CONTRACTOR SAFETY ORIENTATION
METER DISCONNECT / RECONNECT

MEMBER FOCUSED SAFETY ALWAYS

CONNEXUS ENERGY
Your Community Energy Partner
GENERAL HAZARDS

• Our meters, while owned by Connexus Energy, are present on the property of our customers

• As such, we do not control the environment those meters are present in

• Our experience tells us that you can expect several potential hazards on customer owned property, dependent on what type of property that is

• That does not however preclude or predict unexpected hazards created by the environment or the property owner

• Contractors may request other information about the design and operation of the Connexus electrical system that is known and related to the protection of the contractor employees
ENERGIZED WORK

• Meters may be energized at the following voltages:
  ✓ 120/240V (single phase)
  ✓ 120/208 (3 phase)
  ✓ 240/480V (single phase / 3 phase)
  ✓ 277/480 (3 phase)

• Arc flash is possible inside an energized meter base. An arc may sustain itself until the connection gap becomes too great for the available current to bridge.
  ✓ If an arc occurs step back from the arc immediately
  ✓ Call 911 if an injury or fire results
  ✓ Report the incident to Connexus Energy System Operations
GENERAL HAZARDS

• Hazards we have experienced on customer property (homeowners)
  ✓ Slip, trip and fall hazards (snow, ice, water, soil)
  ✓ Uneven terrain
  ✓ Objects (sharp edges, trip hazards)
  ✓ Animals (dogs can be specifically unpredictable)
  ✓ Poisonous plants, plants with sharp thorns
  ✓ Stinging and biting insects
  ✓ Overhead hazards (low clearances, falling ice or snow)
  ✓ People
  ✓ Vehicles
GENERAL HAZARDS

- Hazards we have experienced on construction or industrial sites
  - Large equipment (earthmoving) and vehicles
  - Trenches and excavations
  - Slip, trip, and fall hazards
  - Machinery (moving parts)
  - Cables, wire, gas pipe, and other utilities
  - Spills (oils, petroleum products)
The contractor will ensure the proper PPE is worn / used by its employees, per the contractor's evaluation of the hazards present and all applicable laws and regulations.

Generally, the following is **recommended** based on our experience:

- Arc rated FR clothing
- Rubber gloves and protectors rated at appropriate voltages
- Eye protection (ANSI Z87+)
- Head protection (electrically rated hard hat)
- Face protection (arc rated face shield available if needed)
- Safety toed shoes/boots
SPECIFIC HAZARDS WITH METERS

• The meter is the interface and connection point between our energized distribution wires and the premise

• Meters shall only be removed or connected by trained and authorized contractors/employees trained on their function and operation

• A meter / socket should be considered and treated as energized unless it has been tested and confirmed no voltage is present

• Some services may have demand actuated generators (automatically start when utility power is interrupted – may reenergize the socket)
RECOGNITION OF HAZARDOUS CONDITIONS

• All meters / meter bases should be inspected before beginning the work for any hazards or hazardous conditions.

• The next few slides will depict some specific hazards / hazardous conditions we have experienced on our system.

• If you encounter one of these conditions, we expect that you the contractor make Connexus Energy aware of the conditions
  ✓ For immediate danger to life or health call System Operations
  ✓ For other conditions notify the contract owner or their designate
The following may indicate meter tampering, which can lead to unpredictable connections in the meter socket.

- Cut seals
- Rigged or “tricked” seals
- Broken meter latches
- Rivets drilled out on the latch
• Sockets may be missing meters, or have broken or missing glass on the meter.
• Insects or rodents have been known to create nests inside meter bases and sockets.

• This could create situations where when disturbed an energized meter base could ignite debris in the meter socket.

• Any arcing or charring indicates a potential hazard.
• Due to shifting ground, service wires may “pull” on the meter lugs, potentially breaking the wire insulation.

• This may crack the meter “jaws” as well.

• A “tilted” meter may indicate the presence of this condition.
METER DIVERSION

• Stop work at ANY evidence of diversion and notify Connexus Energy immediately.

• The photos show several methods diversion takes place.
METER DIVERSION

Slugged connection

Jumpered connection

Line side tap
SUMMARY

• Contractors may request other information about the design and operation of the Connexus electrical system that is known and related to the protection of the contractor employees
• When in doubt, contact Connexus Energy
• Every premise / yard may have hazards – complete an adequate site evaluation before beginning work