference between all points on the surface. Refer to USDA's Handbook #696.

Fault: A pathway for current to flow outside the normal circuit pathway. Refer to USDA's Handbook #696.

Fault Current: The current that flows through an electrical fault. Refer to USDA's Handbook #696

Gradient Control: The installation and electrical bonding of materials to limit voltage between contact surfaces to acceptable levels. Refer to USDA's Handbook #696.

Isolation: Separation of the primary (7,200/12,470 volt) neutral/ground system from the farm's secondary (120/240 volt) neutral/ground system at the Cooperative's transformer. An isolator/coupler device is installed between the two grounding systems.

Isolator or Neutral Isolator/Coupler: A voltage-triggered switch designed to close any time the primary and secondary neutral voltages differ (due to a fault) by more than the unit's voltage threshold. Sensing such a voltage difference the isolator/coupler then switches to a shorted or coupled mode to prevent an unsafe voltage from developing between the two grounding systems.

Level of Concern: Defined by Public Service Commission of Wis. Stray Voltage Order, Docket #05- EI-115, to be greater than 1-volt steady state AC, RMS (using a 500-ohm resistor) across two points that livestock may contact simultaneously or 2-milliamp steady state AC, RMS current. This level addresses the concept of equal responsibility between the Cooperative and the farmer; each party is allowed 0.5 volts animal contact or 1mA animal current before action should be taken.

Neutral-to-Earth Voltage (NEV): A voltage that is measured from a grounded or grounding conductor to a remote reference location. Its presence is an unavoidable result of current flow through the resistance of the neutral and ground network. Neutral-to-earth voltage is always present at some level on a multi-grounded primary (ACEC) and secondary electrical system (on-farm).

Reference Rod: A rod installed to give a reference voltage reading to the conditions present on the electrical system. The Public Service Commission of Wisconsin (PSCW) has very specific recommendations for the use of reference rods.

Resistance (R): The properties of a material that impedes the flow of current in an electrical circuit. Refer to USDA's Handbook #696.

Root Mean Squared (RMS): A measure of the effective magnitude of an AC voltage or current. It is the square root of the average of the square of the values of the function taken throughout one complete cycle. Refer to USDA's handbook #696. A type of voltage and/or current measurement that applies to alternating current systems which has the property that the product of voltage and current root-mean-square (RMS) values (in volts and amperes respectively) yields the correct power value in watts. All common voltage designations on an electric grid such as 120, 240 and 7200 volts are root-mean-square values. One can determine the maximum voltage of a sinusoidal voltage waveform by multiplying the root-mean-square value by the square root of 2, an approximate value of 1.414. Thus, the maximum voltage of 120-volt RMS circuit is $120 \times 1.414 = 170$ volts.

Source Resistance: When used for stray voltage analysis, source resistance includes the contact resistance from hoof to floor, the resistance of the concrete, resistance of the soil, resistance of the electrical system path from the voltage source including both the farmstead and the utility electrical system, the resistance of the connection from the electrical system to the water system (or other applicable metallic structures) and the resistance of the water system to the animal's environment. As defined by the Wisconsin Public Service Commission, Stray Voltage Analysis Team.

Spark Gad Isolator: An isolation device that depends upon a gap between two electrodes to break down and spark across. Due to the electrode wear, voltage levels needed to spark the gap increase and becomes unpredictable. Unsafe voltage levels will develop if shorting or coupling does not occur during a fault (This type of isolator is not allowed by the Cooperative).

Stray Voltage: A difference in voltage measured between two surfaces that may be contacted simultaneously by an animal or a small voltage (usually much less than 10 volts) that is measured between two points that can be contacted simultaneously by an animal. Reference USDA's Handbook #696.

Stray Current or Animal Current: The electrical current that flows through an animal when the animal makes simultaneous contact with two surfaces that are at different electrical potentials. Refer to USDA's Handbook #696.

Testing for 24 hours: Testing may or may not have "24 hour" recordings for that period, each 24-hour test will have recording for all of the milkings done in a normal 24-hour period and may be from 18 to 24 hours in length.

Voltage Drop: The difference in electrical potential (voltage) between two points in a circuit. For example, the voltage difference between the supply end and the load end of a conductor is the voltage drop in the conductor. Refer to USDA's Handbook #696.

Terms and Conditions for Service

1. Membership and Electric Service

Any individual, association, corporation, partnership, or governmental agency that is using or desires to use electric service provided by the Cooperative shall be or become a member of the Cooperative. The member is then entitled to electric service and is bound by the Rules and Regulations and Rate Schedules of the Cooperative (available at acecwi.com). No individual or organization may hold more than one membership in the Cooperative. Membership cannot be transferred except as provided for in the Cooperative Bylaws.

Application for membership and electric service shall be made in writing on the membership application form provided by the Cooperative (also available for electronic completion at acecwi.com). Upon acceptance of membership, the Cooperative will furnish electric service as promptly as possible in accordance with these Rules and Regulations. As a member, the member shall have all the rights and privileges of membership as defined in the Articles of Incorporation and Bylaws of the Cooperative. When the member discontinues receiving service, the membership in the Cooperative will automatically terminate according to the Bylaws of the Cooperative.

Where an existing service is being put into a new party's name and the application for service is being sent through the mail, the Cooperative may, on a temporary basis, provide service to that property. Such service should not extend for a period of more than thirty (30) days.

[2. Ownership and Responsibility](#)

[A. Cooperative-Owned Facilities](#)

The Cooperative will normally install, own, operate, and maintain all distribution facilities on the supply side of the meter; all service entrance wiring after this point of service is the responsibility of the member. If building location, dimensions, or modifications create a hazardous condition, obstruct access to metering facilities, or cause a violation of any applicable code, the member will be responsible for all costs incurred to correct these conditions. The cooperative will endeavor to work cooperatively with members to resolve these conditions, but in no case will obstructed facilities remain energized for a period exceeding one year, unless in the sole discretion of the Cooperative, the member in good faith is working towards correcting the condition. See [Metering Standards](#) for specific meter location and secondary system requirements.

For service sizes 400 amp and greater the Cooperative will normally install, own, operate, and maintain the secondary conductors to the meter cabinet (secondary length limitations apply) and the meter to measure electrical service, including any current or potential transformers necessary to measure the usage of electricity.

[B. Access to Premises](#)

The member shall provide at no expense to the Cooperative suitable space with provisions for installation and maintenance of the Cooperative's facilities on the member's premises. Authorized agents of the Cooperative shall have access to the premises for construction, operation, maintenance, removal, or inspection of the Cooperative's facilities, or to inspect the member's facilities to measure the member's load. Failure to provide access for any of the above reasons may result in termination of service. Authorized employees and agents shall carry identification furnished by the Cooperative and shall display it upon request.

For field irrigation, the member is responsible for providing a vehicle access road from the public road to the transformer and meter location for maintenance of Cooperative facilities and for meter reading.

[C. Use of Facilities](#)

No new installations will be made where the member's metering base and related equipment are allowed to be installed on any Cooperative-owned pole.

The Cooperative will not allow use of its poles or other facilities by others for installations or attachments on any kind without written authorization from the Cooperative. This includes but is not limited to, electrical or communication equipment, lights, signs, and fences. The Cooperative assumes no liability for property owned by others attached to its facilities. Unauthorized attachments to Cooperative facilities may be removed without notice at the sole discretion of Cooperative.

[D. Facility and Energy Diversion Protection](#)

The member shall use reasonable diligence to protect the Cooperative's facilities located on the member's premises, and to prevent tampering or interference with such facilities, including modifications of any kind. The Cooperative may discontinue service in accordance with these Rules and

Regulations in cases where the meter and/or facilities on the member's premises have been modified, tampered with, or energy use is un-metered or unauthorized. Also see [Failure of Meter to Register Usage](#), and [Disconnection at Cooperative's Option](#).

In case of such unauthorized use of service, the Cooperative will continue service only after the member has agreed to pay for the un-authorized energy used, including interest charges for all months of unauthorized use at no less than fees otherwise charged for late payment, pay all costs of discovery, investigation, any corrective action the Cooperative deems necessary, including making provisions and paying charges for any metering changes as may be required by the Cooperative.

Failure to enter into such an agreement or failure to comply with the terms of such agreement shall be cause to discontinue service. Restoration of service will be made upon receipt of reasonable assurance of the member's compliance with the Cooperative's approved Service Rules and Regulations.

Temporary disconnection of service for safety during home maintenance is a service provided by the Cooperative. Also see [Disconnection at Member's Request](#).

[E. Ownership Rights](#)

No ownership rights in any facilities provided by the Cooperative shall pass to any person as a result of any contribution (aid-to-construction) made under these Rules and Regulations. No contributions made by any person shall be refundable unless expressly provided for in these Rules and Regulations.

[F. Damage to Cooperative Owned Facilities](#)

The Cooperative will determine the costs to restore damaged facilities to their proper working order. The costs necessary to make these repairs will be assessed to the party causing such damage. The Cooperative will not charge more than the cost for repairs including material, labor, labor overheads (including benefits), and transportation. The charge will not include additional costs of improvement where the Cooperative chooses to upgrade the system.

[G. Member-Owned Facilities](#)

The cooperative reserves the right to deny or discontinue service to any member whose wiring or equipment shall constitute a hazard to any members of the public, the Cooperative's equipment, or its service to others. However, the Cooperative disclaims any responsibility to inspect the member's wiring, equipment or any subsequent wiring changes or modifications and shall not be held liable for any injury or damage resulting from the condition thereof. It shall be the member's responsibility to see that his/her facilities comply with all Cooperative and State rules, requirements and codes, and that all required wiring affidavits, permits, compliances, etc. are obtained.

The member shall be responsible for the adequate performance of his/her owned facilities, such that it does not degrade service to others to a level below industry standards, such as those by the Computer Business Equipment Manufacturer's Association (CBEMA), the IEEE 1100 (Emerald Book), IEEE 519 and IEEE 1547 (Standard for Interconnecting Distributed Energy Resources).

Before purchasing equipment or installing wiring, it shall be the member's responsibility to check with the Cooperative as to the characteristics of the service available. The Cooperative reserves the right to make reasonable service charges for work performed by Cooperative personnel resulting from malfunction of the member's facilities. Also see [Power Quality \(System Disturbances\)](#) and [Special Charges](#).

Where member-owned devices are located on Cooperative owned facilities, the member shall be responsible for removing their facilities as necessary to adapt to the changes the Cooperative has made to Cooperative facilities.

Payment of any contribution (such as aid-to-construction) by the member for any facilities provided by the Cooperative shall not convey any ownership rights to the member for those facilities. No contributions made by members shall be refundable unless expressly so provided in these Rules and Regulations. Also see [Cooperative Owned Facilities](#). The Cooperative will generally not replace or maintain any member-owned facilities. In the event that the Cooperative does undertake work on members-owned facilities the member will be billed according to the rates in [Appendix A, B, and C](#), or another amount as approved by the General Manager and included in a written agreement between the Cooperative and the member.

[H. Point of Attachment](#)

The Cooperative will install service connections from its distribution lines to a suitable point of attachment on the member's premises designated by the Cooperative. Where the member requires a point of attachment other than specified, the member may be required to pay the cost of additional facilities necessary to reach the point of attachment. Service will be provided to a member-owned single terminal point where more than one structure is to be supplied from a single meter. See [Cooperative Owned Facilities](#) and ACEC Service Requirements Manual located at <https://www.acecwi.com/new-construction> for additional information. Should it become necessary for any cause beyond the Cooperative's control to change the location of the point of attachment, the cost of any changes in the member's wiring made necessary thereby shall be borne by the member.

[I. Nature and Quality of Service \(Frequency and Voltage\)](#)

All electric service is alternating current at 60 Hertz (cycles per second). The standard service voltages available are:

Single Phase:

120/240 volts (overhead and pad-mounted)

240/480 volts (overhead and pad-mounted)

Three Phase:

120/208 volts (overhead and pad-mounted)

277/480 volts (overhead and pad-mounted)

Non-standard voltages that will only be utilized for existing service locations with Operations Department review are:

Three Phase:

20/240 volts (delta, overhead)

Due to safety concerns and risk to Cooperative equipment, 120/240-volt delta, 3-phase pad mounted, whether as a single three-phase unit, or three single-phase units in a banked arrangement are no longer allowed.

The Cooperative endeavors to maintain steady-state voltages at 100% of the nominal values shown above, as appropriate for the service provided, plus or minus a 5% tolerance for residential service and plus or minus a 10% tolerance for commercial/industrial service.

The Cooperative provides each member installation with only one service voltage. Any exceptions must be approved by the Cooperative and conform to all other provisions of these Rules and Regulations and applicable codes. The service voltage provided to the member is based on the member's needs and available service voltages.

The member may take service at primary or transmission voltage under terms and conditions as indicated in the applicable Rate Schedule or as provided by special contract.

[J. Continuity of Service](#)

The Cooperative will endeavor, but does not guarantee, to furnish a continuous supply of electric energy.

The Cooperative shall not be liable for interruptions in service, phase failure or reversal, or variations in service characteristics, or any loss or damage of any kind or character occasioned thereby, due to causes or conditions beyond the Cooperative's control, and such causes or conditions shall be deemed to specifically include, but not be limited to the following: acts or omissions of members or third parties; operation of safety devices except when such operation is caused by negligence of the Cooperative; absence of an alternate supply of service; failure, malfunction, necessary repairs or inspection of machinery, facilities or equipment; acts of nature, war, action of the elements; storm or flood; fire; riot; vandalism; terrorism, cyberthreat, civil disturbances; or the exercise of authority or regulation by governmental or military authorities.

The member shall be responsible for giving immediate notice to the Cooperative of interruptions or variations in electric service so that appropriate corrective action can be taken.

The Cooperative reserves the right without previously notifying the member to temporarily interrupt service for construction, repairs, emergency operations, shortages in power supply, safety, and State of National emergencies and shall be under no liability with respect to any such interruption, curtailment, or suspension.

The Cooperative also reserves the right to interrupt service to specific loads when such interruption is a condition of interruptible load rates.

[K. Multi-Grounded Neutral](#)

The Cooperative shall use a multi-ground neutral system as standard for all points of service. Also see [Neutral to Earth Voltage](#).

[3. Availability of Rate Schedules](#)

The availability of a Rate Schedule to a member is based on the member meeting qualifications of the availability clause and other terms of the Rate Schedule. Rate Schedules are available on the Cooperative's website (acecwi.com), or upon request and it shall be the member's responsibility to see that he/she is charged the rate for which he/she qualifies. In some cases, the member may be eligible to take service under more than one rate.

By request, the Cooperative will advise the member in the selection of the rate that will give him/her the lowest cost of service based on information provided to the Cooperative; however, the responsibility for the selection of the rate lies with the member. After the member has selected the rate under which he/she elects to take service, or when the type or capacity of service(s) needed requires a change to another rate, the member will not be permitted to change from that rate to another rate until at least 12 months have elapsed. An exception to this elapsed time requirement will be made if the service no longer meets the availability clause of the Rate Schedule. Additionally, it is the responsibility of the member to notify the Cooperative of any change that affects the rate or charge for service.

No refund will be made of the difference in charges under different rates applicable to the same class of service.

[4. Use of Service](#)

[A. Purchase All Requirements](#)

Each member shall, as soon as electric service becomes available, purchase only from the Cooperative all electric energy to be purchased and used on the premises, and shall become liable for all charges incurred in the purchase of said electrical energy from the Cooperative. Standby

and/or supplemental on-site generation may be utilized if approved by the Cooperative and properly connected so as to prevent parallel operation with the Cooperative's system. Any parallel operation shall be in accordance with Chapter 2.7 Distribution Energy Resources.

[B. Resale of Electric Energy](#)

Members shall not resell to, or share with others, any electric service furnished by the Cooperative under the terms of its approved Rate Schedules when that Rate Schedule is not applicable to such resale or transfer of energy.

[C. Initial Notification](#)

Any member using service without first notifying and enabling the Cooperative to establish a beginning meter reading may be held responsible for any amounts due for service supplied to the premises from time of last reading reported immediately preceding his/her occupancy.

[D. Termination of Service](#)

Any member desiring termination of service shall notify the Cooperative a minimum of three (3) working days in advance so the service may be discontinued on a mutually agreeable date. Members failing to give proper notice of intent to vacate the premises may be held responsible for use of service until a meter reading acceptable to the Cooperative is obtained.

[E. Disconnect/Reconnection of Idle Service](#)

The Cooperative may, at its own discretion, retire (remove) any facilities that have been idle for more than two years. If a member at or near a service that had been retired subsequently

requests service, the service extension rules in place at the time the service will be installed, will determine any charges that may be assessed to connect the new service.

If a member requests that an idled service continue to be left idle and not retired, the Cooperative will allow the facility to remain in place if the member agrees to pay an amount equal to the currently applicable facility charge until the member chooses to have the service re-energized.

If the member declines to pay the facility charge to prevent the service from being retired, ACEC may disconnect, retire, but leave any facilities in place that would not, in the Cooperative's judgment, pose a burdensome expense on the Cooperative and that might be reusable in the future. Subsequently, if the service cannot be re-energized reliably and safely, in the Cooperative's sole judgment, then the member would be required to pay at a minimum the sum of all past unpaid facility charges for that service, or for a new service extension and/or make ready costs at the then-prevailing charges.

Any service that has surpassed the above idle limit of two years may be retired without further notice if at any time in the future the service once again becomes idle for more than one month without paying the currently applicable facility charge.

The Cooperative may require any service idle for more than 12 months to be inspected by a licensed inspector and deemed safe prior to reconnection.

[F. Power Quality \(System Disturbances\)](#)

The member shall not use the service in any way that causes a safety hazard, endangers the Cooperative's facilities, or disturbs service to other members. Failure to comply with this provision may result in discontinuance of the member's service.

The member shall install only such motors, tankless water heaters, electric vehicle chargers or other apparatus or appliances as are suitable for operation with the character of the service supplied by the Cooperative, and electric energy must not be used in such a manner as to cause detrimental voltage fluctuations or disturbances on the Cooperative's distribution system.

The member shall be responsible for notifying the Cooperative of any additions to or changes in their equipment.

The member shall install and maintain the necessary devices to protect his/her equipment against partial or complete service interruptions and other disturbances such as voltage spikes or surges that occur as the result of normal system operation on the Cooperative's system. The member shall also install the necessary devices to protect the Cooperative's facilities against overload caused by the member's equipment. Characteristics and installation of all such equipment or devices including any power factor correction equipment required shall meet the approval of the Cooperative.

The member shall have the responsibility and obligation to modify his/her electrical facilities so as to not have any adverse effect on the Cooperative's system, or on the power quality of any other member.

The member shall meet the harmonic requirements of IEEE 519. The IEEE 519 voltage harmonic limits are 5% total harmonic distortion (VTHD) and no single harmonic greater than 3%. The current harmonic limits are calculated per IEEE 519. Besides bearing the cost to make improvements to their own system, the member will also be responsible to pay time and material to upgrade Cooperative facilities to alleviate the power quality concerns. The member may also be held responsible for any costs incurred by the Cooperative to determine the source of any such problems (i.e., testing)

[G. Motors - General](#)

Motor installations, including starting devices, shall be required to have starting characteristics which will not cause a voltage fluctuation due to inrush current of more than 3% to other members' service nor cause objectionable lighting flicker. Larger momentary voltage drops affecting only the member causing the voltage drop may be allowed with prior approval of the Cooperative.

The Cooperative reserves the right to require the member to provide, at their own expense, equipment to control the fluctuations to the level required by the Cooperative.

The size and/or number of installed motors may necessitate the installation of special Cooperative equipment to prevent an adverse impact to the service of other members or the member utilizing this equipment. Service to such load will be under a special facility charge as determined by the Cooperative.

[H. Motors – Three Phase](#)

Because operating conditions on the Cooperative's system will vary by location, the member or potential member is required to contact the Cooperative to determine the maximum value of starting current permissible at a given location. Motors requiring less than the maximum allowable level will be allowed to start "across the line". Motors with a greater starting current than permissible may require member installed equipment to limit the starting current.

[5. Non-Standard Service](#)

Members shall be liable for the cost of any special installation necessary to meet particular requirements for service at other than standard practice as provided herein.

Upon request of the member and based on circumstances on a case-by-case basis, Adams-Columbia Electric Cooperative (ACEC) will consider moving, modifying, or changing its facilities that provide service to the member.

Any fees (aid-to-construction) for modifying the Cooperative's system to non-standard construction (or to meet the member's requested level of service beyond ACEC established standards) must be paid for prior to commencement of ACEC construction. The member must also submit a signed request in writing for the changes (or the member may return the quote provided by the Cooperative, dated, and signed, to the Cooperative along with the payment). The member must be in good standing with the Cooperative (having no outstanding electric account bill due).

If the member proceeds, or directs ACEC to proceed, with the work and becomes dissatisfied with it for any reason, and either the member or any future landowner requests ACEC to make further changes to ACEC facilities, the member (or the future landowner) would be responsible for the costs associated with those changes, even if those changes are to restore the service to ACEC standards.

ACEC reserves the right to refuse non-standard modifications if they would compromise the system and/or are deemed by ACEC to be detrimental to safety. ACEC's system operation, other member's electrical systems, or go against recommended industry practices.

[6. Neutral to Earth Voltage](#)

[A. General](#)

The Cooperative provides electric energy and service to its members utilizing a multi-ground current-carrying neutral. This neutral is solidly connected to all grounds throughout the system, both primary and secondary. The use of a multi-ground current-carrying neutral greatly enhances the safe operation of the distribution system for all concerned.

These multi-grounded neutral carries current and will, therefore, have voltage relative to the remote earth; this is neutral-to-earth voltage. This neutral-to-earth voltage is a normal system condition and

can be measured on all primary and secondary neutral conductors. The level of neutral-to-earth voltage will vary depending on the member's own energy utilization, the other loads of the line, and the impedance of the neutral system. The neutral-to-earth voltage measured on the member's secondary system will depend on the levels of primary and secondary neutral currents, the conditions of the member's wiring, grounding and equipment, and the relative impedances of the member's and Cooperative's neutral/ground system.

THE MULTI-GROUNDED NEUTRAL SYSTEM IS, HAS BEEN, AND WILL BE, THE STANDARD FOR ALL POINTS OF SERVICE.

This type of system provides maximum safety in case of lightning or other fault condition. Under normal operating conditions, this type of system also keeps neutral-to-earth voltages low enough so that there is no risk of injury to people using the system; however, the neutral-to-earth voltages, whether arising on the Cooperative's or the member's system, cannot always be kept at or below the level generally believed necessary to assure that no operations will be affected. Dairy cattle and other livestock, for example, are more sensitive to low contact voltages than humans.

The Cooperative will endeavor to recommend on-farm improvements and to recommend and implement improvements to the Cooperative-owned system such that the voltage in the cow contact area is less than the "level of concern" as established by the Public Service Commission of Wisconsin.

Members should consider whether their service requirements are more stringent than those of other members. They are encouraged to construct their facilities in ways that will satisfy their special requirements. However, if the member suspects that the normal low neutral-to-earth voltages are affecting his/her operations, the member shall have the responsibility to inform the Cooperative.

New facilities for animal confinement shall have proper construction and wiring completed as specified per NEC (National Electrical Code). The Cooperative reserves the right to require State Electrical Inspection and correction of any deficiencies before energization of a new service for animal confinement facilities. Further, the Cooperative reserves the right to disconnect an existing service where animal confinement facilities are being built or substantially modified and a State Inspection identifies deficiencies in the construction. Reconnection of the service will occur only upon correction of any deficiencies as identified by a State Inspector.

B. Testing and Mitigation Procedures

A general wiring safety check and spot check will be conducted as a service to protect life and property when requested by the member. After an excessive number of requests (exceeding 4 per running 12-month period) for safety checks and animal contact spot check, subsequent checks will be charged a fee according to Appendix A. Where further testing indicates an animal contact voltage greater than the level of concern this fee will be refunded to the member.

The Cooperative will conduct a complete stray voltage test (during 2 milkings, usually over 2 days) on a farm, when requested, once every 3 years without charge. The Cooperative may

require any previous ACEC recommended work to be completed before conducting additional 24- hour testing. Testing is at no charge if major changes (in the system neutral impedance or neutral loading) have been made by the Cooperative.

The fee for stray voltage testing will be according to Appendix A for any other situation. This fee will be refunded if the Cooperative's primary system is contributing greater than 0.5 volts in the animal contact areas. If the contribution is caused by on-farm conditions, the Cooperative will keep the fee and prepare a report for the member documenting the recommended changes to be made based upon data gathered.

If the Cooperative's contribution to the voltage in the animal contact location is 0.5 volts or more, the Cooperative will bear the cost of mitigation to lower the Cooperative's contribution level below 0.5 volts at the animal contact location.

To address off-farm sources of neutral-to-earth voltage the Cooperative will, 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 Cooperative, with the consent of the member, chooses to install an equipotential plane (which becomes part of the structure), or other on-farm devices, such improvements will become the property of the member. The equipotential plane, or other improvements, shall be the member's responsibility to monitor and maintain.

The Cooperative will not install any mitigation devices where the investigation reveals conditions that do not meet minimum standards of electrical safety. If the Cooperative's investigation reveals unsafe conditions, the Cooperative shall promptly notify the member of the problems found and any potential hazard and shall recommend the member take prompt action to remedy the problem.

Where modification of on-farm or off-farm systems are necessary but cannot be accomplished within five (5) working days, it may be desirable to install a temporary primary-to-secondary neutral-isolator/coupler device (neutral isolator). This would be completed according to [Neutral Isolation](#).

The Cooperative personnel will endeavor to leave graphs of the data from the tests conducted with the member before leaving the site. ACEC personnel will also attempt to discuss any wiring and safety concerns with the member before leaving the site.

A written report should be received by the member within one (1) month of the conclusion of the work. This will include facts gathered, results of tests completed, a list of less than adequate conditions found, a list of suggested improvements that should be made, as well as final conclusions and recommendations to achieve a reduction in neutral to earth voltage. The report will also include conditions found and necessary improvements recommended on the Cooperative's system. The Cooperative will include all pertinent work sheets and forms used during the investigation if that information hasn't already been provided.

Upon written request the member will receive a copy of the entire stray voltage file pertaining to the investigation.

Release of information to any third party will be authorized after a written request is received from the member along with a verbal verification, or a notarized letter of request from the member.

After a property is sold, the files will be released to the original member if requested. This will only be after a written request is received from the original member along with a verbal verification, or a notarized letter of request from the original member. With similar authorization from the original

member this data may be sent to a requested third party. The new property owner (and/or property tenant responsible for the electric bill for the property) will only have access to any testing records on file for the property with written authorization from the prior owner.

If, after investigation by the Cooperative and the member's electrician, the member deems the level of neutral voltage to be unsatisfactory for his/her applications, the member may elect to install available remedial devices on his/her secondary service to bring service to within his/her requirements or may request non-standard service from the Cooperative. In its discretion, after considering the safe operation of the system among other factors, the Cooperative may provide non-standard service. The cost of such service shall be borne by the member according to [Neutral Isolation](#).

[C. Neutral Isolation](#)

The Cooperative provides *Provisional Isolation* and *Isolation on Request* for mitigation of stray voltage concerns.

Provisional Isolation: Provisional isolation is used by the Cooperative to mitigate stray voltage when the Cooperative is contributing 0.5 volts (1 mA) or more in animal contact. [Testing and Mitigation Procedures](#) describes the circumstances when Provisional Isolation is utilized.

Requirements for Provisional Isolation:

1. The farm must be an operating livestock facility and isolation shall only be allowed for stray voltage concerns. The member shall notify the Cooperative when livestock have been removed. Upon removal of livestock, the primary and secondary neutral/grounding systems shall be bonded, and the isolator will be removed.
2. The member must allow the Cooperative to test the farm for stray voltage, both before and after the installation of the isolator/coupler. Isolation will require 24-hour stray voltage testing conducted by the Cooperative. This testing will provide farm data to determine what category of isolation is applicable. If testing is not allowed, the member will not be isolated. The cost involved with this testing may be borne by the Cooperative as a service to the member, subject to Chapter 2.6b Testing and Mitigation Procedures regarding stray voltage testing. The member shall allow and assist the Cooperative with further investigating and testing at any time to enable the Cooperative to see if system changes or improvements have impacted the levels of neutral-to-earth voltage at the isolated farm.
3. The member shall sign the Cooperative's "Provisional Neutral Isolation Agreement" (Form #309).
4. The member shall provide a list of the phone, cable TV, gas, and/or any other service providers. The Cooperative will notify other utilities in the area of the pending isolation. The other utilities will be contacted to take steps to separate any grounding ties between the farm's secondary neutral/grounding system and the Cooperative's primary neutral/ground system. Each utility is responsible to maintain these separations and notify its personnel of the hazards that may exist due to separation from the electric system. Only after verification that all other utilities are properly separated will the Cooperative isolate the farm.

5. The member is responsible for separating member-owned equipment and maintain separation from any other non-isolated system. These other systems could be gas lines, water lines, inter-connection electrical systems or any other member-owned equipment.
6. The Cooperative also will notify all other adjacent animal confinement operations of the isolation and monitor those facilities for adverse impact.
7. For provisional isolation the farm wiring shall be compliant with the National Electrical Code Article 250 and have suitable over-current protection. Any cost of correcting the electrical wiring to comply with applicable electrical codes is the responsibility of the member.
8. The member will be made aware of other Cooperative accepted neutral-to-earth voltage reduction techniques that are available. These will include but may not be limited to equipotential plane, grounded grid, other gradient control methods or active suppression systems.
9. The member should monitor daily the neutral-to-earth voltage and/or animal contact voltage levels and notify the Cooperative of any signs of failure of the isolator/coupler unit or unusual conditions. The member should have a suitable voltmeter for the purpose of monitoring neutral-to-earth voltage and animal contact voltage.
10. The Cooperative retains ownership of the neural isolator/coupler. The Cooperative assumes all responsibility for maintenance, repairs, and replacement of this device. The Cooperative will be responsible for all testing of the coupler. The Cooperative will perform coupler testing/inspection twice per year. Only the Cooperative's personnel shall perform maintenance, inspection, and service work on the isolator.
11. When the Cooperative's contribution has been reduced to below 0.5 volts in the animal contact with improvements or corrections and is verified by Cooperative testing, the isolator will be removed. The isolator/coupler may be left in place if requested by the member. The member shall meet the requirements of Isolation on Request to remain isolated.

Isolation on Request: Isolation on request is provided when Cooperative's contribution is less than 0.5 volts, and the member chooses to achieve even lower animal contact voltage. Isolation on Request is considered a non-standard service and [Non-Standard Service](#) Non-Standard Facilities also apply.

Requirements for Isolation on Request:

1. The farm must be an operating livestock facility and isolating shall be only allowed for stray voltage concerns. Testing shall be done only on farms where livestock are present. The member shall notify the Cooperative when livestock have been removed. Upon removal of livestock. The primary and secondary neutral/grounding systems shall be bonded, and the isolator/coupler will be removed.
2. The member must allow the Cooperative to test the farm for stray voltage, both before and after the installation of the isolator/coupler. Isolation will require 24-hour stray voltage testing conducted/approved by the Cooperative. This testing will provide farm data and will determine what category of isolation is applicable. If testing is not allowed, the service will not be isolated.

The cost involved with this testing shall be borne by the Cooperative as a service to the member, subject to Chapter 2.6b Testing and Mitigation Procedures regarding stray voltage testing.

3. Before isolation on request the member must complete the Cooperative's application for "Isolation on Request" (Form #307) and sign and have notarized an "Agreement for Non-standard Service: Neutral Isolation" (Form #308).

4. For safety reasons, the Cooperative requires inspection and certification of the farm's electrical wiring system. The farm's electrical system must be in compliance with the state and national electrical codes that were in effect at the time the wiring was installed. Inspection is to be done by a State of Wisconsin Certified Electrical Inspector or a State of Wisconsin Certified Commercial Electrical Inspector. For isolation on request the costs associated with inspection, certification, and/or correction of electrical deficiencies are the responsibility of the member. The requirement for certification will be waived if the farm wiring has been inspected and certified to applicable electrical wiring codes within the previous 12 months and has not been modified since that certification.

5. If there are pending major electrical changes for the farm the Cooperative allows temporary isolation on request for 90 days until completion of those changes. The application and agreement are required the same as for "Isolation on Request". The farm wiring must be certified to meet Article 250 of the National Electrical Code, "Grounding and Bonding" by a State of Wisconsin Certified Electrical Inspector or a State of Wisconsin Certified Commercial Electrical Inspector. At the end of the 90 days the farm must be certified that it meets all of the applicable wiring code requirements for isolation to continue.

6. The member requesting isolation must pay a monthly fee as established and periodically modified by the Cooperative's Board of Directors to cover the Cooperative's costs associated with the isolator/coupler. The monthly fee includes the cost of the basic isolator/coupler, the basic installation, and maintenance (including twice per year unit inspection, isolator/coupler testing and isolator/coupler replacement costs due to failures). This cost of isolation will be charged monthly to the member's electric service account. The minimum installation and billing period shall consist of one year (12 months). The member has the option to have the isolator/coupler removed (neutrals bonded) any time prior to the end of the first year, however, the account will still be billed for the 12-month minimum amount.

7. The member shall provide a list of the phone, cable TV, gas, and/or any other service providers. The Cooperative will notify other utilities in the area of the pending isolation. The other utilities will need to take steps to separate any grounding ties between the farm's secondary neutral/grounding system and the Cooperative's primary neutral/grounding system. Each utility is responsible to maintain these separations and notify its personnel of the hazards that may exist due to separation from the electric system. Only after verification that all other utilities are properly separated will the Cooperative isolate the farm.

8. The Cooperative also will notify all other adjacent animal confinement operations of the isolation and monitor those facilities for adverse impact. Any costs required for modifications to the system to maintain a reasonable and adequate quality of power for the other members may

be borne by the member requesting isolation of the farm, at the discretion of the Cooperative. As an alternative to paying for ACEC system modifications, the isolation device may be removed.

9. The member is responsible for separating member-owned equipment and maintaining separation from any other non-isolated system. These other systems could be gas lines, water lines, interconnecting electrical systems or any other member owned equipment.

10. The member will be made aware of other Cooperative accepted neutral-to-earth voltage reduction techniques that are available. These will include but may not be limited to equipotential plane, grounded grid, other gradient control methods or active suppression systems.

11. The member should monitor daily the neutral-to-earth voltage and/or animal contact voltage levels and notify the Cooperative of any signs of failure of the isolator/coupler unit or unusual conditions. The member should have a suitable voltmeter for the purpose of monitoring neutral-to-earth voltage and animal contact voltage.

12. The Cooperative retains ownership of the neutral isolator. The Cooperative assumes all responsibility for maintenance, repairs, and replacement. The Cooperative will be responsible for all testing on the unit. The Cooperative will perform unit testing and inspection twice per year. Only the Cooperative's personnel shall perform maintenance, inspection, and service work on the isolator.

13. The basic isolation/coupler device used by the Cooperative is a Dairyland Electrical Industries Inc. VT/NI-170-45. Spark gap isolators shall not be used. The Cooperative shall review and approve or disapprove other isolators/couplers as they are introduced.

14. The member must pay for the costs of any excess facilities or work requested by the member beyond the basic isolator/coupler installation cost. Also see Chapters 2.5 Non-Standard Service and 2.6d Non-Standard Facilities.

15. Upon receipt of the request for isolation and the certification of farm wiring the Cooperative will work to install the isolator/coupler as soon as work scheduling and weather permit. This is normally expected to be less than 30 days.

[D. Non-Standard Facilities](#)

Basic installation will include the basic isolator/coupler, required grounding and suitable transformer type. Any cost associated with transformer moves or system changes other than those noted above shall be estimated; payment for these changes shall be required prior to isolation. The difference between estimates and actual costs for this additional work will be refunded or billed to the member. The isolator/coupler installation requires a secondary ground rod at a site-specific distance from the transformer ground rod. If the member would require the secondary ground rod distance to be greater than the minimum required distance from the transformer, the cost of a one (1) foot deep trench and the extended insulated ground wire would be charged to the member as an excess facilities charge. Likewise, there would be an excess facilities charge if the member required winter construction during ground frost conditions.

As noted in Section 2.6 Non-Standard Service, the Cooperative will, after request by the member and based on circumstances on a case-by-case basis, consider moving, modifying, or changing its facilities that provide service to the member.

Lengthy secondary neutral wires are a known source of neutral-to-earth voltage from 120-volt loads. Neutral-to-earth voltage is a source of stray voltage. For this reason, ACEC strives to keep secondary runs at minimal lengths. All changes to farm wiring are required to meet state and national electrical codes. On single-phase farm services, ACEC recommends on-farm wiring utilize a 4-wire secondary from the meter/disconnect to the premise wiring system. On three- phase farm services a 5-wire secondary system is recommended.

Other criteria ACEC will consider when non-standard service modifications are requested. Modified secondary conductor length should not exceed 50 feet or be any longer than the existing secondary (length from the transformer to member's meter/disconnect). If the existing secondary exceeds 100 feet, ACEC may require the new installation to be less than 50 feet in length. ACEC may increase secondary conductor size to reduce secondary neutral voltage drop. The meter location shall be mutually agreed upon before a quote is supplied to the member by ACEC.

[7. Distributed Energy Resources](#)

The Cooperative, consistent with its policy of encouraging innovation in the energy field, will conform to PURPA Standards, Wisconsin Public Service Commission Chapter 119 – Rules for Interconnecting Distributed Energy Facilities, IEEE 1547-2018 – Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power System Interfaces IEEE 1547-1-2020, - Standard Conformance Test Procedures for Equipment Interconnecting Distributed Energy Resources with Electric Power Systems and Associated Interfaces, American Transmission Company (ATC) Guide GD-1701 v3.0, and any State of Wisconsin standards as may apply to Cooperative utilities.

Due to the complexity and volume of this material, these are kept on file at the Cooperative's office. Also see [Purchase All Requirements](#).

Member's desiring to operate generators in parallel with the Cooperative's system will be permitted to do so in accordance with these Rules and Regulations. Also see [Metering with Distributed Energy Resources](#).

- A. The member will be required to enter into a written agreement covering the installation and operation of his/her generator system in parallel with the Cooperative's system. The Cooperative reserves the right to charge fees for application processing and inspections to DER systems installed on the system.

Application / Commissioning Fee

Category	Export Capacity	Application Review Fee	Engineering Review Fee	Distribution System Study Fee	Commissioning Fee
1	20 kW or less	\$150 (1-8 kW) \$300 (9-20 kW)	Cost Based	Cost based	\$150

2	Greater than 20 kW to 200 kW	\$300 + \$10/kW	Cost based	Cost based	\$250
3	Greater than 200 kW to 1MW	\$2000 + \$2/kW	Cost based	Cost based	\$1000
4	Greater than 1 MW to 15 MW	\$4000 + \$0.50/kW	Cost based	Cost based	\$2500

B. The Public Service Commission of Wisconsin Chapter 119 Rules for Interconnecting Distributed Generation Facilities will be used as the interconnection guideline by all interested parties.

C. The member shall follow the requirements of the NEC (National Electrical Code) and the equipment and installation shall also meet the requirements of UL1741 and IEEE1547. The member shall provide the Cooperative with detailed electrical diagrams and other necessary data on the proposed generator system, including the interfacing device, for the Cooperative's review and approval prior to installation.

D. The control system shall provide for automatic separation of the generator from the Cooperative's system in the event of a loss of power from the Cooperative's electric system.

E. A lockable disconnecting device suitable for use as a hold tag location shall be installed just beyond the meter and ahead of the generator input into the Cooperative's system.

F. The completed installation will be subject to final inspection by a certified Electrical Inspector and test by the Cooperative before commencement of parallel operation is permitted. Also, the member shall agree to obtain approval from the Cooperative prior to making any revisions to his/her energy source. Its control systems, or the interface between the two power systems after the initial installation.

G. The member will receive and pay for the electric service to be furnished by the Cooperative on the appropriate rate.

H. The Cooperative may at any time install special meters or other apparatus as may be desired to monitor the operation of the two systems in parallel or to protect the safety of its employees or accuracy of its meters.

I. Should the parallel operation of distributed energy resource cause interference with the Cooperative system or other member's services, the member shall discontinue parallel operation until the condition has been corrected, at the member's expense, to the satisfaction of the Cooperative.

J. Commercial or industrial members proposing to install wind-powered, or any other type of generation will be considered on an individual basis.

K. The Cooperative reserves the right to charge members for the cost of facilities necessary to connect and integrate the member's generation with the electric system. This includes costs

associated to the Cooperative's role in identifying and mitigating power quality concerns. Also see Chapter 2.4f Power Quality (System Disturbances)

L. The Cooperative reserves the right to disconnect electric service for non-compliance with ACEC's requirements outlined in this section. Costs associated with disconnection, inspections, commissioning, etc. will be borne by the member.

Metering and Metering Equipment

1. Ownership

The Cooperative will install, own, and maintain all meters and associated potential and current transformers used in the measurement of electrical loads for billing purposes.

The Cooperative reserves the right to make final decisions with respect to methods and equipment used in measurement of loads for billing purposes.

2. Meter Access and Protection

The member shall permit only authorized representatives of the Cooperative or other person lawfully authorized to do so, to inspect, test or remove the meters. If the meters or metering equipment are damaged or destroyed through neglect or deliberate act of the member, or becomes obstructed, the cost of necessary repairs or replacements may be required of the member. Once identified, members with damaged or obstructed meters will be notified of necessary improvements or relocation requirements. In no case will obstructed meters remain energized for more than a period of one year, unless the member is demonstrating in good faith efforts to resolve the situation.

Meters should be located on the gable end of the building. If not, a means of protection shall be required to shield the meter from damaging ice. If the meter is located in an area occupied by livestock, the meter shall be protected from damage. If the metering is damaged, the member will be responsible for the charges to replace and repair the metering.

Extra trips required by ACEC personnel due to obstructed meters, or for meter reading where a solid-state meter capable of automated meter reading could not be installed due to obstruction or inaccessibility, will be charge to the member according to Trip Charge as shown in [Appendix C](#).

For field irrigation, the member is responsible for providing a vehicle access road from the adjacent public road to the transformer and meter location for maintenance of Cooperative facilities and for meter reading.

3. Meter Testing

Qualified personnel will do all testing of metering equipment. The Cooperative may, at its option, either conduct field tests on the member's premises, or remove metering equipment for testing at the Cooperative's office.

A. Routine Tests

The Cooperative will, through accepted test procedures, endeavor to maintain its metering equipment within accurate limits. The Cooperative will endeavor to test its meters using the Wisconsin Administrative Code PSC 113 as a guideline for all meter testing.

[B. Tests Requested by Members](#)

Tests of individual meters will be made upon request of the member, with payment of a meter test fee as indicated in Section 4.7 Special Charges. The Cooperative reserves the right to refuse to test any meter upon request more frequently than once in two years. If such a test reveals meter registration of more than 101%, the test fee will be refunded, and a billing adjustment made. If meter accuracy is found to be within the plus or minus one percent (1%) accuracy range, the test fee will not be refunded, and a billing adjustment will not be required. If it appears there may be sufficient reason to question meter accuracy (for example, a marked increase in metered consumption without a corresponding change in member's living or working patterns on the member's premises), the Cooperative may waive the meter test fee or may install a second meter, at no charge to the member, to provide check readings.

[C. Failure of Meter to Register Usage](#)

When a meter has stopped or has failed to register all the energy used, the Cooperative will make a charge to the member for the energy estimated to have been used.

Any attempt to divert electric energy from the appropriate path through the electric meter, or any tampering with the operation of the electric meter or any wires on the supply side of the meter is strictly prohibited. All known occurrences of diversion or tampering will result in immediate disconnection with us without prior notification. This step will generally be taken in the presence of personnel from the appropriate County Sheriff's department. The Cooperative will press charges for any instance of meter tampering or energy diversion.

The Cooperative must be reimbursed for the estimated amount of electric energy as well as any other expenses incurred by the Cooperative for investigation and restoring service (payment of the estimated costs is acceptable until actual costs of reconnection are known) before service is reconnected. [Facility and Energy Diversion Protection](#) and [Disconnection at Cooperative's Option](#).

[D. Adjustment](#)

Adjustment due to incorrect metering will be limited to the preceding twenty-four (24) months except that there shall be no time limits where deliberate current diversion, meter tampering, or fraud has occurred.

[4. Metering Standards](#)

[A. Accessibility](#)

Meters for all service shall be in unobstructed outdoor locations and shall be kept readily accessible for reading, testing, replacement, or repair except as might be approved otherwise by the Cooperative. An authorized representative of the Cooperative will determine the acceptability of the meter location in all cases. Also refer to Chapters 7.3 Routing and 7.4c Construction Obstacles.

[B. Multi-Unit Dwellings](#)

Any dwelling unit constructed after 1980 must be separately metered if practical. [See also Separate Bills](#).

[C. Service Sizes Less Than or Equal to 400 Amps](#)

For new or upgraded services less than or equal to 400 amps (residential type) the meters will be located in a member supplied meter socket on the house, main structure, treated post or pole supplied by the member in a location acceptable to the Cooperative. Also [see Cooperative-Owned Facilities, Accessibility and the "ACEC Service Requirements Manual"](#)

[D. Service Sizes Greater Than 400 Amps](#)

Services 400 amp and larger should be located within 25 feet of the Cooperative transformer or another location approved by the Cooperative.

[E. Requirements for CT Metering](#)

Residential: Any single-phase service greater than 400 amps.

Commercial & Large Power: Any single or three-phase service greater than 400 amps.

For any service greater than 400 amps, the member or their electrician is responsible for running the service lateral raceways/conduit between the transformer and the member-owned CT cabinet.

Please contact Adams-Columbia Electric Cooperative for pre-approval of CT cabinets, meter sockets and for consideration and approval of 320-amp self-contained metering installations.

[F. Commercial and Industrial Class Metered Services](#)

Upon approval by the Cooperative a member may receive electric service through a primary metered electric service point. There are four types of primary metered service that are available.

1. Primary and/or aggregated metered – no discount

For service to a location receiving electric service under a special contract, or economic development rate, there will be no discount and the negotiated rate and terms will apply for all electric demand and energy supplied for the duration of that contract or rate.

2. Primary metered – 2% discount

For service to a location receiving electric service at the Cooperative's standard rates that is metered at primary voltage but delivered through the Cooperative's facilities beyond the primary meter (primary conductor and transformers owned by the Cooperative) the member shall receive a discount of 2% in demand and energy to account for the difference between the demand and energy metered and consumed (estimated losses).

3. Primary metered – 5% discount

For service to a location receiving electric service at the Cooperative's standard rates that is metered at primary voltage but delivered through member-owned facilities beyond the primary meter (primary conductor and transformers owned by the member) the member shall receive a discount of 5% in demand and energy to account for both the difference between demand and energy metered and that consumed (estimated losses) and for the reduction in facilities maintained and operated by the Cooperative.

Primary metered members may qualify for either the 2% or 5% discount. Commercial and Industrial rate classes qualify for potential primary meter discounts based on how the specific site is metered and ownership of facilities. Discounts applied will be at the sole discretion of the cooperative based on cost recovery method, where the facilities are located, and how they are fed electrically.

[*4. Aggregated metering*](#)

The Cooperative, at its discretion, may offer aggregated metering for commercial- type services that would benefit from primary metering but for the geographic diversity of such loads and /or metering options available. The facility charges and the rate for the aggregated load will be determined by the Cooperative based on specific costs of facilities in place to serve the metered accounts.

[5. Meter Readings](#)

The Cooperative shall provide meter reading for billing purposes as set forth in the Cooperative's Rate Schedule.

[A. Cooperative Readings](#)

The Cooperative will determine all meter-reading schedules and provide readings of meters as provided in the Rate Schedule.

[B. Estimated Readings](#)

An estimated meter reading will be used for billing purposes if a meter is inaccessible, or an accurate reading cannot be made. Such a reading or billing shall be adjusted when an accurate reading is obtained.

[6. Metering with Energy Resources](#)

The Cooperative will furnish, install, and maintain watt-hour meter(s) equipped to measure energy into the member's premises at a distributed energy site. Such metering will also have the ability to record the energy generated by the member that is supplied to the Cooperative's distribution system if the member desires to sell energy to the Cooperative. Bi-directional meters may be used, as appropriate, where net energy billing is permitted. The Cooperative reserves the right to charge the member for metering costs above the standard for the rate class of the service.

The member shall furnish, install, and maintain all additional wiring and equipment required for the installation of his/her generating system. All wiring must be done in a manner acceptable to the Cooperative. Also see [Distributed Energy Resources](#).

[Billings, Payments, and Special Services](#)

[1. Timing](#)

Bills for electric service shall be computed and rendered in accordance with the terms and conditions of the appropriate published rate.

[2. Bill Information](#)

The minimum information shown on the bills will include closing dates of the period for which the bill is rendered, the meter readings (actual or estimated), the number of units consumed, the amount

payable, the due date, the amount of tax which the Cooperative must collect on this bill, a statement that the bill is based on estimated meter readings if such is the case, the name and address of the member, any power cost adjustment, and any other fees imposed by governmental units.

Every bill rendered by the Cooperative for residential electric service shall state clearly:

- (1) Any previous balance.
- (2) The amount due for the period of service.
- (3) The amount due for other authorized charges.
- (4) The total amount due.
- (5) The date after which late payment charges will be added.
- (6) The address and telephone number of the Cooperative designating where the member may initiate an inquiry or complaint regarding the bill as rendered or the service provided by the Cooperative.

[3. Separate Bills](#)

Any dwelling unit constructed after 1980 must be separately metered. The Cooperative shall render a separate billing for service provided at each residence or location and shall not combine two (2) or more electric accounts unless the Cooperative has agreed to aggregated metering.

Exceptions: Separately metered panels (i.e., second meter, dual socket installations) may be shown on the regular billing if at the same location. In certain circumstances where metering each residence is not possible or practical, the Cooperative may, at its sole discretion, agree to provide service to multiple residences through one meter, however, the account will be billed multiple facilities charges corresponding to the number of residences served by the one meter. Residence refers to structures with sleeping and cooking facilities.

[4. Special Services](#)

The Cooperative may include charges for special services together with charges for electric service on the same bill if the charges for special services are designated clearly and separately from the service account. If partial payment is made, the Cooperative shall first credit all payments to the balance outstanding for electric service. Also see [Special Charges](#).

[5. Payment](#)

The member is responsible for the payment of bills until service is ordered discontinued by the member and the Cooperative has had reasonable time to secure a final meter reading. Failure to receive a bill will not remove the member's responsibility to pay all legitimate charges, including applicable penalties.

[A. Penalties](#)

Failure to pay a bill on or before the due date shown thereon will result in application of the late payment charge as provided in Appendix C.

[B. Overdue Bills](#)

If a bill remains unpaid the Cooperative shall then have the right to discontinue service to the member after (8) days written notice. Following discontinuance of service for nonpayment, the member will be subject to all applicable charges and deposits as provided in these Rules and Regulations before service is restored.

[C. Collection Fee](#)

A collection fee may be charged for each trip to the member's premises in regard to a delinquent account. Also see [Special Charges](#).

[D. Returned Payments](#)

Members whose payment has been returned for any reason shall have the amount of the payment charged back to their account and also be charged a fee (provided in Appendix C) to cover additional time and expense incurred by ACEC.

A first class or certified letter will be sent notifying members of the requirement to reimburse ACEC with cash, money order, or credit card payment. If ACEC is not reimbursed, disconnection of service may follow without further notice. If disconnection is necessary, legal action for reimbursement of the returned payment will be determined at that time. If a returned payment is received for an account other than electric, the same procedure will be followed, excluding the disconnection portion.

[6. Estimated Bills](#)

An estimated bill rendered for electric service any month in which actual reading is not available shall have the same force and effect as if based upon actual meter readings. Accounts billed on an estimated basis shall be adjusted as necessary when readings are obtained.

[7. Special Charges](#)

The Cooperative will assess charges for special services as necessary to recover costs or to minimize any subsidy of such services by other members. The following shall be used where applicable:

[A. Special Charges – Operating Department](#)

Examples of when charges may be assessed are when the member requests after-hours assistance from the Cooperative for the performance of routine tasks such as house construction, remodeling, siding/residing, painting, or for service reconnects or other situations the Cooperative classifies as non-emergency. The Cooperative will not charge for after-hours assistance in cases of emergency maintenance required to restore power after an equipment failure or outage on the member's side of the meter. See Appendix A for charges.

B. Special Charges – Meter Test Requested by Member. See Appendix A for these charges.

[C. Extension Policy and Excess Footage Charges](#)

See Appendix B for these charges.

[D. Special Charges – Other Fees](#)

See Appendix C for these charges.

[8. Adjustments – Accidental Grounds](#)

Where accidental grounds occur on the member's equipment, the Cooperative may, at its discretion, estimate the lost energy and adjust the kilowatt-hour rate for that amount accordingly.

Following a review of the problem with the member's electrician, a Cooperative employee will determine if an accidental ground existed. If so, the Cooperative will estimate the member's normal consumption for each regular billing period when the ground apparently existed and will bill the member for the estimated normal consumption of each billing period at the standard rate.

The energy lost due to the ground is assumed to be the difference between the total measured consumption for any period and the estimated normal consumption for that period as determined above. The member will be billed for such lost energy at the Cooperative's average wholesale power cost for the month(s) the accidental ground occurred.

Adjustments shall be for the time the ground apparently existed but shall be limited to the twelve (12) months prior to reporting the problem. The Cooperative assumes no responsibility for damages or losses due to grounds on member installations and may disconnect a member for failure to clear (remove) such grounds after reasonable notice.

Note: A light or appliance left on, a heat tape left plugged in, or other inadvertent use is NOT an accidental ground.

[Credits and Deposits](#)

[1. Security Deposits – New Consumers](#)

The Cooperative may require a cash deposit as a condition of service:

- a. when the consumer/member has an outstanding prior account with the Cooperative, which, at the time of the request for service remains unpaid, and not in dispute.
- b. when the consumer/member has in the past used the electric service in an unauthorized manner.
- c. when the consumer does not have an established credit rating with the Cooperative.
- d. for irrigation services where the consumer has not established credit with the Cooperative and is leasing the land or system, or for yard lights where the consumer does not own the property.
- e. for a commercial account.

[2. Security Deposits – Existing Member](#)

The Cooperative shall not require a cash deposit as a condition of continued service unless a member has unsatisfactory credit or service standing with the Cooperative due to any of the following:

- a. the service of the member has been discontinued for non-payment of a delinquent account not in dispute.
- b. the member interfered with the service of the Cooperative in an unauthorized manner or diverted the electric service of the Cooperative.
- c. the member has the ability to pay (income above Federal Poverty Guidelines) during the winter months, but does not, so deposits of up to four (4) months usage may be required.

- d. the member has filed for bankruptcy, but deposits may be required per the Bankruptcy Law.

[3. Other Standards Prohibited](#)

The Cooperative shall not require a cash deposit as a condition of new or continued electric service based upon income, residential location, race, color, creed, sex, age, national origin, or any criteria not authorized by these Rules and Regulations.

[4. Amount of Security Deposit](#)

Deposits will be required from new members until a satisfactory credit record can be established. Deposits will be required from existing members when unsatisfactory credit has been demonstrated, until such a time as satisfactory credit has been reestablished. The deposits will be determined in accordance with [Appendix C Special Charges – Other Fees](#).

Deposit for new and reconnecting members (when required) – two times the highest bill in the preceding 12 billings rounded to the closest \$5 increment but not less than \$200.

For commercial service, the deposit may be calculated based on the transformer size x \$40 and is required prior to connection of service.

- a. Any deposit collected by the Cooperative is meant to ensure that the member will not be a financial burden on the rest of the membership.
- b. Deposits will be held until twelve (12) consecutive on-time monthly payments for residential services and up to three (3) years on yard lights and all other classes of service except leased irrigation, or until credit is satisfactorily established.
- c. Deposits are not to be used to pay current amounts owed unless the deposit is credited to the member's account after a satisfactory credit rating has been established.
- d. Deposits cannot be used to pay off past due balances.
- e. Upon termination of service, the deposit may be credited to the account or used to pay any delinquent charges for service or other amounts due to the Cooperative. The balance, if any, will be refunded to the member.
- f. Deposits on leased irrigation or yard lights shall be in accordance with the rate requirements or signed agreement.
- g. Where an irrigation system or land is leased, and credit with the Cooperative has not been established, a deposit equivalent of \$25.00 per kW of established demand may be paid in advance and applied to the October bill or refunded at the end of the season. The maximum demand used by the system for prior years is to be used for this charge; otherwise, 80% of the installed horsepower will be considered the demand in kW. The deposit for existing irrigation accounts that have an unsatisfactory credit or service standing will be equal to the total billing for the previous growing season.
- h. No interest will be paid on any deposit.

[5. Waiver of Security Deposit for Residential Service](#)

Security deposits for residential services may be waived under any of the following conditions.

- a. The member provides the Cooperative their social security number and a credit check is done that indicates no deposit is required.
- b. If the member does not provide their social security number for a credit check and the member provides proof of identification (government issued picture ID) and a satisfactory credit reference from their last electric service provider where they had service in the past 12 months and for more than one year.

6. Guarantee Contract

Instead of a cash deposit, the Cooperative may accept an Irrevocable Letter of Credit from a reputable financial institution, or a contract signed by a guarantor which specifies that payment of a specified sum (not exceeding the cash deposit requirement) is guaranteed.

7. Financial Assistance or Counseling Referral

The Cooperative maintains a list of agencies and programs that may provide financial assistance or financial counseling. The member should contact the Cooperative information on these agencies and programs. The Cooperative will release usage information for the location of the member's residence to such assistance agencies, provided Cooperative has a valid non-disclosure agreement with the agency on file.

Disconnection and Reconnection

1. Disconnection at Member's Request

Upon Termination – The Cooperative will disconnect service with no charge to the member upon due notice as provided elsewhere in these Rules and Regulations (Also see Chapter 2.4d Termination of Service). However, if the same member or property owner(s) requests restoration of service at the same location Facility Retention Charges will be applied.

For Repairs – The Cooperative will temporarily disconnect service to facilitate repairs or other work on the member's equipment or premises during regular working hours. This work may be subject to charges for Special Services under some conditions.

2. Disconnection at Cooperative's Option

With Due Notice – The Cooperative may disconnect service upon notice for any of the following reasons:

- a. For violation of these Rules and Regulations.
- b. For failure to fulfill contractual obligations, either written or verbal.
- c. For failure to provide reasonable access to the member's premises.
- d. For failure to pay any bill within the established collection period.
- e. For failure to provide deposits as provided elsewhere in these Rules and Regulations.
- f. Upon written notice from governmental inspection authorities of condemnation of the member's facilities or premises.
- g. For fraudulent representation as to the use of service such as meter tampering, theft of service, or use of electric service without proper authorization.

[3. Notice of the Cooperative's Intent to Disconnect Service](#)

Under normal conditions the Cooperative will supply the member with a notice stating our intent to disconnect, the reason for the disconnection and the first day that the disconnection may take place. That notice will be postmarked at least eight (8) days before the intended disconnection. The Cooperative will then have twenty (20) days, from the first day stipulated in the letter, to complete the disconnection before another notice needs to be provided.

[4. Disconnection of Service Where a Medical Condition Exists](#)

The Cooperative will send the member a letter postmarked at least 21 days prior to disconnection, or in the case where the disconnection has already occurred, will reconnect the service for up to twenty-one (21) days for any member who produces a written statement from a licensed Wisconsin physician, social services or law enforcement official which identifies the medical or protective services emergency and specifies the time frame (not to exceed 21 days) during which disconnection of electric service will aggravate the circumstances. Disconnection of service will occur, with a twenty-four (24) hour notice once the specified time expires unless all obligations of the member to the Cooperative have been satisfied.

[5. Payment Arrangement Contract](#)

The Cooperative may provide members that are in default of their financial obligations a temporary reprieve from disconnection provided the member has made an arrangement contract, either written or verbal, to pay all past due and current amounts owed over a specified period of time, not to exceed three (3) months.

Broken arrangements may result in disconnection of service within three days without any further notice of the Cooperative's intent to disconnect. A member failing to honor an arrangement agreement will not be eligible for an arrangement agreement for 12 months.

[6. Without Due Notice](#)

The Cooperative reserves the right to disconnect service without notice for any of the following reasons:

- a. Where hazardous conditions exist.
- b. Where the member's use of service adversely affects the Cooperative's facilities or service to others.
- c. For unauthorized reconnection after disconnection with due notice.
- d. For unauthorized use of or tampering with the Cooperative's service or facilities.

[7. Re-Connection](#)

After service has been disconnect at the Cooperative's option for any of the above reasons, service will be reconnected only after the member has taken necessary corrective action and satisfied all applicable fees, charges, and deposits to guarantee payment for service. Also see Chapters 4.7 Special Charges, and Section 2.4e Disconnection/Reconnection of Idle Service

Reconnection of any service that was disconnected because of non-payment will not be allowed if occupancy of the property has not changed unless all, account balances and applicable fees are paid in full, and any required deposit has been paid or an arrangement for such payment has been made.

8. Prepaid Program

Members with remote connect/disconnect functioning metered service may elect to participate in the Prepaid program; members participating in the program are bound by all provisions of the pre-paid agreement.

Deposit for a Prepaid account is \$100.00. The deposit will be held until the account is no longer active. A minimum credit of \$50.00 is required to initiate and/or reconnect a Prepaid account.

Member participation in the Prepaid Program is for a minimum of twelve (12) consecutive months. After twelve (12) consecutive months Member participation in the Prepaid Program will automatically continue unless the Member or the Cooperative elect to end the Member's participation in the Prepaid Program. If a member elects to end participation in the program a deposit may be required pursuant to the deposit section of this document.

Electric service will be disconnected any time the Prepaid account balance falls to zero (\$0.00), even when alerts cannot be delivered; weather conditions will not postpone disconnection of electric service. The Cooperative shall not be liable for damages incurred due to interruptions in service.

After service has been disconnected; service will be reconnected only after the member has taken necessary corrective action and satisfied requirements of the Prepaid agreement.

Construction Policy

1. General

This section of the Rules and Regulations sets forth the Terms and Conditions under which the Cooperative will construct and extend its facilities to serve new loads and replace, relocate, or otherwise modify its facilities to the benefit of the specific member.

The Cooperative will render service to all members within its service area who apply for membership in and service from the Cooperative in accordance with these Rules and Regulations applicable to the extension to be made under the class of service required. The extension route and type of construction are to be determined by the Cooperative and will be based on the provisions of these Rules and Regulations.

2. Service and Extensions

A. Underground Primary and Secondary

A member requesting an overhead service to be changed to underground with no major changes in service entrance may be billed time and material due to retirement and the cost of the new facilities installed at the present costs.

If an inspection by the Cooperative determines that an area is not suitable for underground and/or that maintenance or construction would be unreasonable, no underground extension shall be approved in that area.

System improvements and revamps. If an area requires an unusual amount of brushing and cost becomes prohibitive to clear and maintain the existing primary, the Cooperative may convert overhead in the area to underground. Members in the area will be contacted before changes are made that will require changes in the member's service entrances.

B. General Provisions

1. Easements granting right-of-way, as designated by the Cooperative, should be furnished at no expense to the Cooperative. Such right-of-way shall be cleared of trees and other obstructions to a width of 20 feet. No buildings or trees shall be placed on said right-of-way; however, right-of-way may be used for gardens and other purposes that will not interfere with maintenance and replacement of electric facilities.
2. The easement strip shall be graded to a level which shall not be above or more than six (6) inches below grade prior to the time installation of underground facilities is commenced by the Cooperative. The Cooperative shall be notified in advance of any changes in grade after the underground electric facilities have been installed by the Cooperative and shall be reimbursed for all costs incurred as a result of such change.
3. The Cooperative shall not be liable for damage to trees, shrubs, lawns, fences, sidewalks or other obstructions incident to the installation, maintenance, or replacement of underground facilities, unless caused by its own negligence.
4. In the event underground electric facilities must be installed in frozen ground, rock or in other areas in which installation is difficult, the developer or member shall pay an additional amount equal to the extra cost of installation due to such conditions when caused by member action/inaction. Also see [Construction Obstacles](#).
5. The member shall provide an approved meter location where the Cooperative service wires will terminate. Also see [Cooperative Owned Facilities](#), [Metering Standards](#), and the "ACEC Pre-Construction Guide <https://www.acecwi.com/new-construction/>

C. Wiring Rules and Regulations

The Cooperative's Service Requirements Manual is, by this reference, made a part of these general Rules and Regulations. View at <https://www.acecwi.com/new-construction>.

D. Yard and Street Lights

The Cooperative will install, own, and maintain yard lights and streetlights for its members on existing primary, secondary or yard poles in accordance with established rate requirements. They shall be connected on the Cooperative's side of the meter, but not in the meter base. In addition to the lease payments according to the rate schedule, the member may also be required to pay for any excess facilities required for installation of the yard/streetlight. A three-year minimum agreement is required for a yard light installation. The installation will be scheduled to minimize costs to the Cooperative.

Yard/streetlights will be relocated on a time and material basis according to Appendix C. Repair or maintenance of yard/streetlights will be done during regular working hours only.

Yard lights that have been disconnected for more than 12-months will be removed or will require a new three-year contract to be reconnected.

E. Service for Construction

The Cooperative will provide service in accordance with applicable Rules and Regulations and codes. This service will only be provided from existing overhead distribution facilities when available or adjacent to existing underground facilities. The fee for this service will be in accordance with Appendix

B, plus facility, demand, and energy charges in accordance with the applicable Rate Schedule. The member will pay the cost of installing the facilities. Any subsequent relocation or extension of those facilities will be handled on a time and material basis.

[F. Loads of Questionable Permanence](#)

When service is requested for loads of questionable permanence, such as, but not limited to, sawmills, mixer plants, gravel pits, campsites, fairs, etc., the Cooperative will install, own, operate and maintain all distribution facilities up the point of attachment to the customer's service equipment subject to the following:

Prior to the commencement of construction, the member shall make a payment with the Cooperative in the amount of the Cooperative's estimated construction cost to provide service. The estimate shall include the cost of extending the Cooperative's distribution facilities and an allocable portion of any costs of increasing the capacity of existing facilities necessary to serve the new load. It may also include the costs of retiring the facilities after use. If the actual construction cost is less than the estimated cost, the Cooperative will refund the difference at the time the service is first taken.

[3. Routing](#)

The length to quote to the member for their line extension will be measured along a route that could be built and maintained. This includes, as necessary, the ability to secure any easements and permits necessary to install, operate and maintain the line. We will measure from the primary or secondary voltage facility that (in ACEC's opinion) is the best point of attachment that can adequately serve the load to the member's service pole, meter pedestal, or service entrance, including any deviations required to avoid member's outbuildings, plumbing, drain field, etc.

Although the Cooperative may, for its own reasons, choose to install the wire or cable along a longer route, the applicant will not be charged for the additional distance. If the member requests a special routing of the line, however, the member will be required to pay the extra cost resulting from the special routing at the rates specified in Chapter 4.7 Special Charges

All parts of the route on the member's property must be accessible and clear for construction or will need to be cleared prior to construction in compliance with Cooperative specifications. Route preparation on the member's property shall be at the member's expense. Also see Chapters 7.2b General Provisions and 7.4c Construction Obstacles.

[4. Overhead vs. Underground Line](#)

[A. General](#)

This portion of the Rules and Regulations provides for the extension of lines and/or replacement of existing facilities with underground electric facilities. The Cooperative may install.

underground primary or secondary facilities at its discretion, or upon request of the member, if the Cooperative determines such installation reasonable feasible. If the member should desire underground construction after the Cooperative has determined overhead to be appropriate, the member shall be required to make a non-refundable aid-to-construction for any increased cost.

Where the Cooperative, for its own convenience, installs member-requested facilities underground, any differential between the estimated overhead and underground construction cost will be borne by the Cooperative.

The Cooperative will install the lowest cost route/alternative on a time and material basis or replace them at a discounted rate if age and condition of facilities warrant replacement.

Determination of the cost differential for specific situations will be made by the Cooperative and will include a variety of conditions that are provided for herein. In the event the Cooperative undertakes a project or projects to rehabilitate existing overhead line or to repair damaged overhead line, it may choose to replace the facilities with underground cable if the cost to rehabilitate or repair the existing overhead line is estimated to more than 50% of the cost to fully rebuild the line overhead (if conditions and additional circumstances permit such underground installation). For the purposes of this evaluation the cost will be considered sufficiently high if more than half of the structures have failed inspection or have been severely damaged or destroyed in any given distance. The size of any wire or cable installed in such a replacement will be of the current standard size that most closely matches the existing facilities unless the Cooperative's current Work Plans or Long-Range Plan specifies that a larger size is warranted. Additional considerations for conversion to underground include mitigation of future storm related damage, long-term maintenance and Right-of-way clearing cost, and system reliability.

[B. Extensions](#)

ACEC will provide electric service to all within its service area in a non-discriminatory basis and will make reasonable overhead or underground line extensions to do so. ACEC will provide an

estimate to provide service to each service request. The membership shall not be required to subsidize long extensions.

Application for service or extension shall be considered and estimated on an individual basis. The cost of the line extension will be based on time and materials to install facilities for this service. Payment of the line extension fee is generally required prior to the start of construction.

- a. Any exceptions to the above policy must have written approval of the Cooperative's General Manager and may require a signed contract.
- b. If a member's load at an existing residential service increases to such an extent that replacement of the transformer or secondary service is warranted, or at the Cooperative's discretion the primary extended to be closer to the load, the Cooperative will install the lowest cost route/alternative at a time and material basis or replace them at a discounted rate if age and condition of facilities warrant replacement.
- c. If a member's load at an existing single or three-phase commercial service increases, or is proposed to increase, to such an extent that Cooperative facilities must be increased the Cooperative will provide the member a cost estimate to accommodate this increase.

[C. Construction Obstacles](#)

Where unusual construction costs are incurred by the Cooperative due to physical conflict such as (but not limited to): rock surface water, frost, other utility facilities, heavy concentration of trees or tree roots, or excessive roadway crossings, the applicant(s) shall remove the impediment or make a non-refundable aid-to-construction equal to the estimated difference in cost of the underground installation and that of the lowest cost alternative. In no case shall this contribution be less than the charges indicated elsewhere in these Rules for the type of service involved. Also see [General Provisions](#)

The Cooperative reserves the right to refuse to install facilities underground in cases where, in the Cooperative's opinion, such construction is technically not feasible or will present a potential detriment of service to other customers.

[D. Condominiums, Land Developments and Subdivision](#)

Under normal conditions, the Cooperative will install an underground electric distribution system in all new residential subdivisions, mobile home parks, condominium and other multiple occupancy building complexes and commercial subdivisions (collectively referred to as Developments below) in cooperation with the developer or owner evidenced by signed agreement and in compliance with the following specific conditions.

- a. Before any new construction begins, signed easements must be obtained from any and all property owners involved.
- b. The developer of a new Development shall cause to be recorded with the plat of the Development a public utility easement approved the Cooperative for the entire plat. Such an easement shall include a legal description of areas within the plat that are dedicated for utility purposes, and other restrictions as shall be determined by the Cooperative for construction, operation maintenance and protection of its facilities.
- c. Where suitable easements do not exist, the Cooperative will provide the necessary easement forms, and shall cause their execution. The applicant(s), as a condition of service, will ultimately be responsible for obtaining all easements and permits including any third-party easements as required by the Cooperative, for construction, operation, maintenance, and protection of the facilities to be constructed. The applicant(s) will be responsible for all costs incurred by the Cooperative for right-of-way and permits.
- d. The developer or owner will provide the Cooperative with a recorded certified survey map that has been approved by the county or local zoning authorities.
- e. The Cooperative will furnish, install, own, and maintain the entire underground electric distribution system including the service laterals for the Development. Installation of the primary and/or secondary cable with associated equipment to provide service to the lot line of each lot in the Development will be covered by the agreement with the developer. Arrangements for service laterals will be made with the party requesting service. The preferred location of electrical facilities is along the front (roadside) lot line.

- f. Prior to the start of construction, the developer or owner shall provide a clear right-of-way and establish grades in the easement right-of-way, which shall be not more than six inches above or below the finished grade and shall remove all trees, stumps, or other obstructions within, on or about the right-of-way for the installation of the system. Prior to the construction, the developer or owner shall mark all lot corners and right-of-way routes as requested by the Cooperative.
- g. The trenches for primary and/or secondary cables may be occupied jointly by facilities of the Cooperative and other utilities where satisfactory arrangements exist between the Cooperative and the other utilities.
- h. The developer or owner will be responsible for all costs of relocating Cooperative facilities to accommodate changes in grade, or other changes, after the underground facilities have been installed. The developer or owner is also responsible for any damage to Cooperative facilities caused by their operation or the operation of their contractors. The costs involved will include overheads and the cost for relocation or rearrangement of facilities whether specifically requested by the developer or owner, or due to the facilities becoming endangered by a change in grade as determined by the Cooperative.
- i. Prior to start of construction, the developer or owner shall agree to advance to the Cooperative an extension fee based on required line extension. Also see [Appendix B](#).

E. Campground, Mobile Home Park Requirement

Layout

1. Developer is to provide the Cooperative with a county-approved plan.
2. The Cooperative will design the necessary electrical facilities up to the metering point required to serve each lot and add to the county-approved plan.
3. The developer will then sign one copy of the county-approved plan approving the design prior to start of installation.
4. Preferred location of electrical facilities is along front (roadside) lot lines with metering and transformers set back to allow trailer parking and removal.
5. Design shall include loop feed capabilities for all transformers unless exempted by the Cooperative.
6. The developer will provide the Cooperative with a notarized easement granting adequate access to all Cooperative facilities. All grades are to be within 6" of final grade before beginning.
7. Underground installation is the preferred method of providing electrical service. Where rock soils are encountered, the Cooperative may choose overhead services, or the developer shall bear the expense of blasting and/or sand bedding.
8. The developer shall have all meter sockets installed prior to the time of ACEC construction.

9. Developer is to pay in advance a line extension fee based on the Cooperative's current fee for the amount of line required. Also see Appendix B.
10. This procedure is limited to parks with lots 100 feet in width or less and 150 feet or less in depth (for secondary capability limitations) unless approved in writing by the Cooperative.
11. Developer shall receive no construction credit for, or refunds of, any line extension fees.

The balance of Section 7 Construction Policy of these Rules and Regulations also applies to Land Developments and Subdivisions.

[5. Miscellaneous General Policies](#)

Before any new construction begins, signed easements must be obtained from all property owners involved.

[A. Easement and Permits](#)

New Residential Subdivision – The developer of a new residential subdivision shall cause to be recorded with the plat of the subdivision a public utility easement approved by the Cooperative for the entire plat. Such easement shall include a legal description of areas within the plat which are dedicated for utility purposes, and other restrictions as shall be determined by the Cooperative for construction, operation, maintenance, and protection of its facilities.

Other Easements and Permits – Where suitable easements do not exist, the Cooperative will provide the necessary forms to the applicant. The applicant(s), as a condition of service, is responsible for obtaining all easements and permits including any third-party easements as required by the Cooperative, for construction, operation, maintenance, and protection of the facilities to be constructed. Where State or Federal lands are to be crossed to extend service to an applicant or group of applicants, the additional costs incurred by the Cooperative for rights-of-way and permit fees shall be borne by the applicant(s).

[B. Moving of Buildings or Equipment](#)

Where the Cooperative is requested to assist in the moving of buildings or equipment through, under or over the Cooperative's distribution lines, the Cooperative will require a payment from the mover in advance of providing such assistance. When done during Cooperative regular hours, the payment required will be based on the Cooperative's estimate based on time and material.

[C. Relocation of Facilities](#)

- a. The Cooperative will cooperate with political subdivisions in the construction, improvement or rehabilitation of public streets and highways. It is expected that the Cooperative will receive reasonable notice so that any required relocation work can be properly scheduled.
- b. If the Cooperative's poles, anchor, or other appurtenances are located within the confines of the public right-of-way, the Cooperative will make the necessary relocations at its own expense with exceptions:

1. Existing facilities begin within the confines of a new public right-of-way obtained after the construction of the Cooperative's facilities.
 2. Facilities providing public services such as lighting, traffic signals, etc. If the Cooperative's poles, anchors, or other appurtenances are located on private property, the political subdivision must agree in advance to reimburse the Cooperative for any expenses involved in relocating its facilities.
- c. When the Cooperative is requested to locate its facilities for reasons other than road improvements, any expense involved will be paid for by the firm, person or persons requesting the relocation, unless one or more of the following conditions are met:
1. The relocation is made for the convenience of the Cooperative.
 2. The relocation is associated with other regularly scheduled conversion or construction work at the same location and can be done at the same time.
- d. Before actual relocation work is performed under paragraph above, the Cooperative will estimate the cost of moving the pole, anchors or other appurtenances and an advance deposit in the amount of the estimate must be received from the firm, person or persons requesting such relocation. Upon completion of relocating work, the Cooperative will determine the actual costs of the relocation, and the firm, person or persons requesting the relocations will be billed or credited for the difference between the advance deposit and the actual cost.

[D. Construction Schedules](#)

The scheduling of construction shall be done on a basis mutually agreeable to the Cooperative and the applicant. The Cooperative reserves the right not to begin construction until the member has demonstrated to the Cooperative's satisfaction his/her intent to proceed in good faith with installation of his/her facilities by acquiring property ownership, obtaining all necessary permits, and meeting the Cooperative's requirements. For the convenience of the member and the Cooperative, the Manager of Operations has the authority to approve the installation of Cooperative facilities prior to receiving all requirements of the member's service. Under no circumstance will the service be energized until after the wiring compliance has been received by the Cooperative.

Billing does not apply to these facilities installed at the Cooperatives discretion unless the member has so consented.

[E. Billing](#)

For member(s) who fail to take service one (1) month after an extension has been completed to the premises and within the time period requested by the member(s) the Cooperative shall have the right, after said one (1) month period, to commence billing the member under the Cooperative's applicable Rates and Rules and Regulations for the type of service requested by the member(s).

[F. Right-of-Way Clearing](#)

Clearing lines and equipment of tree growth is an essential part of providing safe, reliable electric service. Trees adjacent to lines and equipment can create hazards to the lines, equipment, and the

public. ACEC is governed by many State and Federal regulations and regulatory bodies such as the National Electric Safety Code (NESC), and the State of Wisconsin Department of Natural Resources (WI DNR). In addition, our line clearing practices are guided by our liability insurance carrier as well as industry standards.

ACEC has adopted an extensive set of right-of-way standards and practices that are encompassed in a separate document called "Guidelines and Best Management Practices for Right of Way Management: and will be made available upon request. This document is incorporated into these Rules and Regulations by reference. A summary of this document is available on the ACEC website:

<https://www.acecwi.com/co-op-programs/tree-trimming-planting-guide/>

G. Contracts and Guarantees

All line extensions will necessitate an agreement between the member and the Cooperative. At the option of the Cooperative the obligations of the member may be made a line on the real estate served and binding upon the grantees, assignees, and successors in title. The Cooperative may, in lieu of such a guarantee, request a cash aid-to-construction equal to the excess service charges determined under this policy. Where the member is not the owner of the premises to which the extension is made, such contracts shall be guaranteed by the owner with such guarantee binding successors in title.

[Appendix](#)

[A. SPECIAL CHARGES- OPERATING DEPARTMENT](#)

All expenses not itemized out within this document will be based on current time and materials cost. Minimum charge time of 2 hours	
Meter Test Request by Member Less than ten(10) years since installed or tested.	\$142
Meter Test Request by Member-Over ten(10) years since installed or tested.	No Charge
Stray Voltage Test (2 day test)	Time and Material
Isolation on Request Monthly fee for installation and maintenance	\$30
Dispatched Member Side Outage-Regular Hours-Service Call	\$83
Dispatched Member Side Outage-After Regular Hours-Service Call	\$165

[B. EXTENSION POLICY](#)

Upon the member's request and the member's providing sufficient information, the Cooperative will provide a cost estimate to extend electric service to the member's desired location according to Section 7 of these Rules and Regulations. Cost estimates for any new service, or when an existing service is relocated, will be based on a time and materials basis, and must be paid to the Cooperative before construction will commence.

ACEC may charge an estimating fee for preparing the cost estimate. If deemed required at the sole discretion of the Cooperative, this fee will be charged for each parcel for which an estimate is to be rendered by the Cooperative. If the member requests a change or revision that requires more than two visits to the property by the Distribution Design Technician, then each trip beyond two will be assessed an additional charge.

Initial estimate (including up to two trips to the proposed site)	\$200
Additional charge per site trip	\$100

[Irrigation Service](#)

Field irrigation extensions will be provided. An overcurrent rated service disconnect will be installed by the member at this location, not to exceed 25 ft. from the meter. Single-phase line extensions for irrigation pumps will only be made available where the three-phase system is not reasonably available (considering total cost to member), and then subject to review for system impact. Members will not be charged for the cost of the transformer(s) which are considered in the facility charge.

[Commercial Services](#)

Initial estimate for multi-lot developments/subdivisions (minimum charge)	\$500
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Costs for all commercial services shall be estimated to cover the design and all facilities required to serve the member with the exception of the transformer (the cost of the transformer is considered in their facility charge). Payment of these costs are due before construction begins.

Costs for services to industrial customers are estimated to cover all the costs of providing electric service, including design, all conductors and transformers, but these may be recovered through their facility charges which are calculated for each industrial (LP2) member.

Any exceptions to the above must have written approval of the Cooperative's General Manager.

C. SPECIAL CHARGES, OTHER FEES, RATES

Membership Fee	\$0
Deposit for new and reconnecting members (when required) – two times the highest bill in the preceding 12 billings rounded to the closest \$5 increment but not less than \$200.	minimum \$200
Disconnect Fee for Accounts Requiring Disconnection due to Non-Payment	\$100
Facility Retention Fee (number of days service was disconnected X daily facility charge or equivalent per rate class) Fees to reconnect adjoined idled yard lights are in addition to Facility Retention Fee.	\$ Calculated
Minimum Reconnect Fee per Yard Light (Minimum reconnect fee when within 6 months of disconnection) Fee based on equivalent of six months light rental charges	\$66
Reconnect Fee per yard Light (when over 6 months of disconnect) (Number of months disconnected X monthly lease charges per light)	\$ Calculated
Trip Charge/Collection Fee	\$49
Miscellaneous Government Fees	Fees will cover actual costs incurred. (For easements, permits, etc. as required)
All work associated with relocation of ACEC equipment and facilities will be billed on a Time and Material Basis.	
Avoided Cost – Effective rate set by ACEC's full requirements purchase power provider	Energy - Kwh= \$0.04146 Capacity Credit/Kwh= \$0.0044