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ABBREVIATIONS

N.E.C.I. - Navopache Electric Cooperative, Inc.

E.U.S.E.R.C. - Electric Utility Service Equipment
Requirements Committee

N.E.C. - National Electrical Code

N.E.S.C. - National Electrical Safety Code

O.S.H.A. - Occupational Safety and Health Act.

N.E.M.A. - National Electrical Manufacturers Association

R.E.A. - Rural Electrification Administration

NOTE: When reference is made to any of the above codes, standards or regulations, it shall refer to the latest revision of same.

DEFINITIONS

APPLICANT

Any person, firm, corporation or governmental body applying for electric service from the Cooperative at one specific location.

APPROVED

Acceptable to the authority having jurisdiction over the matter.

BUILDING

A structure which stands alone or which is cut off from adjoining structures by fire walls with all openings therein protected by approved fire doors.

CLEARANCE

Approval of the electrical installation by the inspection authority.

COOPERATIVE

Navopache Electric Cooperative, Incorporated

CURRENT TRANSFORMER METERING - DEFINED

When consumer loads are 201 amperes and above, current transformers (C.T's) are connected directly into the service entrance conductors to ratio the primary current down to a secondary current which can be accurately registered on the meter.

Example: A 400 to 5 amp C.T. has a ratio of 80 to 1. The reading on the KW and KWHR scale is then multiplied by the ratio value of 80, indicated as X 80 on the face of the meter, to give the actual load in KW's or Kwh's.

CONSUMER

Any person, firm or corporation, organization, governmental body or any metered installation receiving electric service from the Cooperative.

CONSUMERS SERVICE ENTRANCE

In general, all conductors, devices, apparatus, and hardware on the consumers side of the point of delivery, except the Cooperative's meter installation.

COOPERATIVE EQUIPMENT

The service lines, meter installations, structures, devices, apparatus, hardware and other facilities installed by or on behalf of, and/or owned by the Cooperative and other transmission and distribution facilities of the Cooperative System.

FIRST FLOOR

As defined for the purposes of this manual is the floor that is closest to the elevation of ground level and above ground level.

METER

The instrument for measuring and indicating or recording the flow of electricity that has passed through it.

METER ROOM

Illuminated and ventilated room containing electric meters and electric service equipment.

POINT OF DELIVERY

Where the Cooperative terminates its electric service conductor at the line side of the meter, unless otherwise agreed upon in a written contract or agreement.

POINT OF ATTACHMENT

The location at which restraining anchoring contact is made on a building or structure to support Cooperative facilities.

SELF CONTAINED METER

A self contained meter is one which is capable of carrying the total current and voltage of the electric service supplied to the consumer. This type of meter is connected directly to the service entrance conductors when it is plugged into the meter sockets.

SERVICE ENTRANCE SECTION

A Factory built floor standing service entrance.

SERVICE LINE

The line extending from a distribution line or transformer to the consumers premises or point of delivery.

TEMPORARY SERVICE

Service to premises or enterprises which is temporary or transitory in character and is intended to be used for a limited duration not to exceed 12 months. Service which, in the opinion of the Cooperative, is for operations of a speculative character is also considered temporary service.

GENERAL INFORMATION

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GENERAL

SERVICE AVAILABILITY

Subject to the Cooperative's approved Line Extension Policies, service will be rendered to a consumer from the Cooperative's nearest suitable line of sufficient capacity to furnish adequate service of the phase and voltage requested and availability of easements.

CODES

These requirements are supplementary to and are not intended to conflict with the currently applicable National Electrical Code, National Electrical Safety Code, Municipal, County or State Codes, Ordinances or Regulations within the States of Arizona and New Mexico. In some instances, however, these requirements exceed these codes which are intended as minimum requirements only.

IDENTIFICATION OF EMPLOYEES

Navopache Employees authorized to visit a consumers premises are furnished with an identification which they will show upon request. This is done to protect the consumer from unauthorized persons representing the Cooperative.

ATTACHMENTS ON COOPERATIVE POLES

The Cooperative forbids all unauthorized attachments, including meter loops, posters, and signs to its poles, equipment, or property. The Cooperative may remove all such unauthorized attachments without notice and may prosecute for such trespass.

DESIGN OF CONSUMERS EQUIPMENT

The provision for adequate electrical capacity must be made by the consumer. As a utility, the Cooperative cannot design, plan, install or maintain the consumers wiring, electrical equipment or other consumer owned facilities. An electrical engineer and/or a qualified electrical contractor should be consulted to aid the consumer in determining that his electrical installation will have adequate capacity for future use.

ACCESS FOR COOPERATIVE EMPLOYEES

Consumers shall permit authorized employees of the Cooperative safe access to premises of the consumer to obtain information concerning connected load, to measure or test the service, to read or test meters, and for other purposes incident to the supplying of electric service at all reasonable times.

RIGHT OF WAY CLEARING

It shall be the responsibility of the consumer or developer to clear the utility Rights of way, including removal and disposal of slash and obstacles. The Cooperative will maintain the Right of Way after the initial clearing has been done.

The consumer can elect to have the Cooperative clear the Right of way required to provide service, however, the cost must be advanced to the Cooperative by the consumer.

RATING OF SERVICE DISCONNECTING MEANS

For a single family dwelling, the service disconnecting means shall have a rating of not less than 100 amperes, 3-wire.

DIVERSION OF ENERGY

Under no circumstance shall devices or attachments be connected to Cooperative facilities in such manner as to permit the use of unmetered energy, except in emergencies when authorized and done only by authorized Cooperative employees. Under Arizona & New Mexico law, unauthorized diversion of electricity constitutes either a misdemeanor or felony punishable by a fine of up to \$150,000.00 and/or imprisonment for up to five (5) years.

DE-ENERGIZING THE SERVICE ENTRANCE

No person other than an authorized employee of the Cooperative or a licensed electrical contractor who has signed a letter of understanding with the Cooperative and has been issued special meter seals may break seals, move, relocate or replace meters and other equipment owned by the Cooperative. If de-energizing is needed, contact your local Cooperative office to make arrangements.

PROTECTION OF COOPERATIVE EQUIPMENT

The consumer shall be responsible for the safeguarding and protection of all Cooperative equipment and property installed in or on the consumers premises for the purpose of supplying electric service to the premises. Each consumer shall exercise all reasonable care to prevent loss or damage to the Cooperative's property excluding normal wear.

The consumer shall be billed for damages to Cooperative property caused by the consumer or the consumer's employee(s), agent(s) or family.

WORKING SAFE NEAR COOPERATIVE'S OVERHEAD FACILITIES

When a party plans to do construction or repair work where personnel or equipment will be used under or near the Cooperative's electric transmission or distribution facilities, required clearances must be observed.

O.S.H.A. prohibits the use of equipment closer to high voltage lines than ten (10) feet for voltages of 0-50,000 (phase to phase) and eleven (11) feet for 69,000 volts (phase to phase).

DETRIMENTAL EFFECTS OF CONSUMERS EQUIPMENT CAUSING LINE DISTURBANCES

The consumer shall eliminate or correct the conditions causing detrimental effects on Cooperative equipment or the integrity of it's facilities, or the Cooperative may correct the problem and bill the consumer causing the effect. The operation of welders, compressors and similar equipment having intermittent flow of large currents can sometimes interfere with other users of the electric service.

SERVICE INTERRUPTIONS

Navopache Electric Cooperative cannot guarantee uninterrupted service, and it is not the Cooperative's policy to pay for damages that result from such interruptions, single phase conditions, or voltage fluctuations on the Cooperative's system occasioned by any cause beyond the Cooperative's reasonable care and control.

The Cooperative's system is designed to minimize potential problems, but malfunctions and other external forces do cause occasional system failures. In these instances, the Cooperative suggests the use of properly

sized, installed and maintained protective devices to protect your equipment.

For information on how to protect your electrical equipment, contact an electrical contractor, equipment manufacturer, pump company or an electrical engineer.

The Cooperative may temporarily suspend service to make necessary repairs, replacements, maintenance, tests or inspections of Cooperative equipment. The Cooperative will make reasonable efforts to notify the consumer, but if necessary, may suspend service without prior notice to the consumer.

COMPUTER PROTECTION

Electronic computers are sensitive to momentary voltage fluctuations which are referred to as "Blips" or "Spikes". These may be created within the consumer's service through motor starts or other electric load turn ons. They may also occur external to the consumer's service as a result of the Cooperative's routine switching or fault clearing.

The Cooperative cannot assure a consumer that their electric service will be free of momentary voltage fluctuations. If this is a concern, it is recommended that the consumer provide an interface between the electric service and the computer to screen out unwanted voltage fluctuations.

EMERGENCY GENERATORS

Generators installed to supply part or all of the consumers load during a power outage shall have the following requirements. The consumers generator shall be connected to the load through a double throw switch or automatic relays and switches which will disconnect the load from the Cooperative's system before the generator is connected to the load. When the Cooperative's system is re-energized, the generator will be disconnected from the load before the load's reconnected to the Cooperative s system.

MOTOR STARTING

Three phase motors rated above forty (40) horsepower shall utilize reduced voltage starting equipment and be installed by the consumer. Forty (40) horsepower and below may be either "across line" or reduced voltage starting at the discretion of the consumer.

The above quoted specification may be modified to allow the use of across the line starting devices for larger motors by specific approval of the engineering department of the Cooperative, depending on the characteristics of the motor and location on the Cooperative's system.

Starters must conform to the latest National Electric Manufacturer's Association standards and the installation must be in accordance with the latest edition of the National Electrical Code. Magnetic contactors in full voltage starters must have a coil capable of sealing in the contactor at 75% rated voltage. The Cooperative may specify the tap setting or percentage of voltage to be used on the reduced voltage starter.

POLYPHASE MOTOR PROTECTION

The following protective devices are required and shall be installed and maintained by the consumer.

The Cooperative shall not be responsible for any damage incurred if they are not installed and in good working order.

1. Three element running overload protection shall be required on all motors; i.e., one overload element in each phase in the starter or equivalent protection devices. (N.E.C. Art. 403-37).

2. All motor controllers shall be arranged so that in event of sustained loss in voltage, the motor will be disconnected from the line unless it is equipped for automatic starting after such failure.

The recommended devices listed below are strongly suggested to reduce the Possibility of damage to PolyPhase equipment.

3. Low voltage protection is recommended on all polyphase motors.

4. Phase reversal protection is recommended in all polyphase motors and well pump motors.

5. Phase failure protection is recommended on all polyphase motor circuits.

Some manufacturers supply a different device for each type of protection, while others may offer a single device that provides complete protection.