ComEd Customer Requirements for Proper Installation of Metering Equipment

Residential and Commercial Customers
Dear customer,

This booklet contains some of the most common metering equipment installation examples. The illustrations depict “Acceptable” and “Not Acceptable” metering configuration installations. Improper installation of metering equipment yields safety hazards to ComEd personnel and may potentially delay the customer’s service date.

Please devote special attention to the captions next to each picture to get more of an in depth knowledge of what makes a safe and “Acceptable” metering equipment installation in comparison to a unsafe “Not Acceptable” metering equipment installation.

To ensure your electrical service entrance metering equipment is installed correctly and can be energized in a timely manner, please ensure the following general guidelines are followed.

GENERAL METERING EQUIPMENT REQUIREMENTS:

- Where applicable, a village or county permit must be obtained prior to ComEd notification and/or approval.
- All fittings must have a CECHA stamp to receive ComEd approval.
- All meter fittings must be installed at the proper/required vertical height/s and location/s. See EXH’s A, B, & C & Fig’s 1 & 1A
- All customer new and revised electric service entrances must be inspected and approved via the governing authority such as the municipality or county. See Fig’s 1 & 1A and others for typical approval stickers
- All meter sockets must be clearly identified using the final tenant, suite or unit number designation and/or address on the metering equipment. See Fig. 2A
- There must exist a final ground grade with no obstructions around all metering equipment. See Fig’s 3 & 3A
- All load side wires must be landed and terminated between the meter socket and unit panels.
- All line and load side wires must be landed and terminated at the customer’s metering equipment. See Fig’s 4 & 4A
- All meter fittings must be installed with the proper/required frontal, side, and swinging door clearances. See EXH’s B & C. See also Fig’s 5 & 5A
- Per local code, all new and existing services must have required grounds.
- For a situation in which meter-related facilities are located on a balcony, access to such meter-related facilities must be made by stairs, and must not be by ladder.

SINGLE PHASE METERING:

- A fifth jaw is required at the nine o’clock position of the socket for “WYE” (120/208v) single-phase services. See Fig. 6
- All single-phase self-contained metering installations (200 amperes maximum), jumping studs/horns are required on the line and load connectors of the meter fitting. Meter fitting(s) must be at proper height. Service attachment (I-plate) must be installed in proper location and must be within minimum and maximum clearances. See Fig. 6
- Trees on private property must be trimmed and/or removed as needed by the customer, so as to provide proper metering equipment clearances to allow initial installation and future maintenance.

THREE-PHASE SELF CONTAINED METERING:

- All phases and the neutral must be clearly identified. See Fig’s 2 & 4
- All three-phase, 120/240V, four wire self-contained meter installations (200 amperes maximum), the high phase must be attached on the right side of the fitting and clearly identified (color coded red) within the meter fitting and at the weather-head. See Fig. 6A
- An integrated bypass lever is required for all three-phase, self-contained meter fittings. See Fig. 6A

THREE-PHASE TRANSFORMER RATED METERING:

- Please ensure the metering cabinet size, estimated demand load and voltages have been provided to the ComEd field representative. Also, ensure an approved wiring harness is provided in all current-transformer cabinet installations (per ComEd requirements) when the meter fitting is on the CT cabinet door. See Fig’s 2 & 4
- CT Cabinet must be clearly marked “Line” and “Load” side. See Fig. 2
- All three-phase, 120/240V, four wire current transformer rated meter installations (400 amperes minimum), the high phase must be in the center terminal lug position of the metering cabinet and clearly Identified (color coded red) within the meter cabinet and at the weather-head. See Fig’s 4, 4A
- Conductor terminal lugs and cables within the CT cabinet must be positioned so as to allow CT mounting and installation. If the line side conduit penetration is located below the upper bus terminals of the CT cabinet, the cable must be trained/installed behind the bus bar detail. See Fig. 4
Exhibit A

Typical Meter Connection Devices
and Mounting Heights (Minimum & Maximum)

1. Single or Double Position with Underground Service Raceway
2. Vertically Grouped and Switchboard Type Sockets
3. Transformer Rated Socket
4. Horizontally Grouped Sockets with Underground Service Raceway
Exhibit B

Frontal and Side Clearances

Drawing Notes

1. All dimensions shown are minimum dimensions.

2. Meter connection device approval (CECHA) is not a location or space approval. Location of equipment must comply with dimensions shown on this sketch, and with meter mounting height dimensions shown in Exhibit A.

3. Main switch or tap box (a) may be mounted adjacent to meter stacks when units are of equivalent depth.

4. Separation will be required by spacer, conduit, or bus extension (c) when main switch or tap box (b) extends beyond adjacent meter stack as follows:
   
   a. If depth of main switch or tap box is 15" or less, a side clearance of 12" to center line of adjacent meter stack is required.

   b. If depth of main switch or tap box is greater than 15", a side clearance of 24" is required.

5. These dimensions apply when meter stacks are mounted on adjacent corner walls.
SWINGING DOOR CLEARANCES

1. All dimensions shown are minimum dimensions.
2. Meters are not to be installed on walls where they will be behind an open swinging door.
3. Meters in locations A, B & C may require protective barriers if traffic passing through doormay cause meter damage. A minimum clearance of 6" is required from the nearest edge of the meter connection device to the barrier.
Current Transformer (CT) rated meter socket height's

Not Acceptable - height range = 54” to 66”

Acceptable - height range = 54” to 66”

Fig. 1

Fig. 1A
Meter cabinet terminal identifications and meter socket premise address designations

Not Acceptable – line and load side not identified

Acceptable – line & load side identified

Fig 2

Fig 2A

Acceptable- preferred unit designations
Current transformer (CT) rated metering equipment accessibility - grading hazard

Fig 3

Fig 3A
Current Transformer (CT) metering cabinet line and load side terminal lug mounting

Not Acceptable – terminal lug placements inhibit CT mounting

Acceptable – terminal lug alignment & color coding

Meter Socket
Wire Harness

Fig. 4

Not Acceptable – un-metered current

Allows Spacing For CT Mounting

Fig. 4A
Ganged meter tap box configuration missing spacers between tap box and meter fittings

Not Acceptable - spacers required
Acceptable - spacing provided by disconnect panel

Fig 5

Acceptable - approved spacers

Fig 5A
Self contained single phase 3 wire 120/208V meter socket – terminal configuration

Not Acceptable – Missing 5th terminal & un-metered current

Fig 6

Self contained three phase 4 wire 120/240V meter socket – bypass handle and high phase connected to the right terminal requirements

Acceptable – self-contained meter with high phase connected to right terminal & color coded red

Fig 6A
For new or revised electric services, relocations, or temporary services please contact:

1-866-NEW-ELEC (1-866-639-3532)
http://www.exeloncorp.com/ComEd/Newbusiness

For all other ComEd electrical needs, please contact customer service:

1-800-EDISON-1 (1-800-334-7661)

More detailed metering information is available from the literature titled “General Terms and Conditions” located on the Exelon web site:


Please be aware that ComEd’s system meter department must improve the installation of main electrical panels rated 1200 amps or greater or any switchboard with an un-metered switch. To obtain this approval, four copies of a one-line diagram for the meter-current transformer cabinet and disconnect switch sequence must be submitted to ComEd's system meter department located at 1919 Swift Dr., Oakbrook IL 60521. Please be sure to include the electrical panel’s manufacturer and model number. These diagrams may be found in your project’s electrical plans or in the manufacturer’s specifications for the panel. Communicate with your electrical contractor if you need assistance acquiring these documents, and be sure to allow ComEd ample time to receive and review these items. All plans must be approved before the service can be livened.

**General ComEd meter application Guidelines**

In order for ComEd to promptly meet our customer’s electric service needs, you must take a few simple actions:

1.) Call a ComEd representative at 1-866-NEW-ELEC (1-866-639-3532) and provide the following:
   a. Customer name, address, phone number, and Tax ID # or Social Security #
   b. Type of service i.e. overhead or underground, commercial or residential
   c. Preferred service start date
   d. City of Chicago customers must provide a permit number.

2.) Complete the Service and Meter Application. Application must be completed in its entirety. *Failure to do so will delay the start of your electric service.*

3.) Mail, E-mail, or Fax the Service and Meter Application to your ComEd Field Representative or the website above. *If you do not know the name of your ComEd Field Representative, call 1-866-NEW-ELEC and request your representative’s name, and contact information.*

4.) Follow up by phone with your ComEd Field Representative to ensure your Service and Meter Application was received by the appropriate person.

Be aware from the outset that all work must comply with the National Electric Code, your Governing authority’s electrical inspection requirements, and with ComEd Service Standards. Customers must verify if the municipal or county requirements are more stringent. *Reference the ComEd web site for more information,*

www.exeloncorp.com/ComEd/NewBusiness