#### Section VII. Meters and Meter Boards

#### 1. General

These general specifications apply to metered installations rated 600 volts or less. Reference to NYSEG publication SP-1099 has been made in Section III of this booklet for installations above 600 volts. Customer installation of metering equipment shall be in accordance with requirements specified in this publication and NEC Article 312. All metallic equipment used for metering purposes shall be properly bonded and grounded as required by this installation specification and NEC Article 250.

## 2. Equipment Requirements Through 800 Amps

The Company will furnish and install all meters and auxiliary equipment required for billing. Meters will be located outdoors and shall be accessible to Company personnel.

For 100 ampere and 200 ampere residential services, the Customer will furnish the meter socket(s). The Company will provide meter sockets for all non-residential accounts, and any service greater than 200 amps. In either case, the Customer has the responsibility for installation of meter socket(s). Metering transformers and transformer enclosures through 800 amperes (primary rating of metering current transformer) will be supplied by the Company.

The maximum number of service disconnects is limited to six by NEC Article 230 for one set of service entrance conductors. Where additional meters/disconnects are required, a main service disconnect switch (fully rated for the service size) on the service entrance is required. Contact NYSEG before purchasing and installing any equipment.

## 3. Equipment Requirements Above 800 Amps

Above 800 amperes, the customer will furnish, install, and maintain metering transformer enclosures or switchgear. The customer will coordinate the requirements for meter installations with the Company prior to the purchase of equipment over 800 amperes. The Company will furnish physical and electrical specifications for metering transformers above 800 amperes upon request. Physical and electrical space requirements and conformance to applicable standards and codes is the customer's responsibility.

#### 4. Meter Sockets

For residential services, the Customer will install, own and maintain all 100 ampere and 200-ampere self-contained, non-lever bypass type meter sockets. Meter sockets supplied by the Customer must meet the following requirements:

Conform to the latest revision of ANSI/UL 414, ANSI C12.7, NEMA 250, NFPA and other relevant standards.

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Must be UL approved and carry the UL label.

Be of a ringless design and include a horn style by-pass mechanism suitable for connecting insulated jumper leads for use in installing or removing the meter. This enables the Company to test or exchange the meter without causing a service interruption.

At minimum, the enclosure of the meter sockets must be of NEMA TYPE 3R design (an enclosure intended for outdoor use to provide a degree of protection against windblown dust and rain). Other NEMA TYPE designs or enclosures with multiple TYPE designs are allowed as long as the minimum environmental requirements of TYPE 3R are met.

Have a sealing mechanism, which allows the socket cover to be sealed to the meter socket body by a Company padlock seal. The sealing mechanism must be made of stainless steel.

Individual meter sockets shall be rated for 100 amperes or 200 amperes continuous load. For a 100 ampere service it is permissible to use a higher rated meter socket up to 200 amperes continuous.

Each position of a ganged meter socket shall be rated for 200 amperes continuous. The design of a ganged meter socket shall allow for the cover to be opened, closed, and sealed individually.

The Company shall furnish all meter sockets for non-residential accounts and for any service greater than 200 amperes. If self-contained, these meter sockets are required to have a single handle, lever operated by-pass, which locks the meter blades in the socket jaws. This by-pass mechanism enables the Company to test or exchange the meter without causing an interruption in service.

Specifications for meter sockets of more than four positions and meter pedestal assemblies shall be submitted to the Company for review and concurrence prior to purchase. Only multi-socket equipment specifically designed for that application will be used to feed additional meter positions. (For example, two, two-position multiple socket assemblies will not be used as a four-position assembly, the second fed from the first.) For additional information on pedestal assemblies, see Figure 25 and adjoining installation specification.

## 5. Connections

The customer is responsible for providing lugs and making connections to meter socket terminals and current transformer primary connections on the line and load side with the exception of pole mounted or overhead installations. The Company will make all secondary connections to the primary potential tap of current transformers.

Meter installations shall be connected to the load side of service equipment when supplied from an underground network supply.

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Self-contained meters will be used for services up to 400 amperes. A line side disconnect must be provided for each self-contained 277/480 volt meter position.

Metering shall be connected to the line side of service equipment in all other cases unless specified by the Company.

#### 6. Meter Access & Location

The main disconnect, metering transformers, and meters shall be accessible to the Company at all times and located as close together as practical. In the interest of both the customer and the Company, a suitable meter location must be identified. The Company will designate the meter location. The location of all metering equipment must be approved by the Company prior to installation.

Minimum clearances are required between gas and electric meters, and the Company should be consulted where combined services are being installed.

Residential meters, sockets and instrument transformer enclosures are installed outdoors not more than 6 feet or less than 5 feet from permanent ground level. A minimum of 4 feet is allowed for horizontally grouped and pedestal installations. Vertically stacked meters shall be installed with no less than 2 feet between permanent ground level and the center opening of the first position. A minimum of 10 inches is required between the centers of the adjacent positions. The meter must be accessible to the Company at all times, and at least 4 feet of clear work space must be provided in front of the meter. All meter sockets or enclosures shall be mounted in a true vertical position.

Commercial and industrial installations using indoor switchgear instrument transformers may require the meter to be located indoors. The Company preferred location is outdoors, but certain conditions necessitate an indoor location. The customer should consult with the Company to determine the meter location.

If a meter must be installed indoors, it shall be located as close as practical to the point where the service enters the building. It must be accessible to the Company at all times.

There shall be at least 4 feet of clear work space in front of the meter. The meter shall not be installed in stairways, coal bins, bathrooms, bedrooms, attics, store windows, behind shelves, transformer vaults, near moving machinery or other similar inaccessible or dangerous location. The meter shall be protected against exposure to excessive moisture, dust, chemicals, vibration, temperatures, corrosive material, etc. The meter location shall afford protection against vandalism.

The Company will make a reasonable effort to protect the meter. However, if vandalism is severe and all equipment the Company normally provides to protect the

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meter is ineffective, the customer must provide adequate protection or accept billing for damage to the meter installation, estimated loss of revenue, and labor charges.

### 7. Meter Identification

Whenever there is more than one meter installed on any one premise, each meter socket or enclosure shall be permanently and clearly marked to properly identify the portions of the premises being served. Marking shall be made with paint or permanent marker on the inside and outside of the meter enclosure; not on the cover. Marking shall be the responsibility of the owner/customer.

#### 8. Meter Board

Where meter boards are used, they shall be made of 3/4 inch exterior grade plywood and painted with a good quality flat paint suitable for the location. The meter board shall be large enough to accommodate all metering equipment (connection boxes, switches, meters, etc.) necessary to each particular type of installation. There shall be a minimum of 21 inches clear board space above the meter box where meters are to be mounted above the meter box. A minimum of 6 inches of space shall be maintained between meter boxes and other equipment. No meter board with multiple positions shall be mounted on a single pole. See Figure 26.

Meter sockets may be mounted directly to a masonry wall using Figure 22 as a guide.

## 9. Relocation

Any change in the location of a meter or service entrance after installation will be made at the expense of the applicant or customer if it has been: (1) requested by an applicant or customer for their accommodation, providing such a change is approved by the Company, or (2) deemed necessary, by the Company, to provide suitable location or adequate protection for the meter. When there is a change by the customer from one service classification to another, such change shall be governed by the requirements applying to a new installation.

A service entrance shall not be left un-metered unless approved by the Company. Connection of any device made ahead of the meter, other than a main disconnect when required, is not permitted.

## 10. Seals

All meter installations and points of access to unmetered wiring on the customer's premises will be sealed by the Company. All cabinets, and equipment enclosures containing unmetered conductors shall be made sealable before the service is energized.

## **11. Tampering Penalties**

Breaking of seals or tampering with meters or unmetered wiring by unauthorized persons is prohibited. Attention is called to Section 165.15 of the New York State Penal Law, which makes such unauthorized tampering a misdemeanor punishable by fine or imprisonment or both.